

An Investigation of Afro-Caribbean and Black Sub-Saharan African Immigrant Health in the  
United States

By

JUSTIN VINNEAU PALARINO

B.A., Old Dominion University, 2014

M.S., Virginia Commonwealth University, 2016

A thesis submitted to the  
Faculty of the Graduate School of the  
University of Colorado in partial fulfillment  
Of the requirement for the degree of Doctor of Philosophy  
Department of Sociology  
2022

Dissertation Committee:

Richard Rogers (Chair), Jason Boardman, Fernando Riosmena, Ryan Masters, and David Cook-  
Martin

Justin Vinneau Palarino (Ph.D., Sociology)

An Investigation of Afro-Caribbean and Black Sub-Saharan African Immigrant Health in the United States

Dissertation Directed by Dr. Richard Rogers

## ABSTRACT

The immigrant population of the United States is increasingly diversifying. Black immigrants represent a large segment of this growing population and contribute largely to the growth of the American Black population. Despite this growth, Black immigrants remain largely underrepresented in immigrant health literature. This dissertation addresses this gap in the literature in three ways. First, it explicitly examines the role of national or regional origin on the health of Black adult migrants hailing from the Caribbean and Africa. Second, it examines the importance of time in the health outcomes of Black immigrants by considering time since arrival to the United States and arrival cohort. To do this, I employ cohort-stratified models to examine health at different duration points. Finally, it investigates the moderating role of sex in the relationship between national origin and health outcomes. To do this, I draw upon literature on the immigrant health advantage, racial context of origin, and cumulative (dis)advantage theory. Findings suggest that there is noteworthy variation in the health of Black immigrants. This variation exists at the national-origin level and differs across health outcomes.

Dedicated to my wife, Lauren.

## Acknowledgements

To my advisor, Richard Rogers. Your guidance and support throughout my graduate studies were invaluable. I entered the academic world as a first-generation college student, knowing nothing about graduate school or what it even meant to pursue a doctorate. From my first year onward, you were a constant for me. You provided sound guidance, clear feedback, and you encouraged me to better myself as a student, writer, researcher, and person. Thank you for being there to explain the many structures and process of the academic world. Thank you for taking me to my first conference and showing me that, yes, I do belong here. Thank you for sitting with me in your office and answering my many questions. You are someone I admire for your commitment to the field, to your research, and to your responsibility towards others. I also admire your kindness and your compassion. Thank you for all your support. Thank you for your honesty. Thank you for setting an example of how to be a successful researcher, scholar, and mentor. I carry so much respect for you and I count myself lucky to have you as my advisor.

Jason Boardman, you have certainly made an impact on my life. From our chats during Data 1 to our impromptu whiteboard sessions, I cannot begin to count the times you helped me, guided me. You are somebody that I can go to with research ideas or questions about different methods, no matter how half-baked they are. That meant a lot to me. It was a sandbox that I could throw around ideas while you reminded me that, hey, we need to be able to answer these questions. You expanded my understanding of what the field of sociology could mean and how we, as researchers, played a role in that process. I also want to thank you on a personal level. Graduate school was not easy. There were many times where I doubted myself and where I struggled to show up at all. You were there to listen. You were there to distract me from the chaos of my academic and personal life. You were there to talk about Sabbath and Maiden when I couldn't bring myself to write. Your patience, unbridled compassion, and, sometimes, your willingness to just let me wallow, helped me feel seen. It helped me become the researcher and person that I am today. I hope to pay this forward as best I can. Thank you, Dr. Boardman. Thank you, Jason.

Fernando Riosmena, there are many things to thank you for. Your course was my first formal introduction to the study of migration, my passion. You were and continue to be so open to having conversations about ideas, potential research projects, or just about what we are both interested in lately. After I took your course on Formal Demographic Methods in my second semester, I realized two things. First, that demography is truly fascinating and where I want to focus my energy. Second, that I was in way over my head and should have probably waited another year to take that methods course. So many of my experiences came from you sharing opportunities with me, opportunities I may never have known about without you. Your kindness and patience helped me gain the confidence to ask questions, to acknowledge that I did not understand something without feeling embarrassed or ashamed.

Ryan Masters, thank you for your help on everything methods. It's a sweeping statement, but it's accurate. Without your patience and willingness to chat with me about different methods and statistical approaches, I would have floundered far more often than I did. There were so many times that I would knock on your door with a question and you, without a second thought, invited me in so we could actually talk through it. You even took the time to draw out the problem so I could see where I needed to make my changes. Your help was pivotal in my academic success. I also want to thank you for your personal support throughout graduate school. This all started in my first year when I was so unsure if I should even stay. You took me to lunch, and we just talked. It wasn't forced. I didn't feel like you were trying to convince me to do



anything. You were willing to talk to me. You helped me feel welcomed. You helped me know that this was where I should be and that I did belong here.

David Cook-Martin, you helped me take a step back. You helped me look at my research and ask myself questions I would have never considered on my own. You pointed me in directions I may have never explored without your guidance. I truly believe that this made me a more well-rounded researcher and better equipped me to engage with new, important ideas. Between COVID and so many other factors, we did not spend as much time together in Ketchum as I would have liked, but you made a large impact on me.

Mathieu Desan, thank you for our chats. One of my fondest memories of graduate school was our impromptu conversations about books, travel, and whatever else came up. I want to thank you for the confidence you gave me. After you read my third-year paper, your feedback really caught me off guard. Your kind words and thoughtful feedback helped me transform that paper into a journal article. I wish our work overlapped more so that we could work together, but I am so grateful to have had you in my corner. Jani Little and Philip Pendergast, I want to thank you both for all of your support and guidance with the RDC. You are both amazing people and I cannot imagine how much more difficult the entire process would have been without you two. The folks at IBS are lucky to have you around.

Catherine Talbot, thank you for being there. Thank you for being who you are. We entered graduate school together and, since then, you have been an amazing friend and someone who I can truly say I admire. You are a phenomenal scholar and an even better person. I am so lucky to have you in my life. Jake Carias, you have been an amazing friend and colleague. I like to think we started our research journey together. You helped to make my writing interesting, and I stopped you from turning our term paper into a book. You are a great friend and helped me feel at home in Colorado. Tara Streng Schroeter, you have always been in my corner. Your unwavering support and excitement at every milestone of graduate school helped to keep my tank from bottoming out. You have always been so willing to be there, and I admire that about you. Trent Davidson, thank you. That is a very general thank you for a reason. From our conversations about the gene-environment interaction, to bonding over hockey, you have become one of my closest friends. I attribute a lot of my tenacity and persistence in my final few years to your support. I'm so grateful to have you in my life and proud to call you my friend. To my colleagues and valued friends, thank you for being there for me and with me. Thank you for comforting words, shared lunches, and comradery. Thank you to Bertha Bermudez-Tapia, Kim-Phuong Truong-Vu, Adenife Modile, Daniel Simon, Jose Sanchez, Jasmine Suryawan, and Andrea Tilstra for the countless times you each helped me become a better researcher, sociologist, and person. Thank you, Thomas Laidley and David Braudt, for your mentorship and friendships.

To my grandfather, Ed Grier. You supported me unconditionally throughout my entire education. You encouraged me to pursue what made me happy. You saw me make mistakes and helped me learn from them. You didn't understand exactly what I was doing with my graduate studies, but that didn't stop you from supporting me. You saw me graduate with my high school diploma, my bachelor's degree, and my master's degree. I was so excited for you to see me finish this final hurdle and obtain my doctorate. Tragically, COVID-19 took you before that could happen. I miss you. I wish you could celebrate this achievement with me.

To Connor Webber and Darren Breton, my oldest friends, thank you both for being who you are. You both were there for me and with me through this whole process. I couldn't ask for

better friends than the two of you. I love you guys. To our cats, Cheeto, Suki, and Ernie, I love you all so much. I can't say that you helped me with much of my work. In fact, you hindered it often by walking all over my desk. I can say that you make everything easier.

To my wife, Lauren Palarino, I cannot begin to think of where to start. You have been with me every single step of the way. You have been with me to celebrate my successes and accomplishments. You have seen me through some of my worst, most dejected days. I have no idea what I would do without you in my life. I love you beyond words and I am so grateful to be your partner. Thank you, from the bottom of my heart, for everything.

This dissertation was graciously funded by the Department of Sociology, the Institute of Behavioral Science (IBS), the Rocky Mountain Research Data Center (RMRDC), and the Center to Advance Research and Teaching in the Social Sciences (CARTSS).

## Table of Contents

<a href="#">Chapter 1: Introduction.....</a>	<a href="#">Page 1</a>
Why Heterogeneity?.....	Page 3
Current Study.....	Page 5
<a href="#">Chapter 2: Black Immigrants in the United States: Migration Patterns, Population Characteristics, and Health Trends.....</a>	<a href="#">Page 7</a>
Afro-Caribbean and Black African Immigration to the United States.....	Page 7
Selective Migration.....	Page 15
Afro-Caribbean and Black African Immigrants in the United States.....	Page 19
The Health of Afro-Caribbean and Black African Immigrants in the United States.....	Page 23
The Immigrant Health Advantage.....	Page 29
Dissertation Aims.....	Page 36
<a href="#">Chapter 3: Data, Sample, and Methods.....</a>	<a href="#">Page 38</a>
Data.....	Page 38
Measures.....	Page 40
Sample.....	Page 46
Conclusion.....	Page 48
<a href="#">Chapter 4: National and Regional Origin.....</a>	<a href="#">Page 49</a>
Racial Context of Origin and Destination.....	Page 50
Research Question and Hypotheses.....	Page 53
Methods and Sample.....	Page 54
Analytic Approach.....	Page 62
Descriptive Findings.....	Page 63
Multivariate Findings.....	Page 70
Discussion.....	Page 120
Conclusion.....	Page 128
<a href="#">Chapter 5: Duration of Residence and the Health of Black Immigrants in the United States.....</a>	<a href="#">Page 131</a>
Understanding Immigrant Incorporation.....	Page 131
The Role of Time.....	Page 135
Research Question and Hypotheses.....	Page 137
Methods and Sample.....	Page 138
Analytic Approach.....	Page 142
Results.....	Page 143
Discussion.....	Page 184
Conclusion.....	Page 188
<a href="#">Chapter 6: Sex Differences in the Health of Black Immigrants in the United States.....</a>	<a href="#">Page 191</a>
Sex Differences in Immigrant Health.....	Page 192
The Relationship Between Sex and Health for Black Immigrants in the United States.....	Page 195
Research Question and Hypotheses.....	Page 196
Methods and Sample.....	Page 197
Analytic Approach.....	Page 199
Descriptive Findings.....	Page 200

Multivariate Findings.....	Page 209
Discussion.....	Page 245
Conclusion.....	Page 248
<a href="#">Chapter 7: Conclusion.....</a>	<a href="#">Page 250</a>
Conclusions and Contributions.....	Page 250
Limitations.....	Page 259
Future Directions.....	Page 263
Final Remarks.....	Page 265
<a href="#">References.....</a>	<a href="#">Page 267</a>
<a href="#">Appendices.....</a>	<a href="#">Page 295</a>

## List of Tables

### Chapter 3

<b>Table 3.1</b> Sample Distribution by Total Sample and Sample Adult Sample, Adults Aged 18-65+, Public-Use National Health Interview Survey 2000-2018.....	Page 47
--	---------

### Chapter 4

<b>Table 4.1</b> Sample Distribution by Total Sample and Sample Adult Sample, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 57
---	---------

<b>Table 4.2</b> Sample-Weighted Bivariate Descriptive Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 64
---	---------

<b>Table 4.3</b> Sample-Weighted Bivariate Access to Care and Health Behavior Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 66
--	---------

<b>Table 4.4</b> Sample-Weighted Bivariate Health Outcome Descriptive Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 69
--	---------

<b>Table 4.5</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 72
---	---------

<b>Table 4.6</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018 .....	Page 75
--	---------

<b>Table 4.7</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Heart Conditions by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 80
<b>Table 4.8</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Heart Conditions by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 83
<b>Table 4.9</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 86
<b>Table 4.10</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 90
<b>Table 4.11</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 93
<b>Table 4.12</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 96
<b>Table 4.13</b> Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 100

**Table 4.14** Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by African Regional Origin, Educational Index, Gross National Income, and Language

Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 103

**Table 4.15** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 108

**Table 4.16** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 110

**Table 4.17** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 114

**Table 4.18** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 117

## Chapter 5

**Table 5.1** Sample Distribution by Region of Origin, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 140

**Table 5.2** Sample Distribution by Cohort of Arrival, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 142

<b>Table 5.3</b> Percent of Respondents Who Self-Report Poor or Fair Self-Rated Health by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 145
<b>Table 5.4</b> Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 149
<b>Table 5.5</b> Percent of Respondents Who Self-Report Hypertension by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 159
<b>Table 5.6</b> Results of Stratified Sample-Weighted, Binomial Logistic Regression Models Hypertension by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 162
<b>Table 5.7</b> Percent of Respondents Who Self-Report Having a BMI in the Overweight or Obese Range by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 173
<b>Table 5.8</b> Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for BMI in the Overweight or Obese Range by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 176



<b>Table 6.1</b> Sample Distribution by National/Regional Origin for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 198
<b>Table 6.2</b> Sample-Weighted Bivariate Descriptive Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 201
<b>Table 6.3</b> Sample-Weighted Bivariate Access to Care and Health Behavior Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 203
<b>Table 6.4</b> Sample-Weighted Bivariate Health Outcome Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 207
<b>Table 6.5</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 212
<b>Table 6.6</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 218
<b>Table 6.7</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes or Diabetes by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 224

<b>Table 6.8</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 230
<b>Table 6.9</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Self-Reported Overweight/Obese BMI Relative to Normal Weight by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 235
<b>Table 6.10</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 240

## List of Figures

### Chapter 4

<b>Figure 4.1.</b> Division of African Countries by United Nations Geographic Divisions.....	Page 56
<b>Figure 4.2</b> Division of African Countries by United Nations Gross National Income per Capita.....	Page 58
<b>Figure 4.3</b> Division of African Countries by Official Language.....	Page 60
<b>Figure 4.4</b> Division of African Countries by Education Index.....	Page 62
<b>Figure 4.5</b> Marginal Predicted Probabilities for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 74
<b>Figure 4.6</b> Marginal Predicted Probabilities for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 77
<b>Figure 4.7</b> Marginal Predicted Probabilities for Heart Conditions by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 81
<b>Figure 4.8</b> Marginal Predicted Probabilities for Heart Conditions by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+,	

National Health Interview Survey 2000-2018.....Page 85

**Figure 4.9** Marginal Predicted Probabilities for Hypertension by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018...Page 88

**Figure 4.10** Marginal Predicted Probabilities for Hypertension by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 92

**Figure 4.11** Marginal Predicted Probabilities for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018...Page 95

**Figure 4.12** Marginal Predicted Probabilities for Pre-Diabetes/Diabetes by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 98

**Figure 4.13** Marginal Predicted Probabilities for Asthma by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018. ....Page 101

**Figure 4.14** Marginal Predicted Probabilities for Asthma by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 105

**Figure 4.15** Marginal Predicted Probabilities for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 109

**Figure 4.16** Marginal Predicted Probabilities for Overweight/Obese BMI Relative to Normal BMI by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 112

**Figure 4.17** Marginal Predicted Probabilities for Depressive Symptoms by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 116

**Figure 4.18** Marginal Predicted Probabilities for Depressive Symptoms by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 119

## Chapter 5

**Figure 5.1** Distribution of Year of Arrival to the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 141

**Figure 5.2** Proportion Respondents Who Self-Report Poor or Fair Self-Rated Health by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....Page 145

<b>Figure 5.3</b> Average Marginal Effects for Reporting Poor/Fair Self-Rated Health for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 153
<b>Figure 5.4</b> Average Marginal Effects at Means for Reporting Poor/Fair Self-Rated Health by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 155
<b>Figure 5.5</b> Proportion Respondents Who Self-Report Having Hypertension by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 158
<b>Figure 5.6</b> Average Marginal Effects for Reporting Hypertension for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 166
<b>Figure 5.7</b> Average Marginal Effects at Means for Reporting Hypertension by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 168
<b>Figure 5.8</b> Proportion Respondents Who Self-Report Having a BMI in the Overweight or Obese Range by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018.....	Page 172
<b>Figure 5.9</b> Average Marginal Effects for Reporting Having a BMI in the Overweight or Obese Range for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 180
<b>Figure 5.10</b> Average Marginal Effects at Means for Reporting Having a BMI in the Overweight or Obese Range by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018.....	Page 182

## Chapter 6

<b>Figure 6.1</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 215
<b>Figure 6.2</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 221
<b>Figure 6.3</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes or Diabetes by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 227
<b>Figure 6.4</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 233
<b>Figure 6.5</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Self-Reported Overweight/Obese BMI Relative to Normal Weight by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 238
<b>Figure 6.6</b> Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018.....	Page 244

## **Chapter 1**

### **Introduction**

The United States is a nation of immigrants with more immigrants than any other nation worldwide (Connor & López, 2016). As of 2018, an estimated 44.8 million immigrants, approximately 13.7% of the total American population, lived in the United States (Budiman, 2020). While this number well exceeds that of any other nation, the foreign-born population of the United States tends to be less diverse (Connor & López, 2016). Just over one-quarter of immigrants in the United States hail from one country – Mexico. It comes as little surprise that a sizeable portion of research on the health of immigrants focuses primarily on Mexican-origin immigrants, alongside other Hispanic groups<sup>1</sup>.

Throughout much of the 20<sup>th</sup> and early 21<sup>st</sup> centuries, Mexico was the major sending nation for immigrants living in the United States (Budiman, 2020; Gonzalez-Barrera, 2021). Beginning in 2005, this trend began to shift. Between 2005 and 2013, net migration from the United States to Mexico was negative (Gonzalez-Barerra, 2021). In other words, a greater number of migrants left the United States to return to Mexico than those who were traveling to the United States from Mexico. Between 2014 and 2018, this trend reversed and net migration from Mexico to the United States returned to positive. Further, migration flows are notably smaller than those in the 1990s and early 2000s. Between 1995 and 2000, net migration from Mexico to the United States rested at approximately 2.27 million migrants (Gonzalez-Barrera, 2021). In the 2013 to 2018 period, net migration from Mexico to the United States returned to positive; however, the flow was 160 thousand migrants (Gonzalez-Barrera, 2021). This

---

<sup>1</sup> The distinction between Hispanic and Latino/a is an important one; however, the National Health Interview Survey inquiries about Hispanic ethnic identity. To remain consistent with the limitations of these data, my discussion of Hispanic and potential Latino/a migrants will solely use the term “Hispanic”.



seemingly temporary inversion of net migration combined with reduced migrant flow resulted in a compositional shift in the migrant population of the United States. Most notably, the number of migrants arriving in the United States from China, India, Southeast Asia, South America, and, most pertinent to this dissertation, Africa, has risen notably.

Between 1980 and 2016, the number of Black<sup>2</sup> immigrants rose from 816,000 to just under 4.2 million (Anderson & López, 2018). Of this, Jamaicans and Haitians are the largest national origin group while the bulk of recent growth is driven by several African sending nations (Anderson, 2017; Anderson & López, 2018). Based on this estimate, Black immigrants represent only 9.4% of the total foreign-born population on the United States. In the same year, 10% of Black and African Americans were foreign-born (Anderson & López, 2018). Todd Hamilton notes that the foreign-born segment of the Black American population grew from less than 1% in 1960 to 9.2% in 2014 (Hamilton, 2019). Further, Black immigrants accounted for over 20% of the total growth in the United States Black population throughout the 2000s (Hamilton, 2019). The growth of this population emphasizes the importance of nativity, regional origin, and race/racial identity among immigrants living within the United States. This is particularly true given that many in this population identify racially as Black, a population that has been persistently exposed to widespread disadvantage like institutional and interpersonal racism; systemic exclusion from social, cultural, and economic resources; and residential segregation (Link & Phelan, 1995; Massey & Denton, 1993).

Since the 1990s, a growing body of research has investigated the experiences, health or otherwise, of Black immigrants (see Brown et al., 2017; Commodore-Mensah et al., 2015;

---

<sup>2</sup> The term “Black” is used throughout this dissertation to refer to those who self-report having a racial identity of “Black.” As with ethnic identity, race is an incredibly complex social construct, and its nuances are important. However, these data and my interpretation of race are limited to an American perspective and definition.

Cooper et al., 1997; Elo et al., 2008; Ford et al., 2015; Hamilton & Hagos, 2021; Kasinitz, 1992; Mehta et al., 2016; Mehta et al., 2015; Read & Emmerson, 2005; Waters, 1999). Despite this, the Black immigrant population remains relatively understudied in the entire body of immigrant health literature. Further, few studies investigate heterogeneity within this population, despite calls for more in-depth investigation (Commodore-Mensah et al., 2015; Elo et al., 2008; Hamilton, 2019). This gap in the literature is not malicious. In most cases, data on the Black immigrant population is scant. That which does exist does not include detailed information on country of origin and, if present, does not typically allow for analyses due to small sample sizes.

In this dissertation, I utilize restricted-use data to examine heterogeneity in the health of Black immigrants living in the United States. Specifically, I examine how the health of Afro-Caribbean and Black Africans adult immigrants are impacted by questions of national origin, time spent in the United States, and the moderating role of sex. In these analyses, I define Afro-Caribbeans as those who originate from a Caribbean nation and identify racially as Black. Similarly, Black African immigrants are those who originate from a Sub-Saharan African nation and identify racially as Black. In all cases, an immigrant is an individual who resides in the United States but was born in another country or region.

### **Why Heterogeneity?**

The Black immigrant population of the United States is largely heterogeneous, with an incredibly amount of variation in national origin as well as in cultural, racial, and ethnic identity (Hamilton, 2019). As it stands, identifying shifts in the geographic origins of Black immigrants is key to understanding trends in social, economic, and health outcomes, but it does not answer all of our questions (Hamilton, 2019). To fully capture the experiences of Black immigrants, alongside

their health burdens and risks, researchers must investigate the many sources of variation within this population.

Heterogeneity in the health of the Black immigrant population of the United States is important for several reasons. First, Black immigrants are one of the fastest growing foreign-born populations in the United States. Second, the Black immigrant population contributes a tremendous amount of growth to the overall Black American population. Third, Black immigrants hail from notably different origin nations and, in turn, the method through which different groups arrive. Due to the noteworthy variability in national origin, entry method, and pre-migration conditions, the health profile of Black immigrants will likely vary widely. As the influx of these groups continues to rise, it becomes increasingly important to understand the health experiences of different groups in order to effectively address health care needs and shortcomings.

These points are not to say that heterogeneity in the U.S.-born Black population is unimportant. Quite the contrary. Existing research shows that there is a great deal of variability in the health of the Black American population when one considers important socioeconomic and demographic characteristics, especially geography. Specifically, residential location is highly correlated with the health of Black Americans and, as such, necessitates full consideration when examining the health of this group. Other key considerations in the heterogeneity in health within the Black American population are period and cohort. Period-based effects are key due to the fluctuation in the social climate surrounding race in the United States. Sixty years ago, the Civil Rights act was passed in this country, barring the overt process of racial discrimination. The health of Black Americans in this period and earlier will be much different than contemporary periods. Tied into this is cohort. Those who were born in periods of segregation and overt

institutional and interpersonal racism will likely display worse health profiles than those who were born and raised in more contemporary times. This is not to say that segregation and racism are no longer concerns, because they are. It is more to say that the social landscape of the United States has changed in the decades following the passage of the Civil Rights Act and the Immigration and Nationality Act. Because of this, there is a large body of research that directly examines these geographic, period-based, and cohort-based differences.

### **Current Study**

In this dissertation, I examine three research questions as they relate to the health of Black immigrants who reside in the United States.

1. Does country and/or region of origin explain variability in the health of Afro-Caribbean and Black African immigrants in the United States relative to their U.S.-born Black American counterparts?
2. Does time since arrival to the United States, otherwise stated as “duration”, differentially impact the health of Caribbean and Sub-Saharan African immigrants when compared to the health of non-Black immigrants? Do these potential differences differ by arrival cohort?
3. Does sex moderate the immigrant health advantage evident among Afro-Caribbean and Black Sub-Saharan African immigrants living in the United States?

These three questions present unique and beneficial contributions both theoretically and substantively to the existing understanding of the context of Black immigration in the United States. Specifically, these questions allow for a detailed examination of the differential mechanisms that influence immigrant health in the United States, allowing for a more in-depth

understanding of why disparities may exist. These analyses also serve to potentially identify areas of need within the Black immigrant population. There may be health conditions that Black immigrants, or even those from specific regions, are more likely to report than that seen in the U.S.-born population or in other immigrant groups. Identifying these health conditions would allow both public health and clinical professions the opportunity to focus on addressing and, ideally, reducing these disparities.

## **Chapter 2**

### **Black Immigrants in the United States: Migration Patterns, Population Characteristics, and Health Trends**

In what follows, I detail the migration patterns, population characteristics, and health of the Black immigrant population of the United States. I begin with an explanation of migration trends, both historical and contemporary, for Afro-Caribbean and Black African immigrants to the United States. Within these discussions, I detail the motivators of migration, known components of selectivity, and the different contexts of reception once in the United States. Next, I discuss several demographic and socioeconomic characteristics of these two populations, often relative to their native-born Black American counterparts. These characteristics include age, educational attainment, and employment. The purpose of this subsection is to provide a groundwork to understand both similarities and differences between these three groups. Finally, I describe the known health characteristics of Afro-Caribbean and Black Africans in the United States. In this subsection, I detail known trends as well as disparities but also emphasize the realms of investigation that remain unexamined.

#### **Afro-Caribbean and Black African Immigration to the United States**

##### *Forced Migration and the Trans-Atlantic Slave Trade*

The United States has a distinct history of racial injustice and racism rooted in antebellum slavery that pervades to this day. The institutions of the trans-Atlantic slave trade, antebellum slavery, and the subsequent decades of racism and discrimination under Jim Crow policies have shaped the lived experience of Black Americans (Hamilton, 2019; Hamilton, 2020). In what follows, I provide an abridged history of the trans-Atlantic slave trade and highlight regional

differences in the establishment, maintenance, and eventual dissolution of slavery in the Americas and Caribbean Islands.

Throughout the 17<sup>th</sup> century, Africans, particularly West Africans, were forcibly abducted, involuntarily migrated, and sold into slavery throughout the “New World” – North America, the Caribbean Islands, Central America, and South America (Hall, 2005; Hamilton, 2019; Venters & Gany, 2011). Estimates show that nearly 12 million Africans were brought to the Americas over the nearly two-century long slave trade (Hall, 2005; Venters & Gany, 2011). Of those 12 million Africans, 0.5 million arrived in what is now the United States, 2.7 million went to the West Indies (British Caribbean Colonies), 2.3 million were brought to non-British Caribbean islands, 6.5 million went to Central and South America, largely Brazil, and 1.5 million died in transit (Lambert, 2017; Venters & Gany, 2011).

In the United States, Africans were sold into slavery and, more often than not, relegated to physically demanding menial labor (Hamilton, 2019). These individuals were forced to work with no external sources of income or subsistence. As a result, American slaves relied entirely upon the slave owners for access to food, water, and shelter. I mention the conditions of American slaves primarily to serve as a foil to the experiences of Afro-Caribbean slaves, particularly those in the West Indies. In his 2019 text, Hamilton outlines three key differences between American and Caribbean slaves. First, the populations of the Caribbean islands were majority Black. This is in stark contrast to the majority White population of the United States at this time. Because of the relative size of this Black population, Caribbean slaves had greater opportunities to develop human capital as slaves could not be siloed exclusively into low-skilled positions (Hamilton, 2019). Relatedly, Caribbean slaves displayed higher likelihoods of escape attempts and successes. The size of the Black population, combined with the environment and

terrain of Caribbean islands, offered greater access to food and shelter for fugitive slaves (Hamilton, 2019). Finally, Caribbean slaves were permitted to cultivate their own food and to sell the surplus crops for profit (Hamilton, 2019).

By 1808, the government of the United States voted to end the trans-Atlantic slave trade. This declaration did not abolish slavery, only the importation of abducted Africans into the United States. It was not until 1865 that the United States government formally abolished the practice of slavery and American slaves were emancipated (Lambert, 2017). In contrast, slaves in English and English-speaking colonies were emancipated in 1838.

#### *Post-Emancipation Migration (1838 – 1964)*

Following emancipation in 1838, former slaves in the English-speaking Caribbean were free to move both domestically and internationally. In this period, many former slaves moved to neighboring islands in search of employment opportunities that were unavailable on their home islands (Hamilton, 2019). Eventually, nearly 100,000 labor-driven Caribbean immigrants, particularly those from Barbados and Jamaica, would turn their focus to the construction of the Panama Canal. Despite the harsh physical demands, these Caribbean immigrants received notably higher wages than what they had previously experienced in their work throughout the Caribbean (Hamilton, 2019). As the project ended, many of these immigrants traveled north to the United States, a country that played a major role in the funding and construction of the Panama Canal (Hamilton, 2019). One of the core reasons for this shift in migration flows was the search for a living wage and better working conditions than what was often available in their home countries. This marked the first period of Black immigration to the United States.



Many of these new Afro-Caribbean immigrants would enter through and settle in New York City. Here, they would join a large and growing Black American population who recently arrived in this and other northern cities during the Great Migration following emancipation (Hamilton, 2019). Here, both Afro-Caribbean immigrants and U.S.-born Black Americans faced extremely high degrees of racial hostility. This hostility resulted in highly segregated residential opportunities. Black Americans, regardless of their nationality, were forced into the same neighborhoods and had restricted access to key social, economic, and employment opportunities.

Despite this hostility, the number of new Black immigrants and, thus, the overall Black immigrant population grew rapidly between 1890 and the mid-1930s (Hamilton, 2019; Kasinitz, 1992; Kibria, Bowman, & O’Leary, 2014). In 1890, there were 19,979 Black immigrants living in the United States (Kasinitz, 1992). In the last year of this decade, there were 412 English-speaking Black Caribbean immigrants were admitted into the United States. By 1907, a mere 8 years later, this number rose to 5,633 new entries. In the following years, this rate would stabilize between 5,000 and 8,000 annual new entries until reaching its peak in 1924 with 12,243 new entries (Kasinitz, 1992). Coincidentally, the 1920s are accepted to be the peak of the first wave of Black immigration to the United States (Hamilton, 2019; Kasinitz, 1992; Kibria et al., 2014). Between 1920 and 1930, the population of Black immigrants rose from 73,803 to 98,620 (Kasinitz, 1992). Even with this tremendous amount of growth, the end of the first period of Black immigration would soon come to an end.

The National Origins Act of 1924, otherwise known as the Johnson-Reed Act, introduced new restrictions to immigration that drastically reduced the number of admitted Black immigrants after 1924 (Kasinitz, 1992; Kibria et al., 2014). Following prior restrictive policies like the Chinese Exclusion Act of 1882, the goal of this legislation was the curtail immigration

from Southern and Eastern Europe while all but barring the entry of immigrants from Africa, Asia, and Arabic states (Hamilton, 2019). Members of the English-speaking Caribbean were largely unimpacted by this policy, however. Because many of these island nations were colonies of Great Britain, they were able to enter the United States through their colonizer's quota (Hamilton, 2019; Kasinitz, 1992). Notwithstanding this option, the United States still experienced a dramatic decline in Black immigration. Hamilton suggests that, due to the policy's reflection of growing anti-immigrant sentiment, foreign-born populations were largely discouraged and hesitant to immigrate to the United States (Hamilton, 2019).

With the onset of the Great Depression in 1929, Black immigration fell further (Hamilton, 2019; Kasinitz, 1992). Between 1929 and 1939, poor economic conditions and the absence of potential labor opportunities resulted in a dramatic drop in migration flows to the United States, Black or otherwise. From 1932 to 1937, the number of Caribbean migrants residing in the United States declined. Indeed, in 1930 there were 98,620 Black immigrants and by 1940 the number dropped to 83,941 (Hamilton, 2019). This period of low to negative migration continued until the post-World War II period.

The 1950s and 1960s saw widespread economic turmoil in the Caribbean (Kasinitz, 1992). Because of this, desires to emigrate grew in the Afro-Caribbean world (Hamilton, 2019). A combination of changing, more welcoming immigration laws in Great Britain and Europe, a desperate need for workers, and an ease of entry for former colonies offered enticing opportunities for Black Caribbean immigrants to improve their relative social and economic positions (Hamilton, 2019). Further, the United States had a very low demand for immigrant labor during this postwar period. In 1952, the McCarran-Walter Act, which expanded upon the quota system introduced in 1924, introduced additional legal restrictions to immigrants through

visa restrictions. Throughout this period, White immigrants from Western and Northern Europe, received approximately 85 percent of all visas while immigrants from the Caribbean, Africa, Asia, and other White-minority regions faced tremendous legal barriers to entry into the country (Louis et al., 2017). That said, the United States did experience a sharp rise in Black immigration between 1940 and 1960. The population of Black immigrants rose from 83,941 in 1940 to 113,842 in 1950. It again rose to 125,332 by 1960. This would change in 1962 when Great Britain and much of Europe changed their stance on immigration. In this year, Great Britain passed the Commonwealth Immigrants Act. Driven largely by nativist sentiments and fears of employment opportunities, this legislation heavily curtailed the flow of immigration from former colonies in the West Indies and Africa (Hamilton, 2019). These changes, combined with more welcoming immigration laws in the United States, began the third period of Black immigration to the United States. Alongside other noteworthy differences, it is this period that marks the beginning of African migration to the United States.

#### *Black Migration in the Post-Civil Rights Era (1965 – Present)*

The third period of Black immigration to the United States began with the passage of the Immigration and Nationality Act, or the Hart-Cellar Immigration Reform Act, of 1965 (Hamilton, 2019; Hamilton, 2020; Kasinitz, 1992; Kibria et al., 2014). This legislation eliminated the national quota system enacted in 1924 and, in its place, Congress established limits of 20,000 persons per country for the Eastern Hemisphere, with an overall limit of 170,000. In the Western Hemisphere, the total immigration cap was originally set to 120,000 persons regardless of nationality. In 1976, this was changed to a 20,000-person cap per nation (Kasinitz, 1996). This legislation also emphasized two entry preferences for potential

immigrants: family reunification and occupational. Occupational preferences were awarded to those immigrants who were able to display credentials or experience in fields desired in the United States. It is through this employment preference that Afro-Caribbean immigration surged yet again (Hamilton, 2019; Kasinitz, 1992; Kibria et al., 2014).

Afro-Caribbeans, particularly those from the West Indies, had few difficulties obtaining labor certifications for entry into the United States for two specific occupations – nurses and domestic servants (Hamilton, 2019). Because these two fields were dominated by women, much of the growth in the Afro-Caribbean immigrant population between 1970 and 1980 was driven by women who could secure employment in these arenas (Hamilton, 2019). Indeed, the Black immigrant population grew from 257,800 in 1970 to 653,460 in 1980, an increase of over 150 percent largely driven by Afro-Caribbean migration (Hamilton, 2019; Kasinitz, 1992). It is also in this period that the United States saw the demographic profiles of Black immigrants begin to change.

In 1970, the United States saw a trickle of immigration from Sub-Saharan Africa. In this year, approximately 80,000 people identified as an African immigrant, reflecting 0.8% of the total foreign-born population of the United States (Anderson, 2017). Due in part to the passage of the Hart-Cellar legislation, this was the first major influx of Sub-Saharan African immigrants that the United States had seen. It was not this legislation alone that motivated these migrants. In the mid-1950s, African nations began to declare independence from European colonizers and establish sovereign rule (Adjepong, 2018; Hamilton, 2019). Without question, sovereignty was a welcome change to colonial rule; however, not all changes can be called improvements. Decades of colonial rule left many African countries struggling with newly established national boundaries that severed long-held regional and cultural boundaries, economic hardship, and

sociopolitical struggles for control. Mounting social, economic, and political instability, coupled with rising violence, motivated many Africans to emigrate to neighboring countries or to Europe. Between 1960 and 1980, Western European nations, especially former colonial powers, served as popular destinations for African migrants because of their high rates of labor recruitment and available pathways to citizenship (Gordon, 1998). As European economies fluctuated, so too did the demand for African migrant labor. As European nations imposed restrictions on African migration, prospective African migrants looked elsewhere.

Between 1980 and 1990, the population of Black immigrants rose to 1,308,678 in the United States (Hamilton, 2019). Of this population, estimates place 364,000 Black immigrants as being African born (Anderson, 2017). The Refugee Act of 1980 played a sizable role in this increase of 655,218 Black immigrants. This legislation expanded U.S. refugee policies to conform with United Nations protocols. This resulted in 500,000 refugee visas and began migration streams from Somalia, Ethiopia, and Eritrea and strengthened flows from Haiti (Hamilton, 2019). Throughout this period, Afro-Caribbeans remained the majority share of the Black immigrant population and the core contributor to the population's growth.

The United States introduced the 1990 Immigration Act which provided a more welcoming reception to African immigrants seeking to improve their life conditions (Hamilton, 2019). This was for two central reasons. First, this legislation raised the number of immigrants admitted on basic skills, which increased migration flows from both the Caribbean and Africa (Hamilton, 2019). Second, it created a diversity visa system that is designed to increase the number of immigrants from underrepresented countries in the immigrant population of the United States. These two changes brought about a shift in migration patterns for Black immigrants. Most notably, Sub-Saharan Africans became the greatest source of Black

immigration. Indeed, by the year 2000, 881,000 African-origin immigrants lived in the United States, comprising over one-third of the Black immigrant population (Anderson, 2017).

Between 2000 and 2013, migration flows from the Caribbean to the United States grew by 33% and 137% from African to the United States (Hamilton, 2020). By 2015, the number of African immigrants grew to nearly 2.1 million in the United States, comprising 4.8% of the total foreign-born population and nearly 50% of the total Black immigrant population (Anderson, 2017). Further, African immigrants, while a small percentage of the total immigrant population, represent the fastest growing population of immigrants to the United States (Anderson, 2017; Hamilton, 2019; Hurtado-de-Mendoza et al., 2014). In 2016, Jamaica (17.2%), Haiti (15.9%), Trinidad & Tobago (4.6%), and Guyana (3.1%) were the largest sending nations for Afro-Caribbean immigrants. In the same year, Nigeria (7.3%), Ethiopia (5.7%), Ghana (3.9%), Kenya (2.7%), and Somalia (2.1%) were the largest sending nations for Sub-Saharan Black African immigrants.

### **Selective Migration**

Immigrant selectivity plays an important role in understanding the motivations, pathways to entry, and differential outcomes in the immigrant population both when compared to other immigrants and to the U.S.-born population. Indeed, one of the principal explanations for the better health status and lower mortality rates for immigrants relative to U.S.-born groups is selective migration (Borjas, 1994; Elo et al., 2008; Elo et al., 2011; Hamilton, 2019; Hamilton & Green, 2018; Mehta et al., 2016). Through this lens, immigrants are not a randomly selected group. Instead, when compared to non-migrants in their respective country of origin, immigrants tend to be positively selected on measurable characteristics such as income, educational

attainment, and health as well as for unobserved characteristics such as ambition or motivation (Elo et al., 2011; Hamilton, 2019; Model, 2008). Because of this selectivity, the immigrant population of the United States is likely to be more highly educated, maintain greater access to economic resources, and to be healthier than one may reasonably expect if an entire population were equally as likely to migrate.

In his recent text, Tod Hamilton details educational selectivity in primary sending nations in the Caribbean Islands and across the African continent (Hamilton, 2019, p. 77). Immigrants from Ethiopia are the most highly selected group, with 4.98 times as much education as Ethiopians in Ethiopia (Hamilton, 2019). Similar trends can be seen in Sierra Leone (4.09), Sudan (3.69), Liberia (2.96), Nigeria (2.50), Cameroon (2.36), and Kenya (2.26). Ghana is the only major African sending nation with an education ratio below 2.00, resting at 1.96. There is no information for the education levels in Somalia, the only remaining major sending nation from Africa. In a subsequent article, he re-emphasizes educational selection by stating that 63% of Nigerian immigrant Americans maintain at least a bachelor's degree, whereas 7% of Nigerians in Nigeria have reached this same level of education (Hamilton, 2020).

Among Afro-Caribbean immigrants, educational selection is also evident, albeit to a lesser degree than what is observed among Africans. Afro-Caribbeans from Haiti maintain the largest educational difference when compared to their home country, showing an education ratio of 2.37. Those who arrive from Guyana report having 1.56 times as much education as those in Guyana (Hamilton, 2019). These trends continue for Jamaica (1.36) and Trinidad and Tobago (1.22). While the trends in educational selectivity are evident for both Afro-Caribbean and Black African immigrants, selectivity appears to be stronger among Africans. Borjas (1994) offers an explanation for this.

In his 1994 article, George Borjas states the selectivity increases with the costs of immigration (Borjas, 1994). The costs can be monetary, psychological, physical, or a combination of the three (Borjas, 1994; Hamilton, 2019; Jasso et al., 2004). In a later paper, Jasso and colleagues emphasize this point by stating that, as the costs of migration go up, the number of migrants drops (Jasso et al., 2004). One of the central reasons for this increased cost is geographic and/or cultural distance between the origin and receiving nations (Hamilton, 2019). Geographic distance increases the difficulty of navigating to the destination country while simultaneously increasing the fiscal cost of arrival. Because of this, Africans of modest means may experience tremendous difficulty getting to the United States (Hamilton, 2019). Cultural distance makes it difficult for immigrants to adapt and incorporate into receiving nations due to noteworthy differences in norms, beliefs, and behaviors (Hamilton, 2019). It may be the case that, because of the geographic distance between the United States and the many African sending nations, African-origin immigrants are more highly selected on socioeconomic status than their Afro-Caribbean peers.

Elo and colleagues (2011) build on this logic and posit that, in addition to these reasons, African immigrants are more likely to enter the United States on diversity visas and employment-based preferences than other Black immigrants (Elo et al., 2011; Jasso et al., 2005). This distinction is important because the diversity visa system requires that migrants display a high school or equivalent level of education to qualify (Kibria et al., 2018). This degree of educational achievement is no small feat in many African nations (Hamilton, 2019). For this reason, voluntary African migrants display higher educational attainment than those who come to the United States as refugees or from other visa systems. Further, research finds that recent immigrants who arrived in the United States on diversity visas show stronger signs of health



selectivity than those who arrived via other means (Jasso et al., 2005). Afro-Caribbean immigrants, on the other hand, are much more likely to arrive in the United States on family reunification visas than African immigrants (Elo et al., 2011; Kent, 2007; Read & Emmerson, 2005). While migrant selectivity still occurs for this type of entry visa, it is to a far lesser degree.

In contrast to this high degree of selectivity, Africa is a major source of involuntary migrants in the form of refugees (Capps et al., 2011; Elo et al., 2011; Hamilton, 2019; Kibria et al., 2018). In 2010, 22% of all Africans in the United States entered with refugee status (Capps et al., 2011). The vast majority of these African refugees come from four nations: Ethiopia, Liberia, Somalia, and Sudan (Hamilton, 2019). Haitians are also a primary source of Afro-Caribbean refugees, but the percentage is relatively low (~3%) (Kent, 2007). Refugees experience much less selectivity on socioeconomic status and health than voluntary migrants (Elo et al., 2011). Further, refugees display twice the odds of reporting worse health, on average, relative to immigrants in the United States on employment-based visas (Akresh & Frank, 2008; Elo et al., 2011).

Once in the United States, the conversation turns toward the context of reception. Mary Waters found compelling evidence that White employers preferred hiring West Indian immigrants over U.S.-born Black Americans (Waters, 1999). The employers perceived West Indian immigrants as more motivated, flexible, and as having a stronger inclination toward work than Black American peers. In addition to these perceptions, Afro-Caribbean and Black African immigrants alike have obtained a status of “model minority.” Often attributed to the Asian American population, the model minority is one that is perceived to be successful in and adaptive to American culture (Kibria, 2014; Rogers, 2006). In American society, Afro-Caribbeans and Black Africans are perceived very much in this way – they are immigrant populations who can

find success through determination and hard work. In short, Afro-Caribbean and Black African immigrants are an archetype for which other minority groups to imitate. This label stems from similar perceptions to what Waters reports but also reflects the differential status of Black immigrants on the hierarchy of discrimination, particularly relative to U.S.-born Black Americans. This is discussed in greater detail in coming chapters.

### **Afro-Caribbean and Black African Immigrants in the United States**

#### *Demographic Characteristics: Age, Citizenship, English Proficiency, Arrival Cohorts, and Geographic Dispersion*

Black immigrants are overwhelmingly comprised of adults. Approximately 93% of the Black immigrant population is at least 18 years old (Anderson, 2015). The median age of the Black immigrant population is 42 years, just slightly younger than the total immigrant population at 43 years. Black immigrants also maintain an average age that well exceeds that of the American Black population (29 years) (Anderson, 2015). Black African immigrants have a median age of 37 years, while Afro-Caribbeans are notably older, with a median age of 47 years (Anderson, 2015).

As of 2018, 58% of all Black immigrants are U.S. citizens, higher than the general immigrant population at 49% (Anderson, 2018). An estimated 74% of Black immigrants aged 5 years or older are proficient in English (Anderson, 2018). This is roughly 23 percentage points higher than the entire immigrant population (Anderson, 2018). Nearly 63% of Black African immigrants arrived in the United States in the year 2000 or later (Anderson, 2015). Afro-Caribbean immigrants have lived in the United States longer (Anderson, 2015). Afro-Caribbean

immigrants have lived in the United States longer than their African peers, with roughly 42% having arrived before the year 1990 and 18% in 2006 or later (Anderson, 2015).

When examined in the aggregate, Black immigrants tend to reside in the American Northeast (41%) and South (41%). Black Africans primarily reside in the U.S. South (40%) followed by the Northeast (25%), Midwest (19%), and West (16%) (Anderson, 2015). Afro-Caribbeans are more geographically concentrated. In 2013, 51% lived in the Northeast, primarily New York, and 44% lived in the South, primarily Florida (Anderson, 2015). Only 3% reside in the Midwest and the remaining 3% in the West. The top 10 state by Black immigrant population are New York, Florida, New Jersey, Maryland, Massachusetts, Texas, California, Georgia, Pennsylvania, Virginia, and Minnesota (Anderson, 2015).

#### *Socioeconomic Status: Educational Attainment, Employment, and Income*

Socioeconomic status (SES) is known to be significantly associated with health both in the United States and elsewhere (Adler et al., 1999; Cutler et al., 2008; Elo et al., 2011; Glymour et al., 2014; Link & Phelan, 1995; Shavers, 2007). SES is also known to be a key predictor of health disparities in the United States, particularly in the comparison of Black and White Americans (Crimmins et al., 2001; Elo et al., 2011; Pais, 2014; Shavers, 2007; Williams et al., 2010; Williams et al., 2016). For these reasons, it is essential to understand the socioeconomic profiles of Black immigrants, particularly by region and, ideally, country of origin.

In 2014, White Americans maintained an average of 13.75 years of education and Black Americans 13.00 years (Hamilton, 2019). In the same year, Afro-Caribbean immigrants from Guyana (13.16), Haiti (12.27), Jamaica (13.13), and Trinidad and Tobago (13.31) reported a combined 12.97 average years of education (Hamilton, 2019). Black African immigrants from

Cameroon (14.44), Ethiopia (12.85), Ghana (13.62), Liberia (13.15), Kenya (14.25), Nigeria (14.97), Sierra Leone (13.62), Somalia (9.85), and Sudan (13.01) maintained a mean educational attainment of 13.31 years, just over that of U.S.-born Black Americans (Hamilton, 2019).

In terms of educational attainment, 36% of U.S-born White Americans and 20% of U.S-born Black Americans report having a bachelor's degree or greater in 2014 (Hamilton, 2019). In the same year, 20% of Afro-Caribbean immigrants and 36% of Black African immigrants report the same (Hamilton, 2019). Among Afro-Caribbeans, 22% of Guyanese, 13% of Haitians, 22% of Jamaicans, and 27% of those from Trinidad and Tobago had a bachelor's degree or greater (Hamilton, 2019). Black African immigrants display even greater variation in educational attainment at the country-of-origin level of analysis. Nigerians are the most educated of all Black immigrants, with 63% reporting an education of college or greater. This high percentage of college graduates or greater can also be seen for Cameroon (50%), Kenya (43%), and Ghana (37%). Those from Ethiopia (25%), Liberia (25%), Sierra Leone (28%), and Sudan (28%) fall much closer to the levels seen among Afro-Caribbean immigrants and still remain higher than that of U.S-born Black Americans (Hamilton, 2019).

Those who arrive from Somalia report the lowest percentage of college graduates or greater at 6%, lower than any other Black immigrant group and below that of U.S-born Black Americans (Hamilton, 2019). This is likely because a large portion of Somali Americans arrive in the United States as refugees. Similarly, Ethiopia (10%), Haiti (20%), Liberia (8%), Somalia (44%), and Sudan (16%) report some of the largest percentages of respondents with less than a high school education, further reflecting the lesser degree of educational selectivity for refugee groups (Hamilton, 2019).

Existing work shows that Afro-Caribbean immigrants participate in the labor force at comparable rates to the entire immigrant population and at greater rates than the U.S.-born population (Zong & Batalova, 2016). Immigrants from Trinidad and Tobago and Jamaica are more likely to work in skilled labor professions such as business, management, and sciences whereas immigrants from Haiti participate more in services occupations (Zong & Batalova, 2016). Similar to their Afro-Caribbean peers, a larger portion of the Black African population actively participates in the labor force when compared to U.S-born Black Americans (Hamilton, 2019). These labor participation rates are comparable between the two Black immigrant groups.

The median household income of Afro-Caribbean migrants was estimated at \$43,000 in 2013, nearly \$10,000 higher than that of U.S.-born Black Americans (Anderson, 2015). That said, Afro-Caribbean immigrants collectively report notably lower median household incomes than the U.S. adult population (\$52,000) and the U.S. immigrant population (\$48,000). Immigrants from Trinidad and Tobago and Jamaica were estimated to maintain higher median household incomes than this average with \$52,000 and \$51,000, respectively (Zong & Bratalova, 2016). In 2014, an estimated 20% of Caribbean immigrants lived below the national poverty line. These percentages are lower Afro-Caribbeans from Trinidad and Tobago (15%) and Jamaica (13%).

In 2014, Black African immigrants reported higher earnings than both Afro-Caribbean immigrants and U.S-born Black Americans (Anderson, 2015; Hamilton, 2019). The median annual income for men was \$45,812 and \$35,984 for women (Hamilton, 2019). In comparison, Black American men earned \$42,380 and women earned \$35,620. Afro-Caribbean men earned \$41,548 and women earned \$34,996 (Hamilton, 2019). Despite the income advantage that both

Black immigrant groups display, neither report higher incomes than White Americans (Hamilton, 2019).

### **The Health of Afro-Caribbean and Black African Immigrants in the United States**

The health and mortality differential that exists between Black and White America has long been a focus of inquiry, sociological or otherwise. In the late 19<sup>th</sup> century, W.E.B. Du Bois highlighted higher levels of poor health in the Black American population and emphasized that this was the result of racial inequality, not something innate and biological (Du Bois, 1996 [1899]). Despite noteworthy improvement in the health of both Black and White Americans since this time, there remains undeniable evidence that Black-White health and mortality disparities persist. Non-Hispanic Black Americans consistently and persistently display significantly greater risk for almost all morbidities (e.g., type 2 diabetes mellitus, obesity, hypertension, coronary heart disease) as well as for premature mortality when compared to the majority non-Hispanic White Americans (Assari et al., 2018; Colen et al., 2018; Farmer & Ferraro, 2005; Franks et al., 2006; Hertz et al., 2005; Hummer & Chinn, 2011; Hummer & Hamilton 2019; Macinko & Elo, 2009; Olshansky et al., 2012; Orsj et al., 2010; Read et al., 2005; Rosenstock et al., 2014; Williams & Jackson, 2005; Williams & Mohammed, 2009; Zhang & Rodriguez-Monguio, 2012). Hummer and Hamilton provide a clear example of this in their recent text, *Population Health in America* (Hummer & Hamilton, 2019, pp. 134). Out of a battery of 19 chronic health conditions and relative to White Americans, Black Americans fare worse on 17, comparably on 1, and better on only 1 – breast cancer (Hummer & Hamilton, 2019). In this section, I expand upon the discussion of Black-White health disparities by reporting on the existing literature pertaining to Afro-Caribbean and Black African immigrants in the United States.

### *Afro-Caribbean and Black African Immigrants*

Black American immigrants display better birth outcomes, lower mortality rates, lower morbidity rates, and better physical health than U.S.-born Black Americans (Carlisle, 2012; Commodore-Mensah et al., 2016; Ford et al., 2015; Hamilton, 2019; Hamilton & Hummer, 2011; Jackson & Antonucci, 2005; Mehta et al., 2015; Palarino, 2021). This population tends to have better outcomes for infectious disease than U.S.-born Black Americans (Ford et al., 2015). Adair and Nwaneri found that, in the early 1990s, communicable diseases were common in the African immigrant population, despite prolonged residence in the United States (Adair & Nwaneri, 1999; Chaumba, 2011). In their 2009 article, Venters and Gany highlight the fact that several public health reports focused on infectious diseases among African immigrants (Venters & Gany, 2011). African immigrants in the United States tend to have lower HIV infectious rates than U.S.-born Black Americans, but these rates, alongside those for tuberculosis and hepatitis B, were on the rise (Venters & Gany, 2011). Admittedly, the COVID-19 pandemic brings infectious disease to the forefront of many researchers' minds; however, health in the United States is primarily characterized by the presence of chronic, not acute, conditions. For this reason, combined with the scope of this dissertation, I focus the current discussion of health in the United States focus on chronic health conditions.

Between 2000 and 2018, the prevalence of overweight and obesity rose from 65% to nearly 74% in the United States (Caballero, 2007; Fryar et al., 2020). This is disconcerting given that obesity is a known health-threatening condition associated with several comorbidities (e.g., hypertension, type 2 diabetes mellitus). Despite apparent universal growth in body mass, not all racial and ethnic groups are impacted equally. Black Americans and Black neighborhoods are

impacted by disproportionately high prevalence of overweight and obesity (Boardman et al., 2005; Commodore-Mensah et al., 2016). In 2018, 49.6% of Black Americans had a BMI within the obese range compared to 42.2% for White Americans (Hales et al., 2020). The story becomes more complex when the Black population is disaggregated by nativity and again by ethnic or national identity.

Estimates show that foreign-born Black Americans are nearly half as likely to have a BMI within the obese range relative to U.S.-born Black Americans (Bennet et al., 2006). Additionally, the prevalence of obesity in the foreign-born Black population looks remarkably similar to that of White Americans (Ford et al., 2015; Mehta et al., 2015). Commodore-Mensah and colleagues find that Mexican, Central American, and Caribbean immigrants report a prevalence of overweight and obesity just below 74%, identical to the overall prevalence in the United States in 2018 (Commodore-Mensah et al., 2016). These findings likely provide over-estimated prevalence for Caribbean migrants, given the historically high prevalence of overweight and obesity in the Mexican and Central American immigrant population of the United States. Mehta and colleagues show that, when compared to U.S.-born Black Americans, Caribbean and South American immigrants have higher prevalence of normal weight (37.3% v. 24.1%) while maintaining lower prevalence of class 1 (14.1% v. 22.2%) and class 2 obesity (5.0% v. 16.5%; Mehta et al., 2015). Overweight is the only category in which Caribbean and South American immigrants report higher prevalence compared to U.S.-born counterparts (43.6% v. 37.2%). In the same study, the authors find similar trends for African immigrants in the United States. When compared to their U.S.-born counterparts, African immigrants display higher prevalence of normal weight (41.4% v. 24.1%) and notably lower prevalence of obesity class 1 (9.3% v. 22.2%) and class 2 (2.6% v. 16.5%) (Mehta et al., 2015). It is also worth noting



that the BMI profile of African immigrants is better than that of Afro-Caribbean immigrants. In all cases, foreign-born and U.S.-born alike, women present a more pronounced risk for overweight and obesity than men.

Hypertension, or high blood pressure, is one of the leading causes of all cardiovascular disease and cardiovascular related deaths worldwide (van de Vijver et al., 2013). In addition to these concerns, hypertension is closely tied to coronary heart disease, the leading cause of death in the United States. Nearly half of all adults in the United States are hypertensive (Ostchega et al., 2020). When compared to U.S-born White Americans, U.S-born Black Americans display a higher prevalence of hypertension (Dolezsar et al., 2014; Franks et al., 2006; Ostchega et al., 2020). During 2017-2018, the age-adjusted prevalence of hypertension was 57.1% for non-Hispanic Black Americans and 43.6% for non-Hispanic White (Ostchega et al., 2020). U.S.-born Black Americans consistently maintain earlier age of onset, increased severity, and higher rates of hypertension-related mortality than do Whites (Dolezsar et al., 2014). Commodore-Mensah and colleagues state that U.S-born Black Americans maintain one of the highest prevalence of hypertension worldwide and are nearly 30% more likely to die a hypertension-related death than White Americans (Commodore-Mensah et al., 2016). This disparity has been well-documented for decades, but less is known about variation within the Black population.

Due to its potential impact on cardiovascular health and longevity, combined with its high prevalence, hypertension is one of the most frequently studied chronic health outcomes among foreign-born Blacks in the United States. Brown and colleagues find that foreign-born Blacks have significantly lower odds of hypertension than U.S.-born Black Americans (Brown et al., 2017). The systolic blood pressure of foreign-born, non-Hispanic Blacks was significantly lower than that of U.S.-born Black Americans and there was no difference in diastolic blood

pressure (Brown et al., 2017). These findings build on prior research that suggests foreign-born Blacks have lower prevalence of hypertension than their U.S.-born counterparts (Borrel et al., 2008; Venters & Gany, 2011). Caribbean Black immigrants have a lower prevalence of hypertension (22%) relative to U.S.-born Black Americans (Commodore-Mensah et al., 2017a). Studies on African immigrants find lower prevalence of hypertension and tend to acknowledge lower prevalence of coronary heart disease alongside other cardiovascular conditions (Okwusoa & Williams, 2012; Turkson-Ocran et al., 2020; Venters & Gany, 2011). Between 2010 and 2014, the prevalence of hypertension was estimated at 21% for African immigrants, notably lower than that of U.S.-born Black Americans (Commodore-Mensah et al., 2017a). Njeru and colleagues found that Somalis in Minnesota, a population comprised primarily of forced migrants and refugees, displayed similar prevalence of hypertension to non-Somalis in the same region (Njeru et al., 2016). Commodore-Mensah and colleagues found that, among Ghanaian and Nigerian immigrants, cardiovascular disease risk appeared lower among recent immigrants but increased as time in the United States increased (Commodore-Mensah et al., 2017b). This rise in risk was most notable among men; however, long-term female immigrants displayed significantly higher odds of having hypertension than more recent counterparts (Commodore-Mensah et al., 2017b).

In addition to these heightened rates of obesity and hypertension, Black Americans are at significantly higher risk for type 2 diabetes mellitus (henceforth diabetes) than White Americans (Ali et al., 2016; Ford et al., 2015). Blacks are twice as likely to be diagnosed with diabetes and suffer more target organ damage<sup>3</sup> than Whites (Commodore-Mensah et al., 2017a). Research on diabetes among foreign-born Blacks is relatively scarce when compared to the previous two

---

<sup>3</sup> Target organ damage refers to impairments, be they structural or functional, to major body organs (e.g., heart, brain, kidney) as a result of heightened blood pressure and diabetes. Abegaz provides several examples of target organ damage: left ventricular hypertrophy, retinopathy, and vascular dementia (Abegaz, 2017).

health conditions (Venters & Gany, 2011). Some work shows that Africans display higher risk for diabetes than U.S.-born Black Americans (Oza-Frank & Narayan, 2010; O'Connor et al., 2014), whereas others show that they have significantly lower prevalence of diabetes than U.S.-born counterparts (Ford et al., 2015; Turkson-Ocran et al., 2020). Some African populations, namely Somali, report significantly higher rates of diabetes than non-Somalis, which may contribute to these divergent findings (Njeru et al., 2016).

Beyond physical health, there is evidence of disparities in psychological health between Black and White Americans as well as within the Black population of the United States. Caribbean Black immigrants tend to have lower rates of psychological distress than U.S.-born groups but are shown to experience high rates of racism-related stress in the United States as their length of residence increases (Case & Hunter, 2014). Ahmed and Rasmussen suggest that African immigrants are not immune to insults to their mental health, despite apparent advantages in many other health-related arenas (Ahmed & Rasmussen, 2020). They find that there is increased psychological distress among African immigrants who experience underemployment, a common phenomenon among African immigrants, and other “broken promises” of migration. Another important component of stress and distress is allostatic load, or stress-induced physiological dysregulation resulting from chronic exposure to stress (Bingham et al., 2016). Some suggest that African immigrants, particularly those displaying unhealthy assimilation behaviors, who were older at immigration, and who have increased duration in the United States, display higher rates of stress and, therefore, higher allostatic load scores (Bingham et al., 2016). It is reasoned that a large portion of this stress is associated with discrimination and racism both at the interpersonal and institutional levels.

## **The Immigrant Health Advantage**

To those unfamiliar with the study of immigrant health, these trends may come as a surprise. Immigrants, particularly those of color, are often subject to socioeconomic disadvantage upon arrival in the United States (Abraído-Lanza et al., 1999; Frisbie et al. 2001; Hummer & Hamilton, 2019; Palarino, 2021; Palloni & Arias, 2004; Singer et al., 2017). Extant literature shows that restricted access to social, occupational, and economic resources is strongly correlated with greater morbidity rates and an increased risk of premature mortality relative to those who are socioeconomically advantaged (Adler et al., 1999; Cutler et al., 2008; Elo et al., 2011; Glymour et al., 2014; Hummer & Hamilton, 2019; Link & Phelan, 1995; Shavers, 2007). Despite these disadvantages, immigrants often display better-than-expected health and longevity when compared to peer U.S.-born racial and/or ethnic groups (Frisbie et al., 2001; Hamilton & Green, 2018; Ichou & Wallace, 2019; Markides, 1986; Palarino, 2021; Singer et al., 2017). It is this paradoxical relationship that has intrigued immigrant health scholars and ultimately led to the establishment of the immigrant health advantage (Riosmena, Kuhn, and Jochem, 2017). Sometimes referred to as an epidemiological paradox, the Hispanic Health Paradox (when referring to those of Hispanic/Spanish descent), or a health immigrant effect, the immigrant health advantage provides both an acknowledgement of and explanation for the counterintuitive relationship between immigrant status and health in the United States (Abraído-Lanza et al., 1999; Hamilton & Green, 2018; Hamilton & Hummer, 2011; Markides 1986). While it is difficult to completely understand the mechanisms contributing to the immigrant health advantage, researchers have done a phenomenal job highlight two key explanations: immigrant selectivity (Borjas, 1994; Elo et al., 2008; Elo et al., 2011; Hamilton, 2019; Hamilton & Green,

2018; Mehta et al., 2016; Model, 2008; Riosmena et al., 2017) and cultural buffering (Abraído-Lanza et al., 1999; Hao & Kim, 2009; Jasso et al., 2004; Taylor & Sarathchandra, 2016).

Discussed earlier in this chapter, immigrant selectivity reflects the notion that immigrants are a nonrandom population (Elo et al., 2011; Hamilton, 2019; Model, 2008). Those who migrate tend to be positively selected on characteristics such as social capital, income, wealth, educational attainment, and health status when compared to their non-migrant peers in the country of origin (Borjas, 1994; Elo et al., 2008; Elo et al., 2011; Hamilton, 2019; Hamilton & Green, 2018; Mehta et al., 2016; Model, 2008; Riosmena et al., 2017). These positively selected immigrants are over-represented in the American population which, in turn, raises the health status of immigrant groups above what one may expect if migration were entirely random.

Cultural buffering, a topic not discussed to this point, reflects the second potential explanation for the immigrant health advantage. This second explanation concerns the protective effects of culture and norms in immigrant lives and communities (Abraído-Lanza et al., 1999; Hao & Kim, 2009; Jasso et al., 2004; Taylor & Sarathchandra, 2016). Through the perspective on cultural buffering, the health of immigrants is safeguarded by protective health behaviors and social factors, such as a healthier diet, stronger familial support, tight-knit social support, and refraining from cigarette smoking (Hamilton, 2019; Jasso et al., 2004; Vega & Amaro, 1994). Beyond individual-level characteristics, many interpretations of cultural buffering consider the importance of group- and neighborhood-level characteristics such as the ethnic enclave. An ethnic enclave is a geographic region, often a neighborhood, in which those of like-ethnic identity or national origin congregate (Cagney et al., 2007; Fenelon, 2017). The close proximity to like-ethnic groups provides shared language, cultural beliefs and practices, higher quality diets, and high levels of social cohesion. These factors are thought to be protective against

worsening health status and are shown to discourage residents from partaking in health threatening behaviors while promoting positive health behaviors (Abraído-Lanza et al. 1999; Cagney et al., 2007). These two explanations are not mutually-exclusive –selectivity and cultural buffering can, and likely do, occur in conjunction to impact immigrant health. Another characteristic of the immigrant health advantage is that it is not always long-lived.

With increased time in the United States, the health of immigrant populations declines, sometimes converging with that of the U.S.-born population (Antecol & Bedard, 2006; Frisbie et al., 2001; Goel et al., 2004; Jasso et al., 2004; Palarino, 2021; Urquia et al., 2012; Van Hook et al., 2018). Whether across the life course of first-generation immigrants or intergenerational declines, immigrant populations experience this deterioration. One of the primary explanations for this oft experienced decline is “negative acculturation/assimilation.” Acculturation refers to behavioral changes leading to some degree of conformity with a host society’s culture (Riosmena et al., 2014). The process of negative acculturation involves adopting more health-threatening behaviors like unfavorable changes in diet and nutrition, a rise in cigarette smoking prevalence, and higher levels of alcohol use (Abraído-Lanza et al., 2005; Akresh, 2007; Riosmena et al., 2014). In addition to these changes, more time spent in the United States is associated with gains in body mass (Abraído-Lanza et al., 2005; Riosmena et al., 2014). It is because of the known associations between these health behaviors and chronic disease and/or mortality that this perspective is often at the forefront of discussions on acculturation and health declines among immigrants (Riosmena et al., 2014; Rogers et al., 2005).

Riosmena and colleagues (2014) offer an alternative explanation for the health declines in first- and second-generation immigrants in the United States (Riosmena et al., 2014). In their analysis of mortality outcomes among Latino first- and second-generation immigrants in the

United States, they find that negative acculturation may be neither the only or the main explanation for the association between length of stay and health declines (Riosmena et al., 2014). They come to this conclusion based on their finding that mortality and duration of stay are strongly associated with one another even after controlling for measures of acculturation and adaptation. Instead, the authors suggest that immigrant health deterioration also related to structural forces, which they nest under the “cumulative disadvantage” perspective (Riosmena et al., 2014). Cumulative advantage/disadvantage theory (henceforth “cumulative disadvantage theory”) highlights interindividual divergence in some social outcome, in this case, health, over time (Dannefer, 2003; Ferraro & Kelley-Moore, 2003). Importantly, the divergence is not an extrapolation of individual social position at the beginning of a period. Instead, it is a systematic tendency (Dannefer, 2003). According to cumulative disadvantage, those who experience early-life insults may well experience health disadvantages throughout the life course well into late adulthood (Dannefer, 2003; Willson et al., 2007). In the context of immigration, cumulative disadvantage may also envelope precarious socioeconomic trajectories and legal status (Riosmena et al., 2014). For Black immigrants, it may be the case the accumulation of more perceived and/or experienced acts of racism or discrimination across their life span, particularly in the United States (Elo et al., 2008).

### *The Immigrant Health Advantage. Racial Context of Origin, and Black Immigrants*

Admittedly, the Hispanic immigrant population of the United States has received the most attention regarding the immigrant health advantage (Elo et al., 2011). This is no surprise, given the fact that Hispanic immigrants are the largest immigrant ethnic group in the United States (Elo et al., 2011). This trend is changing to encompass a greater variety of racial, ethnic, and national-

origin immigrant populations, given the shifting profile of American immigrants (Anderson, 2017; Anderson & López, 2018; Elo et al., 2011; Frisbie et al., 2001; Palarino, 2021). Indeed, there is a body of literature that discusses the health of Black immigrants in reference to this immigrant health advantage. In their study, Antecol and Bedard (2006) highlight that Black immigrants, like other immigrant groups, arrive to the United States with better health than U.S.-born Black Americans. Further, the health of Black immigrants is comparable to that of White Americans across some indicators of health (Hamilton, 2019). Antecol and Bedard go on to state that, even after 20 years in the United States, Black immigrants maintain a notable health advantage over their U.S.-born Black American peers (Antecol & Bedard, 2006). Subsequent studies support this general notion and emphasize that Black immigrants, by and large, do display better physical health than their U.S.-born Black peers (Commodore-Mensah, 2016; Ford et al., 2015; Mehta et al., 2015; Palarino, 2021).

Because the Black immigrant population displays a high degree of national origin heterogeneity, these health trends may be further complicated. Elo and colleagues (2008) and Read and Emmerson (2005) suggest that distinct patterns in health may well appear when disaggregating the Black immigrant population into more distinct national or regional groups (Elo et al., 2008; Read & Emmerson, 2005). Due to the variation in social and economic capital, English proficiency, pathways to entry, and refugee status, the immigrant health advantage likely looks quite different depending on which national- or region-origin population under investigation.

Reflecting the large and growing literature on the effects of racism on health, Read and Emmerson propose moving away from a singular perspective analyzing race and structures of racism in the receiving country and, instead, emphasize the importance of considering both the



context of race and racism in the receiving and origin country (Read & Emmerson, 2005). Through this Racial Context of Origin perspective, the authors suggest that Black immigrants who originate from Black majority countries, such as those from Africa and parts of the Caribbean, have been exposed to less racism and discrimination throughout the life course than Blacks from White majority countries, such as the United States and Europe. Blacks living in or hailing from majority White countries often suffer greater esteem issues, are from lower rungs of the socioeconomic ladder, and are on the receiving end of both interpersonal and structural racism relative to peer Blacks from Black majority countries (Read & Emmerson, 2005; Waters, 1999; Winant, 2001). This differential exposure is what leads to variability in health status.

Returning to cumulative disadvantage theory, early life experiences, particularly undesirable ones, combined with repeated exposure to stressful events across the life course, have negative consequences on human development and health status (Read & Emmerson, 2005; Power & Hertzman, 1999). The opposite can be said about positive early life conditions and decreased exposure to stressful events, such as racism and discrimination. When evaluated empirically, Read and Emmerson find support for their theory in the form of a gradient of health among Black immigrants. Africans, who hail from primarily Black majority countries, fare best in their health status while European Black immigrants, who hail from Black minority countries, fare the worst. Caribbean and South American Black immigrants' health status falls between that of African and European Black immigrants. As such, it is likely essential to examine the health of Black immigrants not solely by their nativity status or regional origin, but also by their national origin. These findings have been supported by other empirical studies of Black immigrants in the United States. For example, Thomas and colleagues find that Guyanese and Haitian immigrants in the United States display higher rates of poor and intermediate

cardiovascular health than peer immigrants, particularly Jamaicans (Thomas et al., 2019). The authors suggest that Jamaican immigrants, among other African groups from Black-dominant countries, have lower levels of internalized racism and discrimination because of their pre-migration circumstances.

Building on this discussion of the racial context of origin is the context of reception, or the destination. In the study of immigrant health, context of origin is often considered. In most analyses, one may see Mexico or Southeast Asia as the sending region for the immigrant group of interest and the context of the destination is taken for granted (Urquia et al., 2010). In this case, the United States, stands apart from other receiving regions for Black immigrants. Indeed, existing work on the health of Black immigrants, African and Caribbean alike, shows better health outcomes in the United States when compared to Europe (Grosfoguel, 2003; Hamilton, 2019; Urquia et al., 2010; Imoagene, 2017). The odds of low birthweight births are significantly lower in the United States for Sub-Saharan African and Caribbean women than those seen in Europe (Urquia et al., 2010). In the United States, Nigerian immigrants show signs of better health in the form of less chronic conditions and better health status than those in the United Kingdom (Grosfoguel, 2003; Hamilton, 2019; Imoagene, 2017). Admittedly, the reasons for these differences are complex and are not fully understood; however, the explanations that do exist are compelling.

Black immigrants to the United States may be protected from the full extent of racial discrimination, and its subsequent detriment, because they originate from countries that were not colonial subjects of the United States. As previously discussed, immigrants originating from the Caribbean and Africa are often drawn to former colonial nations due to the relative ease of entry and pathways toward citizenship, if it is not already present. One may expect that the presence

and shared cultural understanding of these nations would ease integration and assimilation, but others push back on this notion. Some attest that the colonial history places Black immigrants lower on the social hierarchy in European destinations. In the United States, these immigrants, along with those from other Black sending countries never colonized by the United States, occupy a position higher in the social and discrimination hierarchy than U.S.-born Blacks, due to their connection to the history of slavery (Hamilton 2019). Because of this higher position, Black immigrants may be perceived more positively and experience less exposure to social, economic, and health-related barriers once in the United States.

### **Dissertation Aims**

In this dissertation, I build on the existing body of immigrant health literature by providing detailed analyses of the Afro-Caribbean and Black African immigrant populations of the United States. My analyses are particularly focused on variability in health within these Black immigrants and what characteristics can better explain differential outcomes when compared to peer Black immigrants and the Black American population. Specifically, I pose the following questions:

1. In what ways does country and/or region of origin explain variability in the health of Afro-Caribbean and Black African immigrants in the United States relative to their U.S.-born Black American counterparts?
2. In what ways might time since arrival to the United States differentially impact the health of Afro-Caribbean and Sub-Saharan Black African immigrants relative to that of non-Black immigrants living in the United States?

3. To what degree does sex moderate the immigrant health advantage evident among Afro-Caribbean and Black Sub-Saharan African immigrants living in the United States?

This dissertation follows the work of prominent scholars in the field of immigration and immigrant health like Yvonne Commodore-Mensah, Irma Elo, Tod Hamilton, Philip Kasnitz, Neil Mehta, Jen'nan Ghazal Read, and Mary Waters. These three questions serve to contribute to and expand upon the growing body of literature investigating the health outcomes of Afro-Caribbean, Sub-Saharan African, and other Black immigrants in the United States by investigating additional sources of variation heretofore un- or underexamined in the literature. By disaggregating these samples to better understand the differential experiences of respondents, this dissertation serves to inform future immigration research, public health, and clinical practice on a large and rapidly growing segment of our population.

## **Chapter 3**

### **Data, Sample, and Methods**

#### **Data**

In this dissertation, I use secondary data from the National Health Interview Survey, henceforth referred to as the NHIS, from 2000 through 2018. The NHIS is an annual, cross-sectional household survey conducted by the National Center for Health Statistics (Centers for Disease Control and Prevention, 2020). I acquire these data through the IPUMS Health Surveys consortium (Blewett et al., 2019). The IPUMS website provides a harmonized set of data from the NHIS. Conducted since 1957, the NHIS is a key source of information on the health of the civilian, noninstitutionalized population of the United States. Indeed, because of this explicit focus, the NHIS contains invaluable data on not only the health of the American population but also their demographic characteristics, socioeconomic status, and nativity.

The NHIS does not rely on a single questionnaire. Data from the NHIS are organized by the source questionnaire: Household Core Questionnaire, Family Core Questionnaire, Person Questionnaire, Sample Adult Questionnaire, and Sample Child Questionnaire. There is also an Injury Episode file that is not used in this study. The Household Core Questionnaire includes information on the composition of the household provided by an individual respondent. This includes but is not limited to information regarding the type of dwelling, whether the respondent owns or rents the dwelling, and the age of each inhabitant. Data from the Family Core Questionnaire pertains to questions of health insurance or medical needs within the family. The Person Questionnaire provides information on the demographic and socioeconomic characteristics of the respondent. Finally, the Sample Adult and Sample Child Questionnaires contain information for only one adult (aged 18 years or older) and child (aged 17 years or

younger) from the household in question. These Sample Questionnaires contain detailed health outcome and health behavior information. A key characteristic of these data to remember is that the Sample Adult Questionnaire, which is used extensively in this dissertation, contains approximately one-third the sample when compared to the Household, Family, and/or Person Questionnaires.

Taken together, the NHIS data are an exceptional dataset to address each of my research questions. I say this for many reasons. First, the NHIS data are nationally representative of the noninstitutionalized, civilian population. This means that, when properly weighted and analyzed, results can be generalized to the entire noninstitutionalized, civilian population of the United States. Second, the explicit goal of the NHIS is to capture data on population health. Because of this, the data contain rich information on not only health status and different health outcomes, but also essential demographic, socioeconomic, and behavioral characteristics. Finally, and most important to the current study, the NHIS has information on migration, nativity, and assimilation for foreign-born groups. Specifically, these data contain measures of United States' citizenship, broad global region of birth, time since arrival to the United States, and interview language. Each of these variables are essential to my investigation of the health of Afro-Caribbean and Black African immigrants. Importantly, I restrict my data range to 2000 through 2018 because questions related to immigration and nativity become available in the 2000 NHIS questionnaire.

Beyond these publicly available data, the NCHS retains sensitive information that may threaten the confidentiality of NHIS respondents. These data are not released to the public but can be accessed after a thorough application process in controlled Federal Statistical Research Data Centers (RDC). In these RDCs, data storage and analyses are monitored and screened before being released for circulation. In my analyses, I make use of the Rocky Mountain

Research Data Center (RMRDC), a secure research environment housed in the Institute of Behavioral Science at the University of Colorado Boulder. These restricted data are appealing for several reasons. First and foremost, restricted-access NHIS data contain detailed country of birth information. As previously mentioned, public-use NHIS data identify broad geographic regions of birth such as Africa or Mexico/Central America/Caribbean. Restricted-access data contain identifiers at the country level. This allows for a more detailed investigation of the health of Afro-Caribbean and Black African immigrants. Second, in the restricted files, respondents report the precise year of arrival in the United States. Unlike the data available in the public-use files, which provide only broad categories since arrival, the detailed year allows for a more precise investigation of the potential role of duration and, after careful consideration, age, period, and cohort of arrival.

## **Measures**

### *Technical Measures*

In the NHIS data, I identify unique respondents using a concatenated variable consisting of calendar year of interview, household number, family number, and person number. In weighted analyses, I use the person and sample person weights provided through the IPUMS NHIS download. The person weight is designed to be used in person-level analyses and represents the inverse probability of selection into the NHIS sample. The sample weight represents the random selection of a person in the household to complete the sample adult/child supplement. The sample weight is the inverse probability of selection into a supplement. Both the person and sample weights are adjusted for non-response and contain post-stratification adjustments for age, race/ethnicity, and sex. To account for several years of data, I divide each weight by 18 prior to

use. I also include two provided measures in all weighted models. Strata, a measure of stratum for variance estimation, represents the impact of the sample design stratification on estimates of variance. Primary sampling unit (PSU) for variance estimation represents the impact of sampling design clustering on estimates of variance.

### *Demographic Characteristics*

Age is measured continuously in the NHIS. In my analyses, I retain this continuous measure and center age at 46.17206, the average age for the total sample. Sex is measured dichotomously where 0 is men and 1 is women.

Race captures self-reported race and is originally measured as White, Black/African American, American Indian/Alaskan Native, Asian, race group not releasable, and multiple races. Ethnicity is captured as Hispanic ethnicity and is coded as not Hispanic/Spanish origin, Mexican, Mexican American, Puerto Rican, Cuban/Cuban American, Dominican (Republic), Central or South American, Other Latin American, Other Spanish, and Multiple Hispanic. Global region of birth is coded as the United States; Mexico, Central America, Caribbean Islands; South America; Europe; Russia (and former USSR areas); Africa; Middle East; Indian Subcontinent; Asia; Southeast Asia; Elsewhere; and Unknown. In my analysis of public-use NHIS data, I combine these three markers and identify groups based on their nativity status. First, I identify 5 U.S.-born groups: non-Hispanic Black/African American, non-Hispanic White, American Indian/Native American/Alaskan Native, non-Hispanic Asian, Hispanic and those who are non-Hispanic with another racial identity. Next, I identify those who are foreign-born: Black/African Mexicans/Central Americans/Caribbean Islanders, non-Black/African Mexicans/Central Americans/Caribbean Islanders, South Americans, Europeans/Russians, Black Africans, non-



Black Africans, Middle Easterners, Indians (from Indian subcontinent), non-Southeast Asians, Southeast Asians, and those of an unknown or other global region of birth.

In restricted-use NHIS files, I use country of birth to further refine the categories for Caribbean and African groups. Through this process, I identify 7 foreign-born Afro-Caribbean and Black African groups and one aggregated “other foreign-born” group: Haitian, Jamaican, Trinidadian & Tobogan, Guyanese, Central/Southern African, East African, West African, and “other”<sup>4</sup>. I implement the same restriction criteria on race which necessitates that any respondent in these Afro-Caribbean and Black African nationalities self-identify as Black. Further, I am unable to provide greater detail on the national origin of Black African migrants due to sample size and associated confidentiality concerns. The categorizations of Black African immigrants will differ in my analyses. Any of these differences will be clearly documented in the question-specific methods.

### *Nativity and Acculturation*

In the public-use NHIS, duration since arrival in the U.S. is measured categorically as less than 1 year, between 1 and 4.99 years, between 5 and 9.99 years, between 10 and 14.99 years, and 15 or greater years. In restricted-use NHIS data, duration since arrival to the U.S. is measured continuously. Interview language is measured categorically as English only, both English and Spanish, Spanish only, and neither English nor Spanish. In my analyses, I employ a dichotomized form where 0 reflects an interview in anything other than English while a value of 1 reflects an interview in English.

---

<sup>4</sup> Individuals in the foreign-born “other” category are those who self-report any region of birth beyond those explicitly considered in the existing categories for foreign-born respondents.

### *Socioeconomic Status*

Educational attainment is measured categorically as the highest degree the respondent self-reports earning less than high school; high school or GED; some college, an associate degree, or technical training of some kind; or a bachelor's degree or greater. In analytical models, I adjust this coding to a dichotomous variable measuring educational attainment as either less than college (0) or college or greater (1). Income is measured as a family's income-to-needs ratio (INR), or an income-to-poverty ratio. This INR is captured categorically as less than 1.00, 1.00 to 1.99, and 2.00 or greater. In this measure, a value of less than 1 reflects a family income that falls below the federal poverty line in that calendar year. Further, I truncate my measure of INR to 2.00 or greater because 12 years of NHIS data maintain a measure of INR listed as "2.00 and over (no other detail)". To preserve as much accuracy as possible, I restrict all values of INR that fall above 2.00 to this final category.

### *Health Behaviors*

Health care access and utilization is assessed using three measures. The first is whether a respondent self-reports having health insurance and is measured dichotomously. The second captures when the respondent's last visit to a health care provider was. This variable is measured dichotomously less than 1 year ago (0) or 1 or more years (1).

Alcohol consumption is measured categorically and is based on the self-reported average number of days drank combined with the number of alcohol beverages consumed on those days. The categories in this variable are current drinkers, former drinker, and lifetime abstainer. Current drinkers reflect those who self-report having had 12 or more alcoholic beverages in their life and self-report having had 12 or more alcoholic beverages in the last 12 months. Former

drinkers are those who report having had 12 or more alcoholic beverages in their life but have not had 12 or more alcoholic beverages in the last 12 months. Lifetime abstainers are those who self-report not having had 12 or more alcoholic beverages in their life.

Cigarette smoking is measured categorically and is derived from self-reported smoking status and the number of cigarettes smoked per day. The variable is categorized as current smokers, former smokers, and lifetime abstainers. Smoking status reflects whether a respondent has ever smoked 100 cigarettes and whether the respondent self-reports currently, formerly, or never smoking cigarettes.

Physical activity is captured using a measure of weekly vigorous activity participation. This variable is coded categorically as no vigorous physical activity, < 75 minutes of physical activity, and  $\geq 75$  minutes of physical activity.

### *Health Status and Conditions*

#### General Health Status

General health status is measured through self-rated health, which is captured categorically as poor, fair, good, very good, and excellent. Self-rated health is a common measure of general health status and is found to be correlated with more objective measures of health (i.e., physician diagnoses) and is predictive of mortality (Idler and Benyamini 1997; Schnittker & Bacak, 2014; Yang & Land, 2013). In my analyses, I recode this variable to measure self-rated health dichotomously where 0 reflects good, very good, or excellent self-rated health and 1 reflects either poor or fair self-rated health.

#### Physical Health Conditions

In what follows, I outline several health measures used in my analyses. Each of these variables are captured dichotomously in response to the following question: “Have you ever been told by a doctor or other health professional that you had [condition]?” Affirmative responses are coded as 1 and responses in the negative are coded as 0. I use 5 measures of cardiovascular health in my analyses: hypertension, angina pectoris, coronary heart disease, some other heart condition, and heart attack. To reduce the number of models, I create a combined measure of cardiovascular health where an affirmative answer to angina pectoris, coronary heart disease, some other heart condition, or a heart attack will result in an affirmative combined response. There is no difference between a single affirmative answer and multiple affirmative answers. Hypertension remains as an independent cardiovascular outcome of interest.

I utilize a single variable for respiratory health: asthma. In this variable, respondents are asked if they have ever been told by a doctor or other health professional that they have asthma. This measure is ideal for capturing a history of asthma as many individuals experience a reduction in severity or symptoms as they transition out of adolescence into adulthood (Adeloye et al., 2013; Gowrie et al., 2016).

Diabetes is measured dichotomously as never being told that they have diabetes (0) or being told that have pre-diabetes or diabetes (1). Body mass index, or BMI, measured as the respondent’s mass (measured in pounds) divided by height (measured as inches squared) multiplied by 703 ( $BMI = \frac{lbs}{inches^2} * 703$ ), is presented continuously in the NHIS. I use this continuous measure to create a dichotomous measure of BMI: those with a BMI in the normal weight range ( $18.5 \leq BMI \leq 24.9$ ; coded as 0) and those with a BMI in the overweight ( $25.0 \leq BMI \leq 29.9$ ) or obese ( $30.0 \leq BMI$ ) ranges, coded as 1.

## **Mental Health**

My core measure of mental health is the K6 nonspecific distress scale (Kessler et al., 2002). This measure is designed to assess mental health at the population level. This measure is composed of six separate items that ask respondent, within the last 30 days, how often they felt sad, nervous, restless, hopeless, worthless, and that everything was an effort. Response options range from 0, “None of the time”, to 4, “All of the time”, and are conventionally summed to form a score ranging from 0 to 24 (Prochaska et al., 2012). Recent work suggests that this continuous measure, while informative, does not denote meaningful change between scores. I opt to use threshold proxies for clinically relevant levels of distress as outlined by Staples and colleagues (2019). I dichotomize the total scores where a score of 8 or higher denotes clinically relevant distress and is coded as 1 and all other values are coded as 0. The NHIS contains a measure of ADHD; however, there are too few responses in the foreign-born sample to properly utilize.

## **Sample**

The total sample size of the NHIS for the years 2000 through 2018 is 1,298,461 (Table 3.1). Of this sample, 78.8% of respondents report being born in the United States while the remaining 21.2% report a birthplace outside of the United States. Among the U.S.-born sample, there are 148,599 non-Hispanic Black/African Americans, 736,181 non-Hispanic White Americans, 9,401 American Indians/Native Americans/Alaskan Natives, 15,225 non-Hispanic Asian Americans, 97,863 Hispanic Americans, and 15,936 Americans who identify as being non-Hispanic but of an unlisted racial identity. Among those who are foreign-born, there are 10,066 Black/African Mexicans/Central Americans/Caribbean Islanders, 139,650 non-Black/African Mexicans/Central Americans/Caribbean Islanders, 16,677 South Americans, 25,145 Europeans or Russians, 6,542

Black Africans, 2,100 non-Black Africans, 5,342 Middle Easterners, 13,580 Indians, 16,686 non-Southeast Asians, 26,486 Southeast Asians, and 12,982 respondents of unknown or some other global region of birth.

The Sample Adult subsample is approximately one-third the size of the total NHIS sample. In Table 3.1, I provide a detailed breakdown of the NHIS and Sample Adult samples side-by-side. The proportion of respondents in each racial/ethnic/nativity category remains largely unchanged between these two samples.

**Table 3.1.** Sample Distribution by Total Sample and Sample Adult Sample, Adults Aged 18-65+, Public-Use National Health Interview Survey 2000-2018

	Total Sample		Sample Adult	
	N	%	N	%
<b>U.S.-Born Sample</b>				
Non-Hispanic Black/African American	148,599	11.4	71,320	12.5
Non-Hispanic White	736,181	56.7	343,063	59.9
American Indian/Native American/Alaska Native	9,401	0.7	4,041	0.7
Non-Hispanic Asian	15,225	1.2	6,061	1.1
Hispanic	97,863	7.5	37,198	6.5
Non-Hispanic Other	15,936	1.2	7,475	1.3
<b>Foreign-Born Sample</b>				
Black/African Mexican/Central American/Caribbean	10,066	0.8	4,160	0.7
Non-Black/African Mexican/Central American/Caribbean	139,650	10.8	51,090	8.9
South American	16,677	1.3	6,597	1.2
European/Russian	25,145	1.9	11,305	2.0
Black African	6,542	0.5	2,780	0.5
Non-Black African	2,100	0.2	838	0.1
Middle Eastern	5,342	0.4	2,058	0.4
Indian	13,580	1.0	5,160	0.9
Non-SE Asian	16,686	1.3	6,683	1.2
SE Asian	26,486	2.0	8,917	1.6
Unknown/Other Global Region of Birth	12,982	1.0	3,593	0.6

N<sub>Total Sample</sub> = 1,298,461; N<sub>Sample Adult</sub> = 572,339

Source: National Health Interview Survey 2000-2018

## **Conclusion**

In this chapter, I describe the National Health Interview Survey (NHIS); list and describe the health outcomes, measures of race and nativity, and core control variables used in my analyses; and provide a general overview of the sample from the NHIS between the years 2000 and 2018. While there will be some question-specific additions and removals from this list, it provides a comprehensive groundwork of the methods employed in upcoming analyses. In Chapters 4, 5, and 6, I investigate my three substantive research questions in detail. In each of these chapters, I provide additional contextual grounding for the specific research question under investigation; detail any changes to model covariates, modeling approaches, or sampling changes; and outline my analytical approach to examining the research question.

## **Chapter 4**

### **National and Regional Origin**

The Black population of the United States is changing rapidly, particularly as the result of immigration. As the Black segment of the foreign-born population continues to grow, it becomes increasingly important to understand the intricacies of health in the Black population of America for several reasons. The Black population of America has and continues to experience disadvantages in the realms of health and mortality, especially when compared to the White American population. The growing, relatively healthy Black immigrant population could, and likely does, impact our understanding of health in the Black population at large and could bias observed “improvements” in health when comparing Black and White Americans. As such, it is imperative that research examine the potential heterogeneity within the Black population as to better identify trends in both population health and mortality.

In this chapter, I build on the existing literature on Black immigrant health by examining the health of Afro-Caribbean and Black African immigrants by their national and/or regional origin. Existing research often aggregates Black immigrants into broad categories (i.e., Africa, Caribbean) (Adair & Nwaneri, 1999; Ali et al., 2016; Bingham et al., 2016; Capps et al., 2012; Carlisle, 2012; Commodore-Mensah, 2015; Commodore-Mensah, 2017a; Corra & Kimuna, 2009; Hammond et al., 2011; Hurtado-de-Mendoza et al., 2014; O’Connor et al., 2014; Okafor et al., 2013a; Okafor et al., 2013b; Palarino, 2021; Thomas et al., 2019; Venters & Gany, 2011; Zong & Batalova, 2019). These findings contribute substantially to our collective understanding of Black immigrant health in the United States but are often restricted by data limitations. As such, these studies are limited in their ability to assess variation in this largely heterogenous



population. I address this shortcoming by drawing on country of origin data to detail the national and regional origins of several Black immigrant groups.

### **Racial Context of Origin and Destination**

In 1999, Mary Waters publish an article comparing the socioeconomic profiles of Caribbean Black immigrants living in New York City to their U.S.-born Black counterparts (Waters, 1999). She found that Caribbean Black immigrants had higher rates of employment, more hours worked per week, and higher average income than U.S.-born Blacks. She theorizes that it is Caribbean migrants' culture of origin that protects them. Because Caribbean immigrants are by and large from Black-majority sending countries, they are exposed to lower rates of racism and discrimination, allowing them to accrue more social and cultural capital than U.S.-born Blacks (Waters, 1999). In short, she suggests that context matters, not just in the United States, but before the move. Read and Emmerson (2005) expand upon this notion by proposing the "racial context of origin" hypothesis.

Read and Emmerson propose moving away from a singular perspective analyzing race and structures of racism in the receiving country and, instead, emphasize the importance of considering both the context of race and racism in the receiving and origin country (Read & Emmerson, 2005). These authors suggest that Black immigrants who originate from Black majority countries, such as those from Africa and parts of the Caribbean, have been exposed to less racism and discrimination than Black immigrants from White majority countries, such as the United States and Europe. Those majority White countries often suffer greater esteem issues, are from lower rungs of the socioeconomic ladder, and are on the receiving end of both interpersonal and structural racism relative to peer Blacks from Black majority countries (Read & Emmerson,

2005; Waters, 1999; Winant, 2001). This differential exposure is what leads to variability in health status.

Returning to cumulative disadvantage theory, early life experiences, combined with repeated exposure to stressful events across the life course, have negative consequences on human development and health status (Read & Emmerson, 2005; Power & Hertzman, 1999). Read and Emmerson find support for their theory in the form of a gradient of health among Black immigrants. Africans who hail from primarily Black majority countries fare best in their health, while European Black immigrants, who hail from Black minority countries, fare the worst. Caribbean and South American Black immigrants' health status falls between that of African and European Black immigrants. Based on these results, it is important to examine the health of Black immigrants not solely by their nativity status or regional origin, but also by their national origin. Thomas and colleagues find additional support for this perspective in their investigation of Guyanese and Haitian immigrants (Thomas et al., 2019). They find that Guyanese and Haitian immigrants in the United States display higher rates of poor and intermediate cardiovascular health than peer immigrants, particularly Jamaicans (Thomas et al., 2019). The authors suggest that Jamaican immigrants, among other African groups from Black-dominant countries, have lower levels of internalized racism and discrimination because of their pre-migration circumstances.

Building on this discussion of the racial context of origin is the context of reception. In the study of immigrant health, context of origin is often considered. In most analyses, one may see Mexico or Southeast Asia as the sending region for the immigrant group of interest and the context of the destination is taken for granted (Urquia et al., 2010). In this case, the United States, stands apart from other receiving regions for Black immigrants. Indeed, existing work on

the health of Black immigrants, African and Caribbean alike, shows better health outcomes in the United States when compared to Europe (Grosfoguel, 2003; Hamilton, 2019; Urquia et al., 2010; Imoagene, 2017). The odds of low birthweight births are significantly lower in the United States for Sub-Saharan African and Caribbean women than those seen in Europe (Urquia et al., 2010). In the United States, Nigerian immigrants show signs of better health in the form of less chronic conditions and better health status than those in the United Kingdom (Grosfoguel, 2003; Hamilton, 2019; Imoagene, 2017). Admittedly, the reasons for these differences are complex and are not fully understood; however, the explanations that do exist are compelling.

Black immigrants to the United States may be protected from the full extent of racial discrimination and its subsequent detriment, because they originate from countries that were not colonial subjects of the United States. Immigrants originating from the Caribbean and Africa are often drawn to former colonial nations due to the relative ease of entry and pathways toward citizenship, if it is not already present. One may expect that the presence and shared cultural understanding of these nations would ease integration and assimilation, but others push back on this notion. Some attest that the colonial history places Black immigrants lower on the social hierarchy in European destinations. In the United States, these immigrants, along with those from other Black sending countries never colonized by the United States, occupy a position higher in the social and discrimination hierarchy than U.S.-born Blacks, due to their connection to the history of slavery (Hamilton 2019). Because of this higher position, Black immigrants may be perceived more positively and experience less exposure to social, economic, and health-related barriers once in the United States.

## **Research Question and Hypotheses**

Despite the clear importance of national and regional origin on the health of immigrants, few studies examine the relationship between origin and health among immigrant groups, particularly those from the Caribbean and Sub-Saharan Africa. To address this gap in the literature, I pose the following research question.

*Does country and/or region of origin explain variability in the health of Afro-Caribbean and Black African immigrants in the United States relative to their U.S.-born Black American counterparts?*

In response to this research question, I offer the following hypotheses.

*Hypothesis 1: Relative to U.S-born non-Hispanic Black respondents, foreign-born Blacks from the Caribbean and Africa will display better health profiles.*

*Hypothesis 2: Foreign-born Blacks from Black majority countries will display better health profiles than peers from non-Black majority countries.*

*Hypothesis 3: Foreign-born Blacks from English-speaking countries display better health profiles than those from non-English countries.*

## **Methods and Sample**

### *Dependent Variables*

In this chapter, I examine seven health outcomes: self-rated health, the combined measure of cardiovascular health<sup>5</sup> (henceforth, “heart condition”), hypertension, lifetime history of asthma, diabetes status, body mass index, and depressive symptoms. Self-rated health is measured as poor/fair (1) and good, very good, and excellent (0). Heart conditions, hypertension, and lifetime history of asthma are all coded where 1 reflects an affirmative answer while 0 reflects a negative.

---

<sup>5</sup>Angina pectoris, coronary heart disease, some other heart condition, heart attack, and stroke

Diabetes status is coded as self-reporting either pre-diabetes or diabetes (1) relative to no diabetes. Body mass index is coded as a BMI in the normal weight range ( $18.5 \leq \text{BMI} \leq 24.9$ ; coded as 0) and those with a BMI in the overweight ( $25.0 \leq \text{BMI} \leq 29.9$ ) or obese ( $30.0 \leq \text{BMI}$ ) ranges, coded as 1. Depressive symptoms reflect the Staples and colleagues (2019) coding. In this instance, those with clinically relevant depressive symptoms<sup>6</sup> are coded as 1 while all others are coded as 0.

### *Afro-Caribbean*

To evaluate the health outcomes of Afro-Caribbean migrants in the United States, I specify four distinct national origin groups: Haitian Black, Jamaican Black, Trinidadian and Tobagoan Black, and Guyanese Black respondents. To be captured in these categories, respondents must self-report their birth nation as either Haiti, Jamaica, Trinidad & Tobago, or Guyana and must also racially self-identify as “Black”. If both criteria are met, they are reflected in that group’s sample. In addition to capturing national origin and racial identity, I also include a measure where respondents are ordered using their time since arrival to the United States. Specifically, respondents are further categorized into two categories: those who arrived within the last 10 years and those who have been in the United States 10 or greater years (e.g., Haitians < 10 years; Haitians  $\geq$  10 years). In subsequent sections, these groups are often referred to as “more recent arrivals” and “more tenured”, respectively.

To address my second hypothesis, I identify two nations as being “Black-minority”: Trinidad & Tobago and Guyana. While the Black or ethnically African populations in these nations are large, they are not the majority based on the most recent Census information provided

---

<sup>6</sup>A score of 8 or higher denotes clinically relevant distress or depressive symptoms.

by each nation (United Nations Statistics Division, 2022). In each of these nations, “Indian” or “East Indians” slightly outnumber the racially “Black” or ethnically “African” populations. For this reason, I use these two as the reference in assessing differences based on the Racial Context of Origin perspective, the foundation of my second hypothesis. In the following section, I outline my categorizations and groupings of African-origin respondents.

### *Grouping African Nations*

Afro-Caribbean national-origin groups have sizable samples in the NHIS, a characteristic not shared by the Sub-Saharan African Sample. Because of this, combined with the potential for unintentional disclosure, I keep African regional origin groups aggregated. Admittedly, aggregating African nations is not ideal, but it does provide greater detail than the incredibly broad category of “African” available in public-use NHIS data. In my analyses, I aggregate African nations in 4 ways to better understand complex variation in social, economic, political, and population health characteristics across the continent. As with the Afro-Caribbean sample, I further categorize each of my African-origin groups by their time in the United States (i.e., less than 10 years and 10 or greater years).

In the first categorization, I use the United Nation’s geographic classification of Africa: West, East, Central and Southern Africa. I do not include North Africa as I am focused specifically on Sub-Saharan African nations. Figure 4.1 provides a graphic depiction of which countries fall into these categories based on United Nations classification. West Africa consists of Benin, Burkina Faso, Cape Verde (Cabo Verde), Côte d'Ivoire (Ivory Coast), Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo. East Africa consists of Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar,

Malawi, Mauritius, Mayotte, Mozambique, Rwanda, Seychelles, Somalia, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe. In the United Nations' classification, Sudan and South Sudan are identified as North African but I include them in the East Africa region due to their Sub-Saharan geography. Because of small sample sizes, I combine Central and Southern African nations into a single category. The Central/Southern African category contains Angola, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe, Botswana, Eswatini (Swaziland), Lesotho, Namibia, and South Africa.

**Figure 4.1.** Division of African Countries by United Nations Geographic Divisions

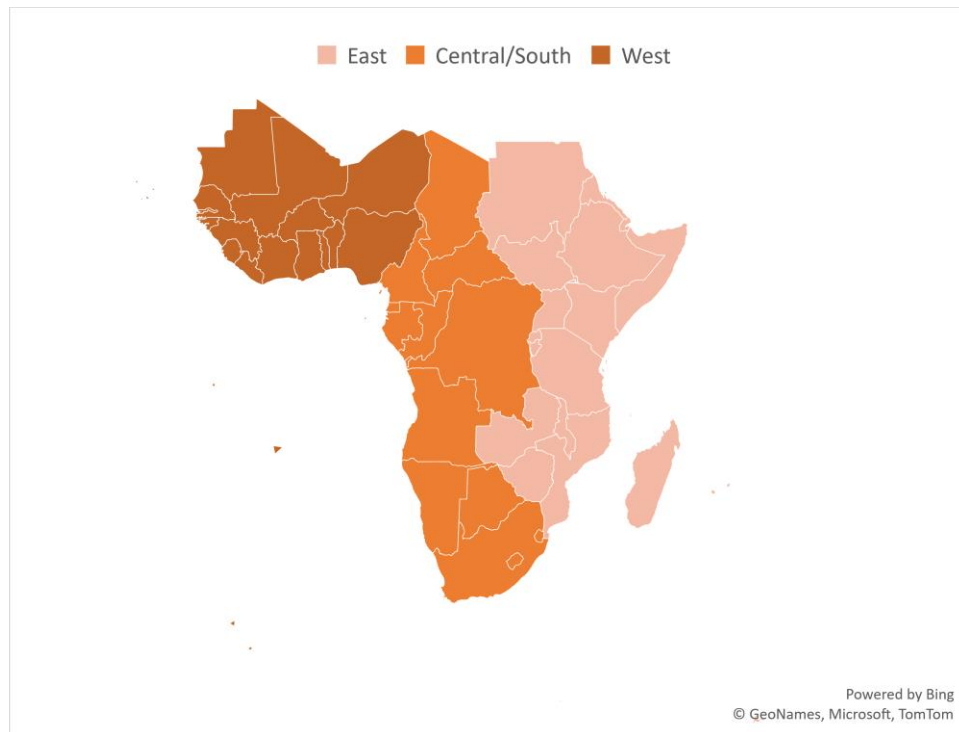


Table 4.1 provides a detailed description of my analytic sample using this categorization of African-origin immigrants.

**Table 4.1** Sample Distribution by Total Sample and Sample Adult Sample, Adults Aged 18-65+,  
National Health Interview Survey 2000-2018

	Total Sample <sup>1</sup>		Sample Adult <sup>2</sup>	
	N	%	N	%
<b>U.S.-born Sample</b>				
Non-Hispanic Black	216,386	12.28	71,320	12.46
Non-Hispanic White	945,560	53.64	343,063	59.94
Non-Hispanic Other	73,375	4.16	16,811	2.94
Hispanic	225,267	12.78	37,964	6.63
Puerto Rican	11,162	0.63	4,772	0.83
<b>Foreign-Born Sample</b>				
Haitian Black	3,665	0.21	1,237	0.22
Jamaican Black	4,134	0.23	1,672	0.29
Trinidadian & Tobogean Black	1,015	0.06	432	0.08
Guyanese Black	953	0.05	356	0.06
Central/South African Black	492	0.03	187	0.03
East African Black	2,350	0.13	869	0.15
West African Black	3,794	0.22	1,404	0.25
FB Other	274,506	15.57	92,252	16.12

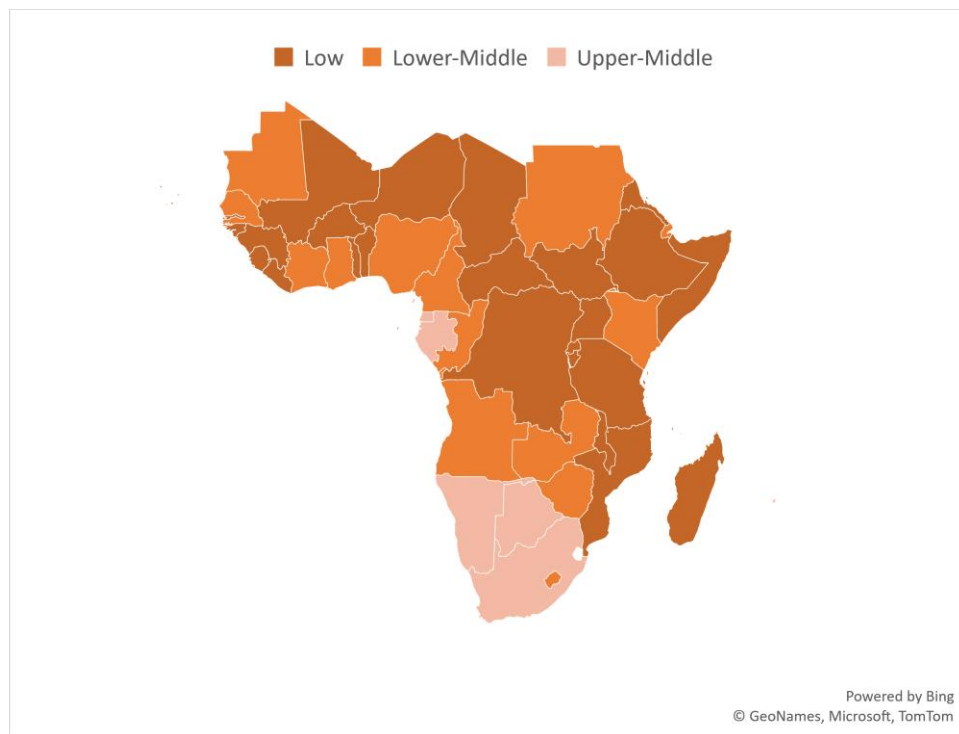
<sup>1</sup> N=1,762,659; <sup>2</sup> N=572,339

The second classification I use is the United Nations' national income groupings. In this categorization, countries are grouped based on their per capita gross national income (GNI): Upper, Upper-Middle, Lower-Middle, and Low (United Nations, 2020). Upper-income maintain a GNI of \$12,375 or greater, upper-middle-income are those between \$3,996 and 12,375, lower-middle-income are those between \$1,026 and \$3,995, and low-income countries are those with a GNI per capita of less than \$1,025 (United Nations, 2020). These GNI thresholds are those established and estimated the World Bank using the Atlas Method to maintain comparability across assessments. There are no Sub-Saharan African nations that fall into the upper-income GNI category. Those in the upper-middle income category are Botswana, Equatorial Guinea,



Gabon, Mauritius, Namibia, and South Africa. Those in the lower-middle-income category are Angola, Cameroon, Cape Verde (Cabo Verde), Congo, Côte d'Ivoire (Ivory Coast), Djibouti, Ghana, Kenya, Lesotho, Mauritania, Nigeria, Senegal, Sudan, Zambia, Zimbabwe, and São Tomé and Príncipe. Those countries in the low-income category are Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Eritrea, Ethiopia, Gambia, Guinea, Guinea-Bissau, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, South Sudan, Togo, Uganda, and United Republic of Tanzania. This categorization is presented graphically in Figure 2.

**Figure 4.2** Division of African Countries by United Nations Gross National Income per Capita



In the third categorization, I categorize African nations dichotomously based on their official national languages. Specifically, those that have English as an official language and those that do not. I choose to include this categorization because language is an important marker

in immigrant health (Avila & Bramlett, 2013; Pottie et al., 2008; Okafor et al., 2013).

Immigrants with greater levels of English proficiency tend to report better self-rated health, health care access, and overall health relative to migrants who are less proficient or who do not speak English (Avila & Bramlett, 2013; Pottie et al., 2008; Okafor et al., 2013).

In this categorization, nations with English as an official language are Botswana, Cameroon, Gambia, Ghana, Kenya, Lesotho, Liberia, Malawi, Mauritius, Namibia, Nigeria, Rwanda, Sierra Leone, South Africa, South Sudan, Sudan, Eswatini (Swaziland), Uganda, United Republic of Tanzania, Zambia, and Zimbabwe. Nations who do not identify English as an official language are Angola, Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Congo, Côte d'Ivoire (Ivory Coast), Djibouti, Eritrea, Equatorial Guinea, Ethiopia, Gabon, Guinea, Guinea-Bissau, Madagascar, Mali, Mauritania, Mozambique, Niger, Senegal, Seychelles, Somalia, and Togo<sup>7</sup>.

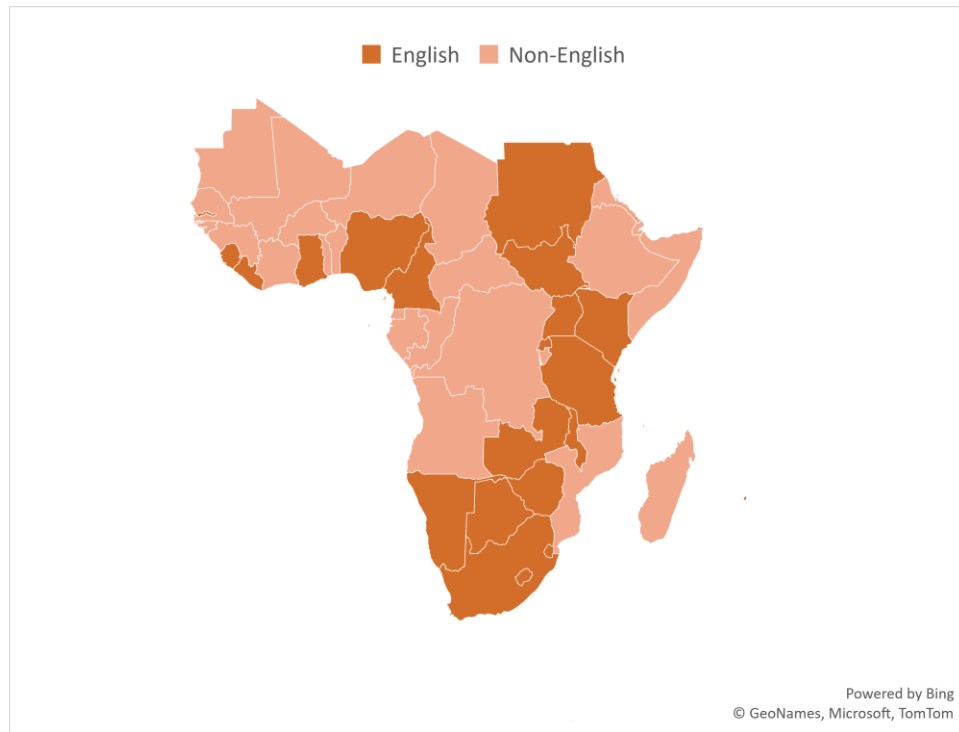
**Figure 4.3** Division of African Countries by Official Language

---

<sup>7</sup> French: Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic Republic of the Congo, Congo, Côte d'Ivoire (Ivory Coast), Djibouti, Equatorial Guinea, Gabon, Guinea, Madagascar, Mali, Niger, Senegal, Seychelles, and Togo

Another European Language: Angola, Guinea-Bissau, Mozambique, and São Tomé and Príncipe

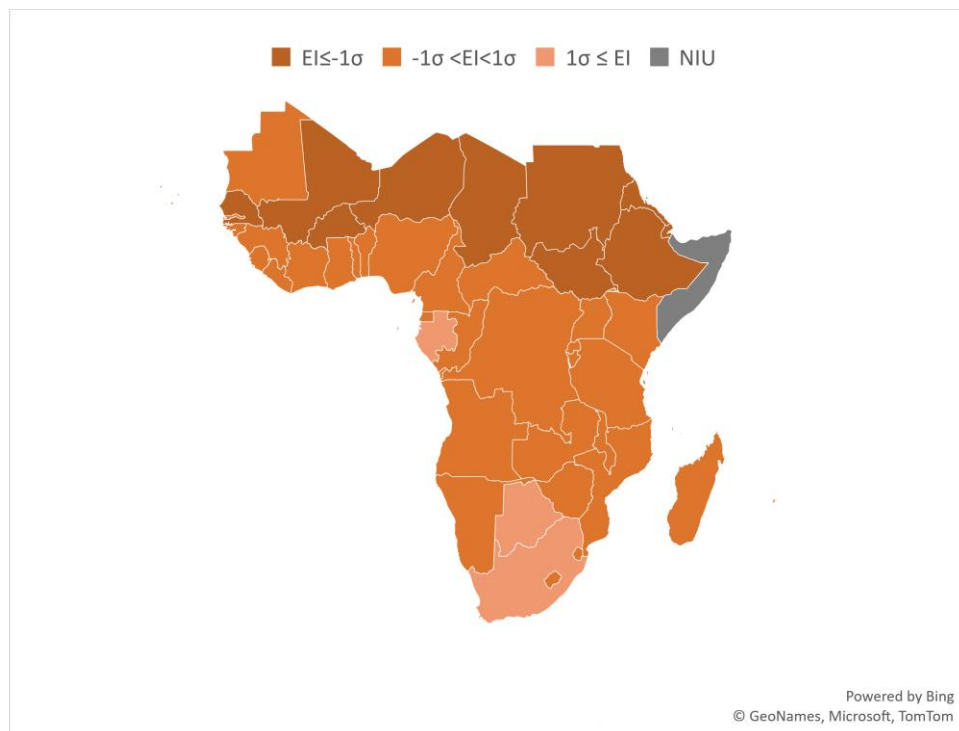
Other Non-European Language: Eritrea, Ethiopia, Mauritania, and Somalia



The fourth categorization is based on the Education Index (EI), a component of the Human Development Index (Human Development Report, 2020). The United Nations Development Program identifies the EI as a measure combining average adult years of education at age 25 years and the expected years of education for students under age 25. The formula for the EI is  $\frac{\frac{EYE}{18} + \frac{AYE}{15}}{2}$ , where EYE reflects the expected years of educational attainment, or the number of years a student can be expected to attend school and AYE is the mean years of education an adult aged 25 received. A value of 1 represents a situation where all citizens of a nation are expected to obtain the highest possible level of educational attainment *and* all citizens achieve this level of education. In this categorization, I use z-scores for EI to identify three groupings of African nations:  $EI \leq -1\sigma$ ,  $-1\sigma < EI < 1\sigma$ ,  $EI \geq 1\sigma$ . The following nations have an EI score that falls at or below -1 standard deviations of the mean: Niger, Eritrea, Mali, Chad, South Sudan, Burkina Faso, Djibouti, Ethiopia, Senegal, Sudan. Central African Republic, Guinea,

Mozambique, Mauritania, Gambia, Sierra Leone, Guinea-Bissau, Burundi, Liberia, United Republic of Tanzania, Côte d'Ivoire (Ivory Coast), Rwanda, Equatorial Guinea, Malawi, Benin, Comoros, Madagascar, Democratic Republic of the Congo, Nigeria, Angola, Togo, Uganda, Lesotho, Kenya, Congo, Cameroon, Eswatini (Swaziland), Zambia, Cape Verde (Cabo Verde), Ghana, São Tomé and Príncipe, Namibia, and Zimbabwe all have an EI value within a single standard deviation of the mean. Gabon, Botswana, South Africa, Seychelles, and Mauritius all have EI values at or above a single standard deviation above the mean. There is no information on EI for Somalia.

**Figure 4.4** Division of African Countries by Education Index



## Analytic Approach

To evaluate my hypotheses, I conduct multivariate analyses using sample-weighted, binomial logistic regression models. I conduct my models using Stata 16. While it is possible to use a linear probability model for each analysis, I find logistic regression models are preferable because of the linear assumption inherent in the linear probability model. The logistic functional form is likely to be a better assessment of the true distribution of the data.

In these models, I employ a nested model structure to better assess the contributions of each control variable grouping on model fit. Model 1 contains only the dependent variable, race/ethnicity and nativity with duration, sex, calendar year of interview, and the language of the interview. In models 2 and 3, I introduce sociodemographic and health behavior controls, respectively. Note that model 2 contains only sociodemographic and socioeconomic measures while model 3 contains only health behaviors. In model 4, the unrestricted model, I maintain all model covariates.

In my model interpretations, I primarily rely upon marginal predicted probabilities. Unlike linear probability models or multiple regression models, it is infeasible to compare coefficients across a nested modeling structure in logistic regressions (Karlson, Holm, & Breen, 2012; Mood, 2009). This is because logistic regression models build in the probability of the outcome measure which subsequently impacts the denominator for all coefficient estimates. By using marginal probabilities as my primary method of model interpretation, I am able to work around hurdle to present meaningful interpretations of significant and substantive relationships.

## **Descriptive Findings**

Table 4.2 contains sample-weighted descriptive statistics for adults ages 18 to 65 years or older from the 2000 through 2018 waves of the National Health Interview Survey. Findings are

provided by race/ethnicity and national origin. Relative to U.S.-born non-Hispanic Black respondents, Afro-Caribbean and West African migrants are significantly older ( $p < 0.001$ ), on average.

Retaining this reference category, I find that all Afro-Caribbean and African-origin immigrant groups report significantly higher percentages respondents with a college education or greater. This ranges from 14.4% of Haitians to 42.5% of Central/South Africans as compared to 13.0% in the U.S.-born referent. Further, I observe that West Africans (41.6%) and Central/South Africans (42.5%), the most highly educated immigrant groups under investigation, maintain significantly higher percentages of college graduates or higher relative to all other groups, save one another. These higher levels of education do not consistently correspond with higher earnings. In this sample, 26.9% of U.S.-born non-Hispanic Black respondents report an INR below 1.00. In other words, nearly 27% of this sample lives below the federal poverty line. Haitian (26.0%), Central/South African (26.2%), and East African (24.0%) respondents all report statistically indistinguishable percentages of respondents living below the same federal poverty line.

Finally, there are few respondents in the Afro-Caribbean and African-origin samples who did not conduct their NHIS interview in English. Indeed, only East Africans (95.6%) report a significantly lower percentage of respondents who held their interview in English as compared to U.S.-born non-Hispanic Blacks (99.4%).

**Table 4.2** Sample-Weighted Bivariate Descriptive Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	USB Black	NH White	USB NH	USB Other	USB Hispanic	Puerto Rican	Haitian	Jamaican	Trinidadian & Tobagonian	Guyanese	Central/South African	East African	West African	Other FB
Demographics														
Average Age at Interview	33.05	39.61	25.74	21.65	46.55	41.78	44.40	45.56	44.45	32.81	32.97	37.42	41.57	
	0.134	0.078	0.222	0.141	0.447	0.740	0.547	0.981	0.816	1.328	0.656	0.488	0.116	
Female (Male) (%)	53.76	51.00	50.33	49.71	54.24	51.53	55.23	55.29	51.50	44.87	50.13	44.69	50.37	
	0.211	0.096	0.347	0.221	0.938	1.786	1.693	3.321	3.594	4.215	2.159	1.665	0.212	
Nativity														
Duration in the United States (%)														
<1 Year	-	-	-	-	1.18	0.91	0.96	0.00	0.60	7.85	2.59	1.83	1.54	
	-	-	-	-	0.222	0.519	0.311	0.000	0.389	2.344	0.659	0.398	0.061	
1 - 4.99 Years	-	-	-	-	10.65	13.48	8.19	5.16	9.11	34.19	23.06	20.35	12.57	
	-	-	-	-	0.677	2.165	1.017	1.641	1.935	4.913	2.042	1.610	0.192	
5 - 9.99 Years	-	-	-	-	9.84	14.84	12.28	10.40	13.28	18.98	27.72	24.68	14.60	
	-	-	-	-	0.621	1.563	1.086	1.597	2.110	3.984	2.074	1.498	0.173	
10 - 14.99 Years	-	-	-	-	8.75	15.10	15.26	15.08	14.05	16.80	19.55	18.80	14.85	
	-	-	-	-	0.554	1.262	1.328	2.119	2.901	4.159	1.829	1.400	0.165	
15 Years≤	-	-	-	-	69.58	55.68	63.32	69.36	62.96	22.18	27.08	34.34	56.45	
	-	-	-	-	1.024	2.473	1.907	3.101	3.051	3.872	2.072	1.699	0.334	
English Interview (Non-English Interview) (%)	99.40	99.45	97.76	75.85	69.61	91.75	99.48	99.40	99.66	94.60	95.62	98.88	65.92	
	0.030	0.016	0.144	0.373	1.137	1.119	0.231	0.351	0.199	2.820	0.944	0.331	0.426	
Socioeconomic Status														
Educational Attainment (%)														
Less than High School	38.23	25.10	44.41	53.55	39.81	24.38	21.75	13.87	15.00	17.05	23.60	14.66	35.43	
	0.294	0.122	0.450	0.328	1.041	2.006	1.121	1.913	2.680	4.088	1.838	1.302	0.355	
High School/GED	23.87	23.45	15.56	17.37	25.67	28.99	29.93	33.13	32.36	12.63	18.48	16.63	19.62	
	0.213	0.133	0.406	0.231	0.843	1.828	1.676	3.034	3.596	3.006	1.398	1.291	0.198	
Some College	24.94	26.05	22.73	20.45	20.09	29.11	27.56	30.10	31.18	27.83	31.88	27.08	17.99	
	0.258	0.122	0.367	0.259	0.794	1.979	1.454	3.409	3.773	4.373	1.977	1.478	0.195	
College or More	12.96	25.40	17.30	8.63	14.43	17.51	20.77	22.90	21.46	42.50	26.04	41.63	26.96	
	0.216	0.182	0.439	0.195	0.901	1.499	1.401	2.955	2.050	4.794	1.803	1.990	0.334	
Family Income-to-Needs Ratio (%)														
<1.00	26.92	8.75	16.77	24.07	27.89	25.97	14.24	11.96	9.56	26.16	23.98	17.83	19.32	
	0.367	0.132	0.513	0.309	1.114	2.414	1.175	2.023	1.837	4.425	2.092	1.581	0.270	
1.00 - 1.99	24.16	15.08	19.91	27.87	26.46	24.21	21.18	18.50	21.92	19.43	25.50	22.21	25.14	
	0.251	0.128	0.417	0.261	1.018	2.014	1.413	3.450	3.391	3.830	2.168	1.624	0.247	
2.00≤	48.92	76.17	63.32	48.06	45.66	49.82	64.58	69.54	68.52	54.40	50.53	59.96	55.54	
	0.428	0.209	0.696	0.407	1.194	2.541	1.679	3.294	3.345	4.842	2.610	1.979	0.388	

Source: National Health Interview Survey, 2000-2018  
Note: Robust standard errors presented in italics

In Table 4.3, I provide sample-weighted health behavior descriptive statistics by race/ethnicity and national origin. Slightly over 86% of U.S.-born non-Hispanic Black respondents report having health insurance. Four foreign-born groups report significantly lower percentages of respondents with health insurance: Haitians (71.1%,  $p < 0.001$ ), Jamaicans (81.9%,  $p < 0.01$ ), East Africans (75%,  $p < 0.001$ ), and West Africans (77.9%,  $p < 0.001$ ).

Interestingly, the same percent of U.S.-born non-Hispanic Black respondents self-report having had a visit with their health care provider in the last calendar year. When compared to this reference group, Haitians and all three African-origin groups maintain significantly lower percentages of respondents who have visited their health care provider in the last year.

Every group of Afro-Caribbean and African-origin migrants self-report significantly lower percentages ( $p < 0.001$ ) of current cigarette smokers relative to their U.S.-born referent (21.1%). Just over half of U.S.-born non-Hispanic Black respondents report being current alcohol users (51.4%). Relative to this, Haitians, Jamaicans, East Africans, and West Africans all report significantly lower levels of current alcohol use ( $p < 0.001$ ). Finally, only two migrant groups maintain significantly different percentages of respondents who vigorously exercise 75 or more minutes per week: East Africans (33.9%,  $p < 0.01$ ) and West Africans (30.7%,  $p < 0.05$ ).

**Table 4.3** Sample-Weighted Bivariate Access to Care and Health Behavior Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018



Access to Care											
Health Insurance Status (%)											
Uninsured	USB NH Black	USB NH White	USB NH Other	USB Hispanic	Puerto Rican	Haitian	Jamaican	Trinidadian & Tobagon	Guyanese	Central/South African	Other FB
	13.67	8.71	8.88	14.66	13.13	28.93	18.07	18.70	14.91	18.91	28.94
Insured	0.166	0.084	0.247	0.204	0.734	2.126	1.488	2.776	2.309	3.360	0.328
	86.33	91.29	91.12	85.34	86.87	71.07	81.93	81.30	85.09	81.09	71.06
	0.166	0.084	0.247	0.204	0.734	2.126	1.488	2.776	2.309	3.360	0.328
Last Health Care Visit (%)											
< 1 Year	86.26	87.43	86.11	83.51	84.48	80.61	84.48	83.73	84.87	74.79	73.12
	0.173	0.081	0.280	0.198	0.701	1.527	1.055	2.670	2.245	4.150	0.237
1 or More Years	13.74	12.57	13.89	16.49	15.52	19.39	15.52	16.27	15.13	25.21	26.88
	0.173	0.081	0.280	0.198	0.701	1.527	1.055	2.670	2.245	4.150	0.237
Health Behaviors											
Cigarette Smoking Status (%)											
Abstainer	64.26	53.87	58.76	68.56	63.87	90.60	84.59	76.90	84.06	84.35	72.98
	0.270	0.156	0.630	0.348	0.980	0.906	0.987	2.752	2.671	3.551	0.209
Former Smoker	14.69	25.48	18.65	15.15	19.38	5.10	8.48	10.56	6.94	10.18	15.59
	0.175	0.117	0.411	0.244	0.761	0.765	0.797	1.792	1.864	2.870	0.167
Current Smoker	21.05	20.64	22.59	16.29	16.75	4.29	6.93	12.54	9.01	5.47	11.43
	0.243	0.134	0.506	0.260	0.678	0.639	0.700	2.484	2.092	2.343	0.147
Alcohol Use (%)											
Abstainer	29.75	16.16	21.77	23.75	34.32	59.62	34.22	24.27	35.09	42.34	36.06
	0.308	0.164	0.571	0.373	0.965	2.219	1.349	2.542	3.376	4.662	0.236
Former Alcohol User	18.82	15.32	16.30	13.98	19.22	13.18	20.23	18.37	16.14	9.50	13.77
	0.189	0.107	0.395	0.252	0.816	1.415	1.352	2.153	3.110	3.194	0.159
Current Alcohol User	51.43	68.52	61.93	62.27	46.46	27.20	45.55	57.36	48.77	48.16	50.17
	0.318	0.194	0.637	0.391	1.042	1.690	1.647	3.172	2.898	5.058	0.246
Vigorous Exercise Participation (%)											
No Vigorous Exercise Reported	63.94	56.18	52.49	55.97	74.32	65.25	67.62	60.21	63.46	55.04	65.08
	0.365	0.213	0.636	0.418	0.963	2.282	1.717	3.130	3.614	4.622	0.266
< 75 Minutes/Week	8.71	10.52	10.90	8.91	5.82	7.58	7.56	8.39	10.51	9.87	8.67
	0.161	0.087	0.340	0.216	0.485	1.027	0.736	1.603	2.289	2.736	0.139
≥ 75 Minutes/Week	27.35	33.31	36.61	35.12	19.86	27.17	24.82	31.40	26.03	35.09	26.25
	0.321	0.178	0.500	0.390	0.879	2.184	1.633	3.271	3.460	4.484	0.233

Source: National Health Interview Survey, 2000-2018

Note: Robust standard errors presented in italics

Table 4.4 provides sample-weighted descriptive statistics for each of the health outcomes under investigation in this chapter. Relative to U.S.-born non-Hispanic Black respondents (3.2%), all Afro-Caribbean, save those from Trinidad & Tobago, and all African-origin migrants report a significantly lower percentage of respondents with poor self-rated health. On the opposite end of the self-rated health spectrum, I observe fewer statistical differences. Maintaining the same reference category, only African-origin respondents exhibit significantly higher percentages of respondents with excellent self-rated health. All Afro-Caribbean migrants have percentages statistically insignificant when compared to U.S.-born Black respondents.

For cardiovascular health, I display results for heart conditions and hypertension. Relative to the reference category, I find that Haitians, Jamaicans, East Africans, and West Africans all maintain significantly lower percentages of respondents responding in the affirmative. All other groups show no clear differences. The results for hypertension show a more consistent trend in that all respondents, Afro-Caribbean and African alike, display significantly lower levels of self-reported hypertension.

For diabetes status, I examine both self-reported pre-diabetes and diabetes. For pre-diabetes, only East Africans display a significant difference from U.S.-born non-Hispanic Black respondents. In this instance, they report lower levels. More differences exist for a diagnosis of diabetes. Here, I find that Haitians (11.1%) and Jamaicans (9.9%) report significantly higher percentages of respondents who report diabetes, whereas all three African-origin groups maintain significantly lower percentages. Afro-Caribbean and African respondents all report significantly lower percentages of respondents with a BMI in the obese range; however, Haitians, Jamaicans,

Guyanese, and West Africans all report significantly higher percentages of respondents in the overweight BMI range.

Finally, 11.6% of U.S.-born non-Hispanic Black respondents experience depressive symptoms in the clinically relevant range. Relative to this value, I find that all Afro-Caribbean migrants, East Africans, and West Africans maintain significantly lower percentages of respondents in this clinically relevant range. Central/South Africans show no significant difference.

**Table 4.4** Sample-Weighted Bivariate Health Outcome Descriptive Statistics by Racial/Ethnic and Nationality Group, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	USB NH Black	USB NH White	USB NH Other	USB Hispanic	Puerto Rican	Haitian	Jamaican	Trinidadian & Tobogian	Guyanese	Central/South African	East African	West African	Other FB
<b>Health Outcomes</b>													
<b>Self-Rated Health (%)</b>													
Poor	3.24	2.37	2.08	1.48	6.50	2.07	2.20	2.25	1.28	0.69	0.57	0.96	2.33
	<i>0.072</i>	<i>0.036</i>	<i>0.108</i>	<i>0.064</i>	<i>0.420</i>	<i>0.456</i>	<i>0.347</i>	<i>0.089</i>	<i>0.466</i>	<i>0.306</i>	<i>0.213</i>	<i>0.261</i>	<i>0.062</i>
Fair	11.04	7.07	6.28	5.95	17.56	9.44	9.78	10.81	11.13	5.56	3.44	4.63	8.80
	<i>0.145</i>	<i>0.064</i>	<i>0.215</i>	<i>0.114</i>	<i>0.641</i>	<i>0.799</i>	<i>0.928</i>	<i>2.836</i>	<i>2.674</i>	<i>2.061</i>	<i>0.702</i>	<i>0.986</i>	<i>0.138</i>
Good	27.28	21.82	21.86	23.77	27.78	29.90	25.97	23.41	28.56	20.40	16.27	21.44	27.48
	<i>0.210</i>	<i>0.099</i>	<i>0.455</i>	<i>0.237</i>	<i>0.783</i>	<i>1.358</i>	<i>1.421</i>	<i>2.375</i>	<i>2.985</i>	<i>3.300</i>	<i>1.689</i>	<i>1.435</i>	<i>0.205</i>
Very Good	26.96	32.38	28.80	28.78	23.19	25.46	29.05	28.46	30.48	28.85	25.51	26.19	29.57
	<i>0.207</i>	<i>0.103</i>	<i>0.359</i>	<i>0.226</i>	<i>0.791</i>	<i>1.422</i>	<i>1.350</i>	<i>2.700</i>	<i>3.050</i>	<i>3.985</i>	<i>1.859</i>	<i>1.525</i>	<i>0.205</i>
Excellent	31.48	36.36	40.97	40.02	24.98	33.13	33.01	35.07	28.55	44.50	54.22	46.78	31.81
	<i>0.253</i>	<i>0.143</i>	<i>0.529</i>	<i>0.282</i>	<i>0.889</i>	<i>1.954</i>	<i>1.586</i>	<i>2.744</i>	<i>2.680</i>	<i>4.442</i>	<i>2.117</i>	<i>1.863</i>	<i>0.230</i>
<b>Heart Condition (No Heart Condition) (%)</b>													
	7.34	10.69	6.56	3.65	13.40	3.30	5.75	7.50	5.06	4.06	1.99	2.84	6.03
	<i>0.112</i>	<i>0.072</i>	<i>0.101</i>	<i>0.092</i>	<i>0.567</i>	<i>0.582</i>	<i>0.633</i>	<i>2.897</i>	<i>1.240</i>	<i>1.789</i>	<i>0.418</i>	<i>0.520</i>	<i>0.107</i>
<b>Hypertension (No Hypertension) (%)</b>													
	36.99	29.38	26.97	20.10	36.88	25.19	30.77	28.42	31.07	15.54	10.72	21.81	21.09
	<i>0.311</i>	<i>0.132</i>	<i>0.521</i>	<i>0.311</i>	<i>0.939</i>	<i>1.719</i>	<i>1.367</i>	<i>3.477</i>	<i>2.748</i>	<i>3.458</i>	<i>1.347</i>	<i>1.441</i>	<i>0.201</i>
<b>Diabetes Status (%)</b>													
Non-Diabetic	90.85	92.80	93.85	95.23	81.97	87.67	88.74	85.69	86.26	98.28	95.58	93.30	91.50
	<i>0.120</i>	<i>0.054</i>	<i>0.246</i>	<i>0.117</i>	<i>0.744</i>	<i>1.066</i>	<i>0.877</i>	<i>2.975</i>	<i>2.492</i>	<i>0.714</i>	<i>0.708</i>	<i>0.798</i>	<i>0.126</i>
Prediabetic	1.10	1.02	1.05	0.74	2.22	1.27	1.36	1.80	2.07	0.65	0.43	1.60	1.36
	<i>0.042</i>	<i>0.018</i>	<i>0.078</i>	<i>0.043</i>	<i>0.339</i>	<i>0.358</i>	<i>0.325</i>	<i>0.709</i>	<i>0.939</i>	<i>0.512</i>	<i>0.236</i>	<i>0.521</i>	<i>0.057</i>
Diabetic	8.05	6.18	5.10	4.04	15.80	11.06	9.89	12.52	11.67	1.07	3.98	5.10	7.14
	<i>0.113</i>	<i>0.049</i>	<i>0.227</i>	<i>0.104</i>	<i>0.622</i>	<i>1.073</i>	<i>0.816</i>	<i>2.917</i>	<i>2.161</i>	<i>0.487</i>	<i>0.672</i>	<i>0.641</i>	<i>0.112</i>
Asthma (No Asthma)	15.61	12.33	15.90	13.30	21.72	5.78	9.59	6.14	7.87	2.29	3.29	4.53	6.33
	<i>0.155</i>	<i>0.070</i>	<i>0.289</i>	<i>0.184</i>	<i>0.750</i>	<i>0.887</i>	<i>0.867</i>	<i>1.362</i>	<i>1.533</i>	<i>1.485</i>	<i>0.609</i>	<i>0.608</i>	<i>0.111</i>
<b>Average Body Mass Index</b>													
	29.308	27.343	27.481	28.614	28.310	27.244	27.517	27.299	27.393	26.182	25.649	26.938	26.458
	0.039	0.018	0.108	0.055	0.108	0.223	0.150	0.355	0.357	0.367	0.215	0.172	0.030
<b>Body Mass Index (%)</b>													
Underweight (<18.5)	1.43	1.86	2.91	1.49	1.28	0.49	0.83	1.10	0.09	3.09	2.49	1.61	2.14
	<i>0.072</i>	<i>0.032</i>	<i>0.203</i>	<i>0.095</i>	<i>0.225</i>	<i>0.210</i>	<i>0.285</i>	<i>0.748</i>	<i>0.095</i>	<i>1.711</i>	<i>0.881</i>	<i>0.420</i>	<i>0.065</i>
Normal Weight (18.5 - 24.9)	27.39	37.12	38.57	29.78	29.08	35.76	32.44	34.84	32.81	38.05	46.56	33.90	40.29
	<i>0.251</i>	<i>0.128</i>	<i>0.627</i>	<i>0.348</i>	<i>0.878</i>	<i>2.093</i>	<i>1.579</i>	<i>3.426</i>	<i>3.956</i>	<i>4.715</i>	<i>2.465</i>	<i>1.763</i>	<i>0.272</i>
Overweight (25.0 - 29.9)	32.63	34.74	29.95	34.02	36.95	41.15	42.48	37.08	40.09	42.07	36.19	43.29	37.67
	<i>0.233</i>	<i>0.106</i>	<i>0.477</i>	<i>0.340</i>	<i>0.886</i>	<i>1.820</i>	<i>1.604</i>	<i>3.174</i>	<i>3.062</i>	<i>5.015</i>	<i>2.212</i>	<i>1.810</i>	<i>0.222</i>
Obese (30.0≤)	38.56	26.28	28.57	34.71	32.69	22.60	24.24	26.98	27.00	16.79	14.77	21.21	19.91
	<i>0.270</i>	<i>0.126</i>	<i>0.629</i>	<i>0.398</i>	<i>0.828</i>	<i>1.494</i>	<i>1.299</i>	<i>3.386</i>	<i>3.502</i>	<i>3.612</i>	<i>1.691</i>	<i>1.340</i>	<i>0.201</i>
Depressive Symptoms (No Depressive Symptoms)	11.56	9.66	13.50	11.58	17.84	9.02	6.39	3.87	4.31	9.23	6.42	6.82	8.52
	<i>0.182</i>	<i>0.087</i>	<i>0.404</i>	<i>0.244</i>	<i>0.801</i>	<i>0.855</i>	<i>0.657</i>	<i>1.017</i>	<i>1.416</i>	<i>2.383</i>	<i>1.201</i>	<i>0.844</i>	<i>0.126</i>

Source: National Health Interview Survey, 2000-2018

Note: Robust standard errors presented in italics

Taken together, these descriptive findings provide evidence of variation among respondents who identify themselves racially as Black. Further, I observe variation in demographic, socioeconomic, health behavior, and health outcome measures by national origin. These differences likely play an important role in the lived experiences of Black immigrants living in the United States. To better understand how these differences influence health, I turn to multivariate analyses.

## **Multivariate Results**

In most tables throughout the remainder of this chapter, I present results across four nested models and in two panels. The top panel contains results from logistic regression models in the form of odds ratios (OR), linearized standard errors (Std. Error), and statistical significance relative to the U.S.-born non-Hispanic Black sample ( $P > |t|$ ). In my interpretation of findings, I discuss odds ratios solely from Model 4. The bottom panel contains marginal predicted probabilities for reporting the health condition under investigation. These are presented as predicted probabilities (Margin), delta-method standard errors (Std. Error), and statistical significance relative to a value of 0 ( $P > |t|$ ). Note that predicted probabilities are assessed while holding all other model covariates at their mean. In each table, I present only the coefficients for race/ethnicity and national origin groups. For full tables, please see Appendix 1.

To assess statistical difference in the predicted probabilities between the foreign-born sample and the reference, I conduct post-hoc two-tailed t-tests. The final two rows contain model fit information in the form of F-statistics and the corresponding p-value.

In addition to tabular reports, one will find several figures throughout this section. These figures provide the predicted probability values for the U.S.-born non-Hispanic Black sample

and each foreign-born group. These predicted probabilities are derived from unconditional models. The error bars reflect standard deviations. Note that the y-axes change between health outcomes.

### *Self-Rated Health*

#### National and Regional Origin

Table 4.5 presents the results of sample-weighted, binomial logistic regression models for self-rated health by race/ethnicity and national origin. In these models, I examine the odds of reporting either poor or fair self-rated health relative to good, very good, or excellent self-rated health. In the first model, the predicted probability of reporting either poor or fair self-rated health (henceforth, poor/fair health) is 17.6% for the U.S.-born non-Hispanic Black sample. When compared to this value, all Afro-Caribbean groups report significantly lower predicted probabilities. Similarly, most African groups maintain significantly lower probabilities for poor/fair health. Only more recently arrived Central/South Africans show no significant difference from the referent.

With the introduction of socioeconomic controls in Model 2, I observe a general attenuation in predicted probabilities for the U.S.-born referent and all but one foreign-born group. For example, more recently arrived Haitian migrants experience a decline in their predicted probability for poor/fair health from 9.4% in Model 1 to 4.7% in Model 2, a change of nearly 5 percentage points. In addition to this general trend in attenuation, tenured Guyanese and Central/South African respondents experience a loss of statistical significance. In Model 3, I continue to see declines in predicted probabilities relative to Model 1. These declines are lesser in magnitude than those seen between Models 1 and 2, however. Returning to more recently

arrived Haitians, the predicted probability for Model 3 rests at 6.8%. This corresponds with a change of 2.6 percentage points, approximately half the decline seen between Models 1 and 2. This is an intriguing finding. Consistent with the results of Palarino (2021), this may suggest that socioeconomic status has a stronger influence on the relationship between national origin and self-rated health than do health behaviors in this sample.

In Model 4, the predicted probability for reporting poor/fair health has decreased to 9.9% for the referent group (Table 4.5; Figure 4.5). Relative to this value, Haitian, Jamaican, Trinidadian & Tobagoan, East African, and West African migrants maintain significantly lower predicted probabilities, regardless of their time spent in the United States. I observe the same for recently arrived Guyanese. Only tenured Guyanese and Central/South African immigrants show no significant differences when compared to U.S.-born non-Hispanic Black respondents. To ease interpretation, I provide a visual representation of these predicted probabilities in Figure 4.5. Here, and in all subsequent figures, error bars reflect standard deviations. Note that, for each foreign-born group, those who more recently arrived display lower predicted probabilities for poor/fair health than their more tenured peers.

**Table 4.5** Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.445	0.009	***	0.652	0.012	***	0.503	0.010	***	0.654	0.012	***
USB NH Other	0.739	0.030	***	0.903	0.033	**	0.807	0.032	***	0.917	0.034	*

USB Hispanic	0.707	0.020	***	0.826	0.023	***	0.821	0.023	***	0.909	0.026	***
Puerto Rican	0.911	0.049	+	0.999	0.054		0.928	0.052		0.969	0.054	
Haitian Black < 10 Years	0.485	0.159	*	0.373	0.125	**	0.486	0.162	*	0.456	0.149	*
Haitian Black ≥ 10 Years	0.527	0.053	***	0.571	0.064	***	0.536	0.055	***	0.602	0.066	***
Jamaican Black < 10 Years	0.318	0.094	***	0.309	0.093	***	0.317	0.097	***	0.329	0.101	***
Jamaican Black ≥ 10 Years	0.606	0.074	***	0.712	0.093	**	0.683	0.084	**	0.778	0.102	+
Trinidadian & Tobagoan Black < 10 Years	0.298	0.178	*	0.336	0.201	+	0.410	0.221	+	0.445	0.264	
Trinidadian & Tobagoan Black ≥ 10 Years	0.373	0.089	***	0.473	0.112	**	0.428	0.099	***	0.523	0.117	**
Guyanese Black < 10 Years	0.180	0.112	**	0.208	0.132	*	0.190	0.117	**	0.212	0.133	*
Guyanese Black ≥ 10 Years	0.627	0.123	*	0.788	0.171		0.783	0.153		0.938	0.201	
Central/South African < 10 Years	0.689	0.339		0.711	0.342		0.802	0.400		0.804	0.382	
Central/South African ≥ 10 Years	0.436	0.238		0.743	0.428		0.516	0.302		0.801	0.472	
East African < 10 Years	0.216	0.092	***	0.212	0.095	**	0.216	0.093	***	0.230	0.103	***
East African ≥ 10 Years	0.316	0.076	***	0.362	0.085	***	0.347	0.089	***	0.388	0.096	***
West African < 10 Years	0.158	0.042	***	0.171	0.045	***	0.163	0.043	***	0.185	0.049	***
West African ≥ 10 Years	0.348	0.078	***	0.506	0.113	**	0.396	0.091	***	0.525	0.119	**
Other Foreign-Born < 10 Years	0.297	0.013	***	0.361	0.017	***	0.311	0.014	***	0.389	0.018	***
Other Foreign-Born ≥ 10 Years	0.458	0.013	***	0.619	0.017	***	0.526	0.015	***	0.672	0.019	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.176	0.002	***	0.117	0.002	***	0.131	0.002	***	0.099	0.002	***
Haitian Black < 10 Years	0.094	0.028	***	0.047	0.015	**	0.068	0.021	**	0.048	0.015	***
Haitian Black ≥ 10 Years	0.101	0.009	***	0.071	0.007	***	0.074	0.007	***	0.062	0.006	***
Jamaican Black < 10 Years	0.064	0.018	***	0.039	0.011	**	0.045	0.013	**	0.035	0.010	***
Jamaican Black ≥ 10 Years	0.115	0.012	***	0.087	0.010	***	0.093	0.010	***	0.078	0.009	***
Trinidadian & Tobagoan Black < 10 Years	0.060	0.034	+	0.043	0.025	+	0.058	0.030	*	0.046	0.026	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.074	0.016	***	0.059	0.013	***	0.060	0.013	***	0.054	0.011	***
Guyanese Black < 10 Years	0.037	0.022	+	0.027	0.017		0.028	0.017	+	0.023	0.014	
Guyanese Black ≥ 10 Years	0.118	0.020	***	0.095	0.018	***	0.105	0.018	***	0.093	0.018	***
Central/South African < 10 Years	0.129	0.055	*	0.086	0.038	*	0.107	0.048	*	0.081	0.035	*
Central/South African ≥ 10 Years	0.085	0.043	*	0.090	0.047	+	0.072	0.039	+	0.081	0.044	+
East African < 10 Years	0.044	0.018	*	0.027	0.012	*	0.031	0.013	*	0.025	0.011	*
East African ≥ 10 Years	0.063	0.014	***	0.046	0.010	***	0.050	0.012	***	0.041	0.010	***
West African < 10 Years	0.033	0.008	***	0.022	0.006	***	0.024	0.006	***	0.020	0.005	***
West African ≥ 10 Years	0.069	0.014	***	0.063	0.013	***	0.056	0.012	***	0.054	0.012	***
Other Foreign-Born < 10 Years	0.060	0.002	***	0.046	0.002	***	0.045	0.002	***	0.041	0.002	***
Other Foreign-Born ≥ 10 Years	0.089	0.002	***	0.076	0.002	***	0.073	0.002	***	0.068	0.001	***
F-Statistic	F(24, 1223)	573.22		F(27, 1220)	977.05		F(32, 1215)	792.94		F(35, 1212)	883.69	
Prob > F	0			0			0			0		

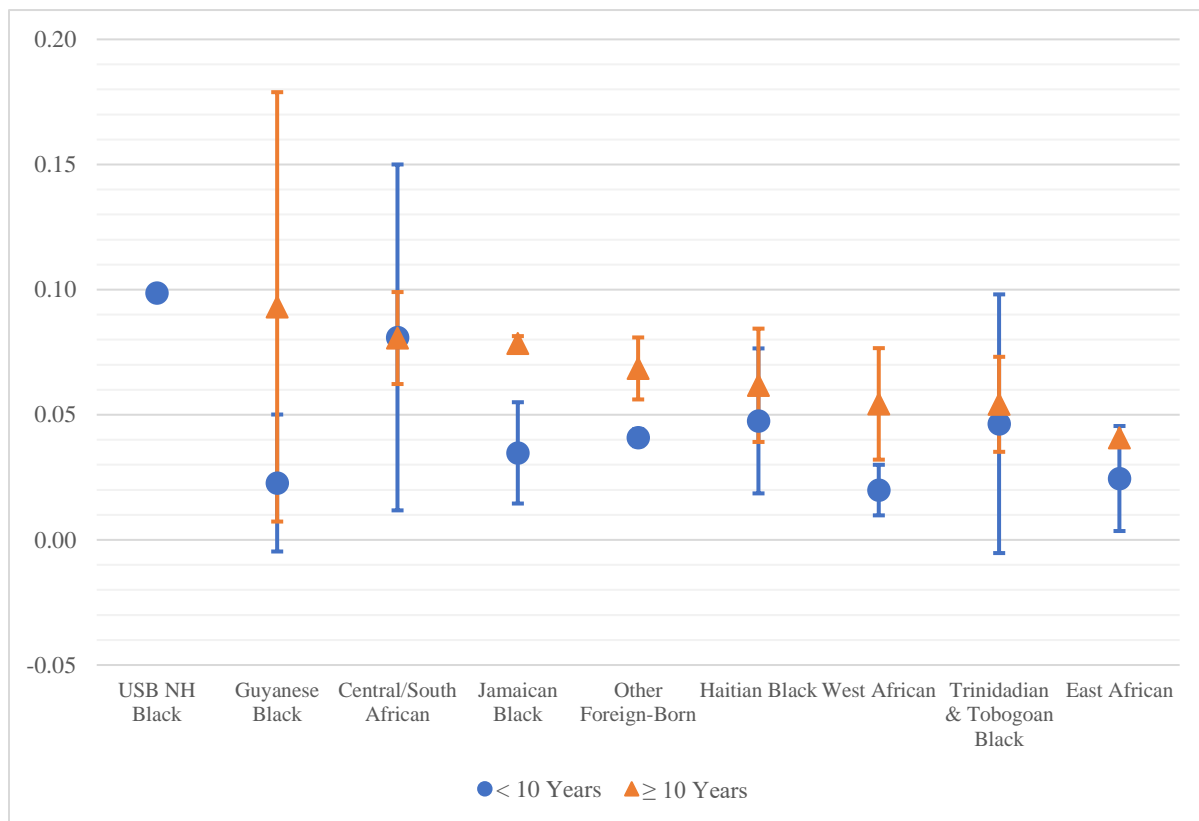


$N = 468,026$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.5** Marginal Predicted Probabilities for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



### Additional African-Origin Categorizations

To examine differences across the four African-origin categorizations, I turn to Table 4.6 and Figure 4.6. In this table, I show odds ratios and predicted probabilities for African immigrants by geographic origin, national educational index (EI), gross national income (GNI), and official

national language. Note that all of the model coefficients come from the unconditional model. As with my interpretation of Table 4.5, I focus primarily on predicted probabilities for each group.

Beginning with EI, I find that migrants originating from nations with a low EI ( $EI \leq -1\sigma$ ) or average EI ( $-1\sigma < EI < 1\sigma$ ) display significantly lower odds ratios and predicted probabilities of reporting poor/fair self-rated health as compared to U.S.-born non-Hispanic Black respondents. This is true regardless of duration. Those originally from nation with a high EI ( $1\sigma \leq EI$ ) show no significant differences from this reference. Similarly, migrants originating from Sub-Saharan African nations with low and low-mid GNI display significantly lower odds ratios and probabilities for poor/fair health, while their peers from upper-mid GNI nations show no significant differences.

Turning to the categorizations based on national language, I find that respondents from both non-English-speaking and English-speaking nations maintain significantly lower odds of reporting poor or fair health. Additionally, these respondents maintain significantly lower predicted probabilities for the same outcome.

**Table 4.6** Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.804	0.382										
Central/South African $\geq$ 10 Years	0.801	0.472										
East African < 10 Years	0.230	0.103	***									
East African $\geq$ 10 Years	0.388	0.096	***									
West African < 10 Years	0.185	0.049	***									

West African $\geq 10$ Years	0.525	0.119	**									
Sub-Saharan African Low EI < 10 Years				0.355	0.121	**						
Sub-Saharan African Low EI $\geq 10$ Years				0.383	0.093	***						
Sub-Saharan African Average EI < 10 Years				0.246	0.066	***						
Sub-Saharan African Average EI $\geq 10$ Years				0.473	0.090	***						
Sub-Saharan African High EI < 10 Years				0.520	0.345							
Sub-Saharan African High EI $\geq 10$ Years				1.036	0.389							
Sub-Saharan African Low GNI < 10 Years							0.307	0.081	***			
Sub-Saharan African Low GNI $\geq 10$ Years							0.468	0.098	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.254	0.087	***			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.415	0.077	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.516	0.311				
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							1.012	0.364				
Sub-Saharan African English-Speaking < 10 Years										0.318	0.119	**
Sub-Saharan African English-Speaking $\geq 10$ Years										0.568	0.150	*
Sub-Saharan African non-English-Speaking < 10 Years										0.381	0.146	*
Sub-Saharan African non-English-Speaking $\geq 10$ Years										0.429	0.108	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.099	0.002	***	0.099	0.002	***	0.099	0.002	***	0.099	0.002	***
Central/South African < 10 Years	0.081	0.035	*									
Central/South African $\geq 10$ Years	0.081	0.044	+									
East African < 10 Years	0.025	0.011	*									
East African $\geq 10$ Years	0.041	0.010	***									
West African < 10 Years	0.020	0.005	***									
West African $\geq 10$ Years	0.054	0.012	***									
Sub-Saharan African Low EI < 10 Years				0.037	0.012	**						
Sub-Saharan African Low EI $\geq 10$ Years				0.040	0.009	***						
Sub-Saharan African Average EI < 10 Years				0.026	0.007	***						
Sub-Saharan African Average EI $\geq 10$ Years				0.049	0.009	***						
Sub-Saharan African High EI < 10 Years				0.054	0.034							
Sub-Saharan African High EI $\geq 10$ Years				0.102	0.034	**						
Sub-Saharan African Low GNI < 10 Years							0.033	0.008	***			
Sub-Saharan African Low GNI $\geq 10$ Years							0.049	0.010	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.027	0.009	**			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.043	0.008	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.053	0.030	+			
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							0.100	0.032	**			
Sub-Saharan African English-Speaking < 10 Years										0.032	0.012	**
Sub-Saharan African English-Speaking $\geq 10$ Years										0.056	0.014	***
Sub-Saharan African non-English-Speaking < 10 Years										0.038	0.014	**

Sub-Saharan African non-English-Speaking $\geq 10$ Years							0.043	0.010	***
F-Statistic	F(35, 1212)	883.69	F(35, 1212)	887.23	F(35, 1212)	890.18	F(33, 1214)	784.35	
Prob > F		0		0		0		0	

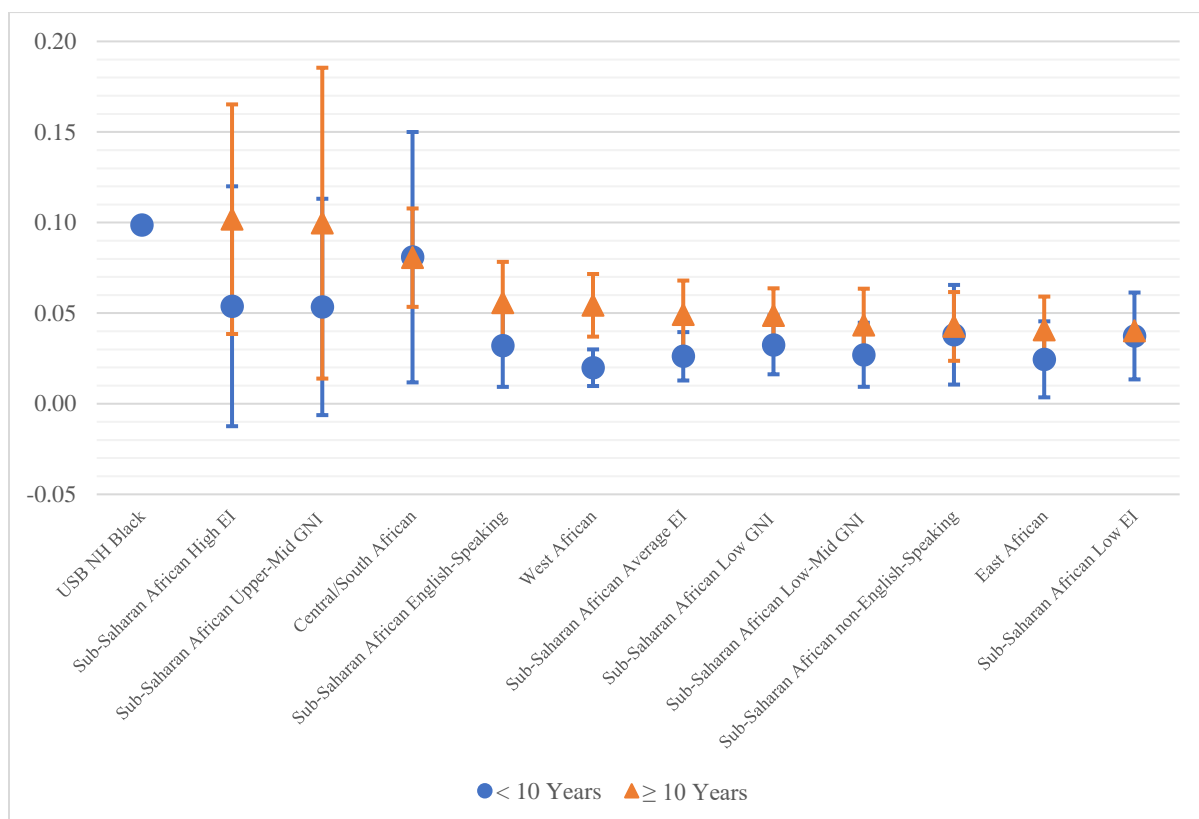
$N = 468,026$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.6** Marginal Predicted Probabilities for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



## Heart Conditions

### National and Regional Origin

In the first panel of Table 4.7, I present the odds ratios for reporting a heart condition by race/ethnicity and national origin. Before making any comparisons, it is important to note that it is not possible to estimate a predicted probability for reporting a heart condition for more recently arrived Trinidadians & Tobagoans. No respondents in this national-origin and duration category self-reported any of the eligible conditions. I find that Haitian (< 10 years: 0.19,  $p < 0.01$ ;  $\geq 10$  years: 0.45,  $p < 0.001$ ) and Jamaican immigrants (< 10 years: 0.21,  $p < 0.05$ ;  $\geq 10$  years: 0.67,  $p < 0.01$ ) display significantly lower odds of reporting a heart condition relative to U.S.-born non-Hispanic Black respondents. Tenured Trinidadian and Tobagoans (0.48,  $p < 0.05$ ) and more recently arrived Guyanese (0.16,  $p < 0.05$ ) migrants report significantly lower odds for heart conditions than this referent. Among Africans, tenured East Africans (0.30,  $p < 0.001$ ), more recently arrived West Africans (0.33,  $p < 0.001$ ), and tenured West Africans (0.50,  $p < 0.001$ ) all report significantly lower odds than the referent.

Turning to the second panel, U.S.-born non-Hispanic Black respondents report a predicted probability of reporting a heart condition at 8.2% in the first model of Table 4.7. Among Afro-Caribbean groups, I find that recently arrived and more tenured Haitians (1.5% and 3.5%, respectively;  $p < 0.001$ ) and Jamaicans (1.7% and 5.1%, respectively;  $p < 0.001$ ) display significantly lower probabilities for reporting a heart condition than the referent. The same is true for recently arrived Guyanese (1.2%,  $p < 0.001$ ). Their more tenured peers show no significant difference, however. Both East and West Africans report significantly lower predicted probabilities for reporting a heart condition. This is true for both duration categories. Central/South Africans show no difference relative to U.S.-born non-Hispanic Blacks.

The predicted probabilities in Models 2 and 3 both show slight attenuation relative to Model 1. Further, these probabilities are very similar to one another. For example, more recently

arrived Jamaican migrants experience a decline from 1.7% in Model 1 to 1.5% in Model 2. In Model 3, the predicted probability returns to 1.7%. Outside of these modest changes in predicted probability values, there are no changes in statistical significance when comparing foreign-born groups to the U.S.-born reference.

In Model 4, the predicted probability for reporting a heart condition declines to 6.9% for the U.S.-born non-Hispanic Black sample. To aid in the interpretation of the predicted probabilities for this group and all foreign-born respondents, see Figure 4.7. Haitians, Jamaicans, the remaining Trinidadian & Tobagoan sample, and recently arrived Guyanese all maintain significantly lower predicted probabilities for this outcome when holding all other model covariates at their mean ( $p < 0.001$ ). Similarly, tenured East Africans and all West Africans exhibit significantly lower predicted probabilities. In this model, tenured Guyanese, all Central/South Africans, and more recently arrived East Africans all show no significant difference from the reference. This is the first instance of non-significant findings for East Africans in this set of nested models. Another important finding from this set of analyses is that East Africans display an inverse relationship between time spend in the United States and the probability of reporting heart conditions. Those who more recently arrived exhibit a predicted probability of 4.3%, while their more tenured peers report that of 2.1%.

**Table 4.7** Results of Sample-Weighted, Binomial Logistic Regression Models for Heart Conditions by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	1.066	0.022	**	1.221	0.025	***	1.097	0.022	***	1.214	0.025	***

USB NH Other	1.258	0.055	***	1.352	0.062	***	1.288	0.057	***	1.354	0.061	***
USB Hispanic	0.870	0.032	***	0.921	0.033	*	0.922	0.033	*	0.959	0.035	
Puerto Rican	1.142	0.069	*	1.170	0.070	**	1.146	0.069	*	1.155	0.069	*
Haitian Black < 10 Years	0.170	0.109	**	0.154	0.097	**	0.196	0.126	*	0.186	0.117	**
Haitian Black ≥ 10 Years	0.408	0.081	***	0.418	0.086	***	0.436	0.088	***	0.452	0.093	***
Jamaican Black < 10 Years	0.194	0.121	**	0.193	0.120	**	0.208	0.130	*	0.212	0.133	*
Jamaican Black ≥ 10 Years	0.597	0.088	***	0.624	0.094	**	0.642	0.095	**	0.665	0.101	**
Trinidadian & Tobagoan Black < 10 Years	1.000			1.000			1.000			1.000		
Trinidadian & Tobagoan Black ≥ 10 Years	0.407	0.134	**	0.445	0.146	*	0.451	0.147	*	0.482	0.157	*
Guyanese Black < 10 Years	0.139	0.105	**	0.148	0.110	**	0.156	0.115	*	0.163	0.118	*
Guyanese Black ≥ 10 Years	0.662	0.193		0.711	0.210		0.749	0.217		0.792	0.232	
Central/South African < 10 Years	0.686	0.439		0.683	0.438		0.774	0.496		0.752	0.481	
Central/South African ≥ 10 Years	0.962	0.698		1.155	0.828		1.071	0.823		1.229	0.936	
East African < 10 Years	0.495	0.194	+	0.495	0.194	+	0.591	0.236		0.603	0.239	
East African ≥ 10 Years	0.262	0.084	***	0.276	0.088	***	0.285	0.093	***	0.295	0.096	***
West African < 10 Years	0.271	0.094	***	0.277	0.095	***	0.318	0.110	***	0.329	0.111	***
West African ≥ 10 Years	0.419	0.113	***	0.472	0.130	**	0.453	0.124	**	0.496	0.138	*
Other Foreign-Born < 10 Years	0.474	0.028	***	0.505	0.031	***	0.541	0.032	***	0.578	0.035	***
Other Foreign-Born ≥ 10 Years	0.609	0.019	***	0.679	0.021	***	0.660	0.021	***	0.720	0.023	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.082	0.002	***	0.074	0.001	***	0.075	0.001	***	0.069	0.001	***
Haitian Black < 10 Years	0.015	0.009		0.012	0.008		0.016	0.010		0.014	0.008	
Haitian Black ≥ 10 Years	0.035	0.007	***	0.032	0.006	***	0.034	0.007	***	0.032	0.006	***
Jamaican Black < 10 Years	0.017	0.010		0.015	0.009		0.017	0.010		0.015	0.009	
Jamaican Black ≥ 10 Years	0.051	0.007	***	0.047	0.007	***	0.049	0.007	***	0.047	0.007	***
Trinidadian & Tobagoan Black < 10 Years	-	-	-	-	-	-	-	-	-	-	-	-
Trinidadian & Tobagoan Black ≥ 10 Years	0.035	0.011	**	0.034	0.011	**	0.035	0.011	**	0.034	0.011	**
Guyanese Black < 10 Years	0.012	0.009		0.012	0.009		0.012	0.009		0.012	0.009	
Guyanese Black ≥ 10 Years	0.056	0.015	***	0.054	0.015	***	0.057	0.015	***	0.055	0.015	***
Central/South African < 10 Years	0.058	0.035	+	0.052	0.031	+	0.059	0.035	+	0.053	0.032	+
Central/South African ≥ 10 Years	0.079	0.053		0.084	0.055		0.080	0.056		0.083	0.058	
East African < 10 Years	0.042	0.016	**	0.038	0.014	**	0.046	0.017	**	0.043	0.016	**
East African ≥ 10 Years	0.023	0.007	***	0.022	0.007	***	0.022	0.007	**	0.021	0.007	**
West African < 10 Years	0.024	0.008	**	0.022	0.007	**	0.025	0.008	**	0.024	0.008	**
West African ≥ 10 Years	0.036	0.009	***	0.036	0.010	***	0.035	0.009	***	0.035	0.009	***
Other Foreign-Born < 10 Years	0.041	0.002	***	0.039	0.002	***	0.042	0.002	***	0.041	0.002	***
Other Foreign-Born ≥ 10 Years	0.052	0.001	***	0.051	0.001	***	0.051	0.001	***	0.051	0.001	***
F-Statistic	F(23, 1224)	877.97		F(26, 1221)	845.34		F(31, 1216)	675.01		F(34, 1213)	658.16	
Prob > F	0			0			0			0		

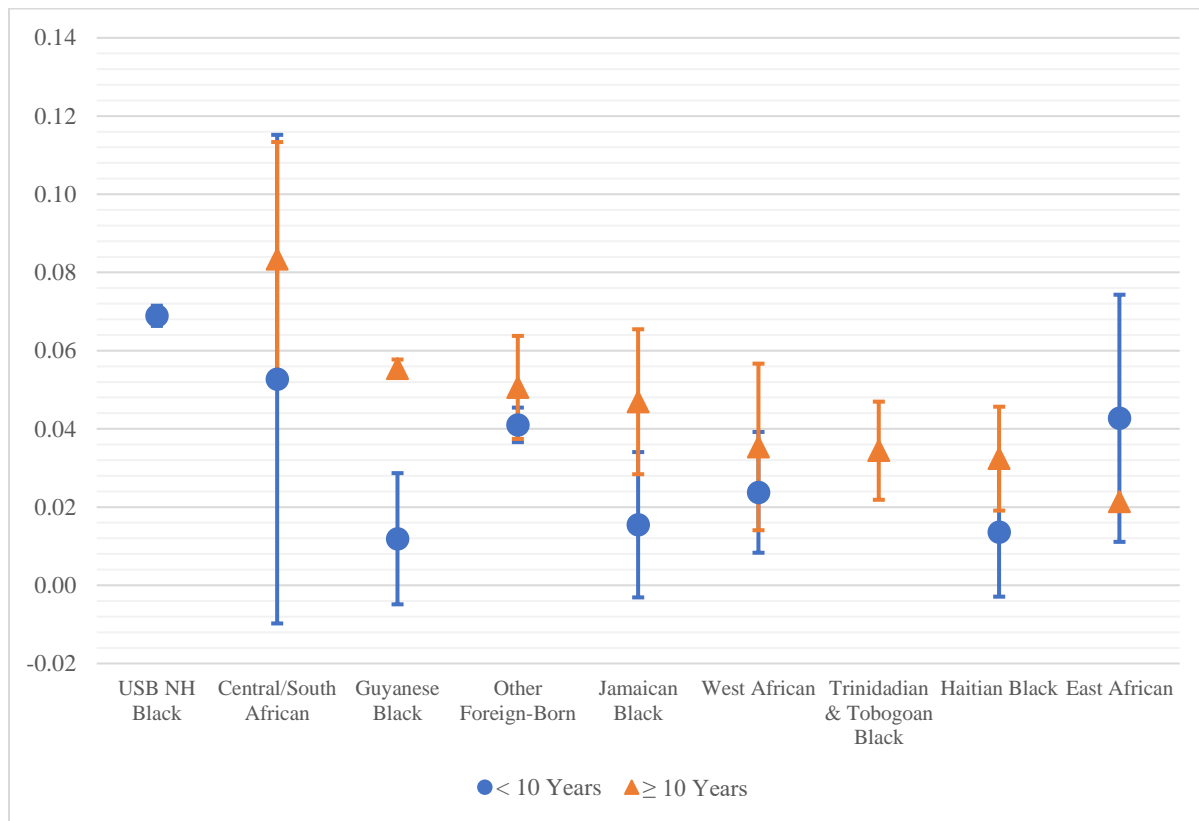
N = 468,049

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\*

$p < 0.001$

**Figure 4.7** Marginal Predicted Probabilities for Heart Conditions by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



#### Additional African-Origin Categorizations

In Table 4.8, I provide the odds ratios and predicted probabilities for heart conditions by African-origin categories. A visual depiction of these predicted probabilities is in Figure 4.10. When categorized by origin nation EI, I find that only those from average EI nations maintain significantly lower odds for reporting a heart condition than the referent. Further, I find that more tenured migrants from low EI nations and all migrants from average EI nations display



significantly lower predicted probabilities for reporting a health condition than U.S.-born Black respondents. There are no differences between migrants from high EI nations and the U.S.-born sample.

The exact same trend is present for categorizations by GNI. Those from mid-low GNI nations maintain significantly lower odds of reporting heart conditions. I also observe significantly lower odds for tenured migrants from low GNI nations. Tenured migrants from low GNI nations and all migrants from low-mid GNI nations display significantly lower predicted probabilities, while those from upper-mid show no significant differences relative to U.S.-born non-Hispanic Black respondents.

Finally, I observe no statistical differences in the top half of Table 4.8 for language categories, save tenured respondents from non-English-speaking nations (0.33,  $p < 0.05$ ). Turning to the second panel of this table, I observe significantly lower predicted probabilities for both groups of language-based categorizations. Interestingly, these predicted probabilities decline with increased duration. These declines align with those observed for respondents from low EI nations and low GNI nations.

**Table 4.8** Results of Sample-Weighted, Binomial Logistic Regression Models for Heart Conditions by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.752	0.481										
Central/South African ≥ 10 Years	1.229	0.936										
East African < 10 Years	0.603	0.239										
East African ≥ 10 Years	0.295	0.096	***									
West African < 10 Years	0.329	0.111	***									

West African $\geq 10$ Years	0.496	0.138	*									
Sub-Saharan African Low EI < 10 Years				0.633	0.235							
Sub-Saharan African Low EI $\geq 10$ Years				0.421	0.201	+						
Sub-Saharan African Average EI < 10 Years				0.443	0.123	**						
Sub-Saharan African Average EI $\geq 10$ Years				0.427	0.084	***						
Sub-Saharan African High EI < 10 Years				1.021	0.626							
Sub-Saharan African High EI $\geq 10$ Years				1.115	0.469							
Sub-Saharan African Low GNI < 10 Years							0.702	0.189				
Sub-Saharan African Low GNI $\geq 10$ Years							0.409	0.129	**			
Sub-Saharan African Low-Mid GNI < 10 Years							0.319	0.127	**			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.449	0.101	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.930	0.567				
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							1.044	0.436				
Sub-Saharan African English-Speaking < 10 Years										0.829	0.274	
Sub-Saharan African English-Speaking $\geq 10$ Years										0.695	0.175	
Sub-Saharan African non-English-Speaking < 10 Years										0.574	0.242	
Sub-Saharan African non-English-Speaking $\geq 10$ Years										0.332	0.148	*
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.069	0.001	***	0.069	0.001	***	0.069	0.001	***	0.069	0.001	***
Central/South African < 10 Years	0.053	0.032	+									
Central/South African $\geq 10$ Years	0.083	0.058										
East African < 10 Years	0.043	0.016	**									
East African $\geq 10$ Years	0.021	0.007	**									
West African < 10 Years	0.024	0.008	**									
West African $\geq 10$ Years	0.035	0.009	***									
Sub-Saharan African Low EI < 10 Years				0.045	0.016	**						
Sub-Saharan African Low EI $\geq 10$ Years				0.030	0.014	*						
Sub-Saharan African Average EI < 10 Years				0.032	0.009	***						
Sub-Saharan African Average EI $\geq 10$ Years				0.031	0.006	***						
Sub-Saharan African High EI < 10 Years				0.070	0.040	+						
Sub-Saharan African High EI $\geq 10$ Years				0.076	0.030	*						
Sub-Saharan African Low GNI < 10 Years							0.049	0.013	***			
Sub-Saharan African Low GNI $\geq 10$ Years							0.029	0.009	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.023	0.009	**			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.032	0.007	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.064	0.037	+			
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							0.072	0.028	**			
Sub-Saharan African English-Speaking < 10 Years										0.060	0.019	***
Sub-Saharan African English-Speaking $\geq 10$ Years										0.051	0.012	***
Sub-Saharan African non-English-Speaking < 10 Years										0.042	0.017	*

Sub-Saharan African non-English-Speaking $\geq 10$ Years							0.025	0.011	*
F-Statistic	F(34, 1213)	658.16	F(35, 1212)	661.38	F(35, 1212)	662.05	F(32, 1215)	599.16	
Prob > F		0		0		0		0	

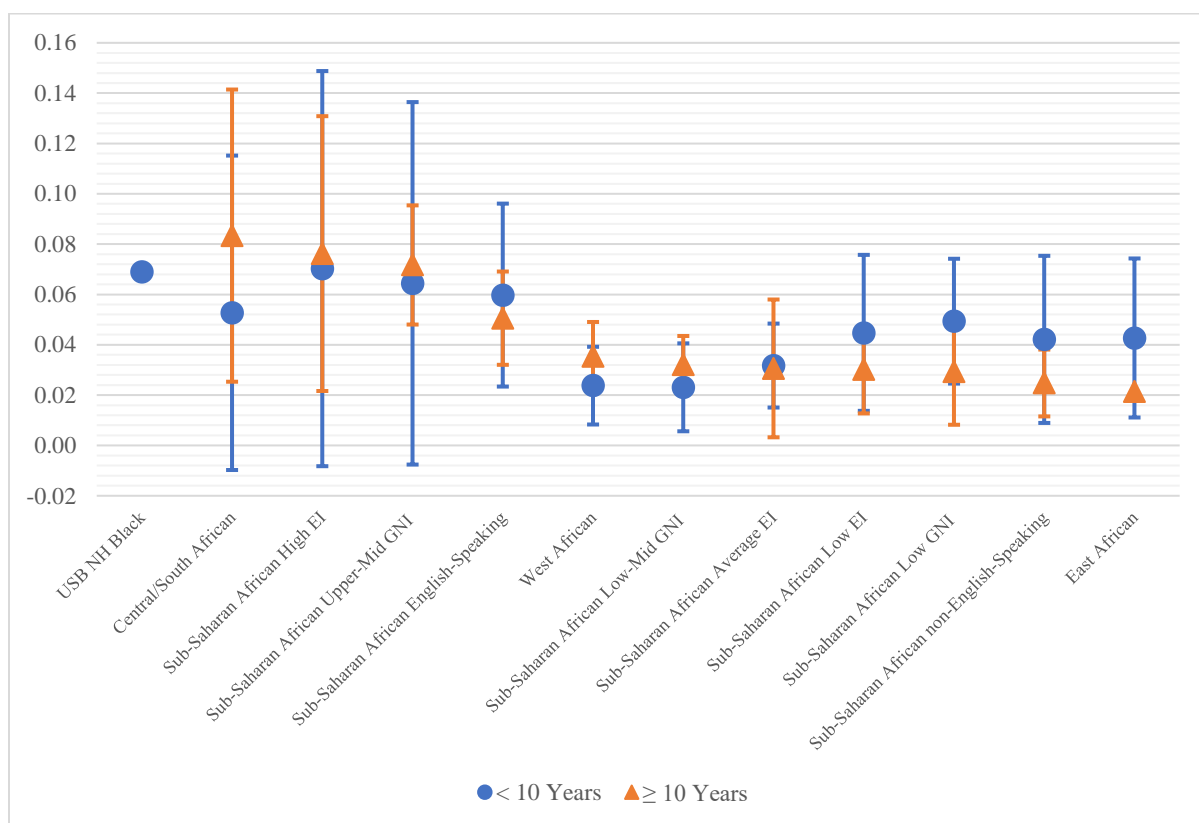
$N = 468,049$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.8** Marginal Predicted Probabilities<sup>8</sup> for Heart Conditions by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



## Hypertension

### National and Regional Origin

<sup>8</sup> The marginal predicted probability is estimated while holding all other covariates at their means.

Table 4.9 contains the results of sample-weighted, binomial logistic regression models for self-reported hypertension. Among more recently arrived Afro-Caribbeans, Haitians (0.39,  $p < 0.01$ ), Jamaicans (0.35,  $p < 0.001$ ), and Trinidadian & Tobagoans (0.08,  $p < 0.001$ ) all have significantly lower odds of reporting hypertension than the U.S.-born reference. The same is true for tenured Haitians (0.53,  $p < 0.001$ ), Jamaicans (0.67,  $p < 0.001$ ), and Guyanese (0.68,  $p < 0.01$ ). East and West Africans in both duration categories report significantly lower odds for hypertension relative to U.S.-born non-Hispanic Blacks.

When compared to U.S.-born non-Hispanic Black respondents (37.4%, Model 1), I find that Haitians, Jamaicans, and Trinidadians & Tobagoans of any duration maintain significantly lower predicted probabilities for reporting hypertension. The same is true for tenured Guyanese migrants. Among Africans, more recently arrived Central/South Africans, all East Africans, and all West Africans experience significantly lower predicted probabilities.

Across Models 2 and 3, most Afro-Caribbeans report declines in their predicted probabilities for hypertension. Speaking generally, these declines are relatively modest for each group. Take recently arrived Jamaicans as an example. In Model 1, their predicted probability of hypertension is 27.7%. In Models 2 and 3, their predicted probabilities decline to 27.0% and 26.4%, respectively. Interestingly, multiple African-origin groups experience slight increases in their predicted probabilities. For more recently arrived East Africans, there is an initial decline between Models 1 and 2 from 11.8% to 11.0%. In Model 3, the probability increases to 12.1%.

The predicted probabilities for Model 4, shown in both Table 4.9 and Figure 4.9, remain consistent in their statistical significance relative to the first model. Indeed, recently arrived Guyanese and tenured Central/South Africans maintain statistically indistinguishable predicted probabilities for reporting hypertension relative to U.S.-born non-Hispanic Black respondents.

**Table 4.9** Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.482	0.007	***	0.533	0.008	***	0.491	0.007	***	0.530	0.008	***
USB NH Other	0.626	0.020	***	0.664	0.021	***	0.642	0.021	***	0.671	0.021	***
USB Hispanic	0.537	0.014	***	0.553	0.014	***	0.559	0.015	***	0.568	0.015	***
Puerto Rican	0.633	0.031	***	0.647	0.032	***	0.620	0.032	***	0.629	0.032	***
Haitian Black < 10 Years	0.375	0.115	***	0.352	0.108	***	0.401	0.125	**	0.386	0.120	**
Haitian Black ≥ 10 Years	0.504	0.054	***	0.518	0.054	***	0.515	0.058	***	0.532	0.058	***
Jamaican Black < 10 Years	0.363	0.095	***	0.356	0.094	***	0.356	0.098	***	0.353	0.098	***
Jamaican Black ≥ 10 Years	0.640	0.051	***	0.671	0.055	***	0.647	0.053	***	0.670	0.056	***
Trinidadian & Tobagoan Black < 10 Years	0.076	0.043	***	0.075	0.041	***	0.082	0.047	***	0.080	0.045	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.406	0.074	***	0.435	0.079	***	0.426	0.079	***	0.448	0.083	***
Guyanese Black < 10 Years	0.545	0.239		0.558	0.243		0.531	0.230		0.539	0.232	
Guyanese Black ≥ 10 Years	0.618	0.094	**	0.651	0.098	**	0.654	0.098	**	0.679	0.102	**
Central/South African < 10 Years	0.458	0.203	+	0.486	0.216		0.472	0.203	+	0.493	0.214	
Central/South African ≥ 10 Years	0.569	0.249		0.687	0.299		0.620	0.286		0.727	0.327	
East African < 10 Years	0.224	0.051	***	0.226	0.052	***	0.249	0.056	***	0.254	0.058	***
East African ≥ 10 Years	0.308	0.056	***	0.329	0.061	***	0.328	0.059	***	0.348	0.063	***
West African < 10 Years	0.346	0.054	***	0.367	0.058	***	0.377	0.059	***	0.403	0.063	***
West African ≥ 10 Years	0.682	0.078	***	0.790	0.091	*	0.690	0.081	**	0.784	0.092	*
Other Foreign-Born < 10 Years	0.278	0.011	***	0.306	0.012	***	0.304	0.012	***	0.337	0.013	***
Other Foreign-Born ≥ 10 Years	0.386	0.008	***	0.426	0.009	***	0.408	0.009	***	0.443	0.009	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.374	0.003	***	0.355	0.003	***	0.357	0.003	***	0.342	0.003	***
Haitian Black < 10 Years	0.183	0.046	***	0.162	0.042	***	0.182	0.046	***	0.167	0.043	***
Haitian Black ≥ 10 Years	0.232	0.019	***	0.222	0.018	***	0.222	0.019	***	0.217	0.019	***
Jamaican Black < 10 Years	0.178	0.038	***	0.164	0.036	***	0.165	0.038	***	0.155	0.036	***
Jamaican Black ≥ 10 Years	0.277	0.016	***	0.270	0.016	***	0.264	0.016	***	0.258	0.016	***
Trinidadian & Tobagoan Black < 10 Years	0.043	0.023	+	0.040	0.021	+	0.043	0.024	+	0.040	0.021	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.195	0.029	***	0.193	0.028	***	0.191	0.029	***	0.189	0.029	***
Guyanese Black < 10 Years	0.246	0.081	**	0.235	0.078	**	0.227	0.076	**	0.219	0.073	**

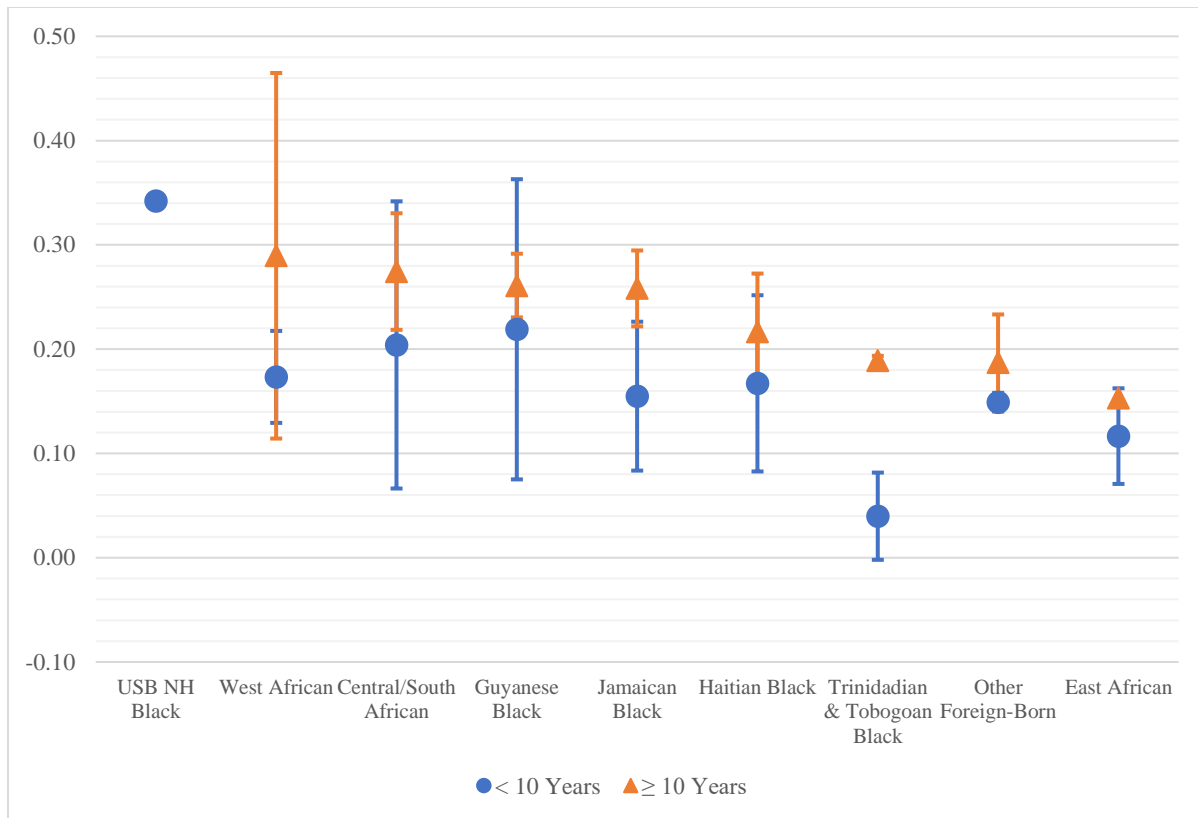
Guyanese Black $\geq$ 10 Years	0.270	0.030	***	0.264	0.029	***	0.266	0.029	***	0.261	0.029	***
Central/South African < 10 Years	0.215	0.075	**	0.211	0.074	**	0.207	0.071	**	0.204	0.070	**
Central/South African $\geq$ 10 Years	0.254	0.083	**	0.274	0.087	**	0.256	0.088	**	0.274	0.089	**
East African < 10 Years	0.118	0.024	***	0.110	0.022	***	0.121	0.024	***	0.117	0.023	***
East African $\geq$ 10 Years	0.156	0.024	***	0.153	0.024	***	0.154	0.023	***	0.153	0.023	***
West African < 10 Years	0.171	0.022	***	0.168	0.022	***	0.173	0.022	***	0.173	0.022	***
West African $\geq$ 10 Years	0.290	0.023	***	0.303	0.024	***	0.277	0.023	***	0.290	0.024	***
Other Foreign-Born < 10 Years	0.143	0.004	***	0.144	0.004	***	0.144	0.004	***	0.149	0.005	***
Other Foreign-Born $\geq$ 10 Years	0.188	0.002	***	0.190	0.002	***	0.184	0.002	***	0.187	0.002	***
F-Statistic	F(24, 1223)	2061		F(27, 1220)	1969.12		F(32, 1215)	1562.57		F(35, 1212)	1517.1	
Prob > F	0			0			0			0		

*N* = 467,804

*Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file*

+ *p* < 0.10; \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001

**Figure 4.9** Marginal Predicted Probabilities for Hypertension by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



### Additional African-Origin Categorizations

Based on results presented in Table 4.10 and Figure 4.10, I find that, with the sole exception of tenured Central/South Africans, all geographic, EI, GNI, and language categorizations of African-origin immigrants display significantly lower odds ratios and predicted probabilities of reporting hypertension than U.S.-born non-Hispanic Blacks. Aside from the statistical differences relative to U.S.-born Blacks, another interesting finding appears in this table.

Within EI and GNI categorizations, one will notice that the increase in predicted probabilities between duration categories for low national EI and low national GNI are relatively small when compared to other groups. For example, the difference between low EI with less than 10 years and 10 years or greater is 1.1 percentage points (14.9% and 16.0%, respectively). For low GNI, the same difference is 4.5 percentage points (15.7% and 20.2%, respectively). Among

higher EI and GNI levels, this gap widens. The same difference is 10.5 and 10.2 percentage points for those originating from average and high national EI nations, respectively. For those originating from low-mid and upper-mid GNI nations, the difference is 11.5 and 9.6 percentage points. This stands out because it shows a greater degree of changes based on the amount of time spent in the United States within this sample of African immigrants. Based on these values, it may be the case that migrants from lower EI and GNI nations are more resilient in their experiences with hypertension than their higher EI and GNI peers.

Within language-based categorizations, I observe higher odds ratios and higher predicted probabilities among respondents from English-speaking nations when compared to those from non-English-speaking nations. Among the most recently arrived migrants, those from non-English-Speaking nations (Margin = 9.4%) maintain significantly lower predicted probabilities for reporting hypertension than their peers from English-speaking nations (Margin = 19.9%) ( $p < 0.05$ ). The same difference exists when comparing more tenured migrants from non-English (Margin = 14.4%) and English-speaking (Margin = 24.4%) nations ( $p < 0.01$ ). These differences highlight an important difference when categorizing African nations based on the national languages of home nations.

**Table 4.10** Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.493		0.214									
Central/South African ≥ 10 Years	0.727		0.327									
East African < 10 Years	0.254		0.058			***						



East African $\geq$ 10 Years	0.348	0.063	***									
West African < 10 Years	0.403	0.063	***									
West African $\geq$ 10 Years	0.784	0.092	*									
Sub-Saharan African Low EI < 10 Years				0.337	0.077	***						
Sub-Saharan African Low EI $\geq$ 10 Years				0.367	0.069	***						
Sub-Saharan African Average EI < 10 Years				0.395	0.056	***						
Sub-Saharan African Average EI $\geq$ 10 Years				0.733	0.073	**						
Sub-Saharan African High EI < 10 Years				0.198	0.102	**						
Sub-Saharan African High EI $\geq$ 10 Years				0.465	0.104	***						
Sub-Saharan African Low GNI < 10 Years							0.357	0.058	***			
Sub-Saharan African Low GNI $\geq$ 10 Years							0.487	0.060	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.403	0.064	***			
Sub-Saharan African Low-Mid GNI $\geq$ 10 Years							0.778	0.092	*			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.179	0.091	***			
Sub-Saharan African Upper-Mid GNI $\geq$ 10 Years							0.425	0.098	***			
Sub-Saharan African English-Speaking < 10 Years										0.465	0.107	***
Sub-Saharan African English-Speaking $\geq$ 10 Years										0.604	0.093	***
Sub-Saharan African non-English-Speaking < 10 Years										0.195	0.052	***
Sub-Saharan African non-English-Speaking $\geq$ 10 Years										0.316	0.059	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.342	0.003	***	0.342	0.003	***	0.342	0.003	***	0.342	0.003	***
Central/South African < 10 Years	0.204	0.070	**									
Central/South African $\geq$ 10 Years	0.274	0.089	**									
East African < 10 Years	0.117	0.023	***									
East African $\geq$ 10 Years	0.153	0.023	***									
West African < 10 Years	0.173	0.022	***									
West African $\geq$ 10 Years	0.290	0.024	***									
Sub-Saharan African Low EI < 10 Years				0.149	0.029	***						
Sub-Saharan African Low EI $\geq$ 10 Years				0.160	0.025	***						
Sub-Saharan African Average EI < 10 Years				0.171	0.020	***						
Sub-Saharan African Average EI $\geq$ 10 Years				0.276	0.020	***						
Sub-Saharan African High EI < 10 Years				0.093	0.043	*						
Sub-Saharan African High EI $\geq$ 10 Years				0.195	0.035	***						
Sub-Saharan African Low GNI < 10 Years							0.157	0.021	***			
Sub-Saharan African Low GNI $\geq$ 10 Years							0.202	0.020	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.173	0.023	***			
Sub-Saharan African Low-Mid GNI $\geq$ 10 Years							0.288	0.024	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.085	0.040	*			
Sub-Saharan African Upper-Mid GNI $\geq$ 10 Years							0.181	0.034	***			
Sub-Saharan African English-Speaking < 10 Years										0.199	0.037	***

Sub-Saharan African English-Speaking $\geq 10$ Years						0.244	0.028	***
Sub-Saharan African non-English-Speaking $< 10$ Years						0.094	0.023	***
Sub-Saharan African non-English-Speaking $\geq 10$ Years						0.144	0.023	***
F-Statistic	F(35, 1212)	1517.1	F(35, 1212)	1520.76	F(35, 1212)	1522.67	F(33, 1214)	1327.76
Prob > F		0		0		0		0

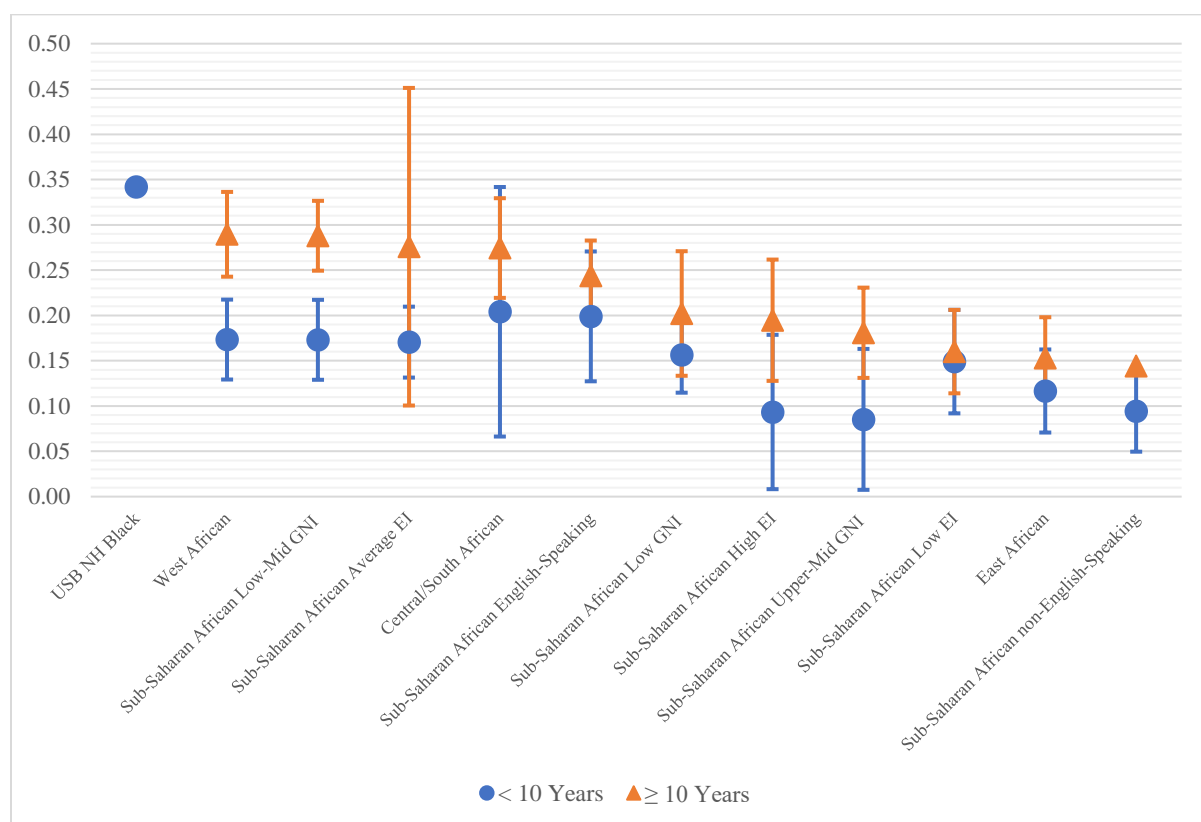
$N = 467,804$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.10** Marginal Predicted Probabilities for Hypertension by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



*Pre-Diabetes/Diabetes*

National and Regional Origin

In Table 4.11, I present the results of sample-weighted, binomial logistic regression models for self-reported pre-diabetes or diabetes (henceforth pre-diabetes/diabetes). When compared to the U.S.-born reference category, only more recently arrived Central/South Africans (0.09,  $p < 0.001$ ), East Africans (0.47,  $p < 0.05$ ), and West Africans (0.39,  $p < 0.001$ ) along with tenured East Africans (0.61,  $p < 0.05$ ) display significantly lower odds of reporting pre-diabetes/diabetes.

In the first model of the second panel, U.S.-born non-Hispanic Black respondents maintain a predicted probability of 11.1% for reporting pre-diabetes/diabetes. Among Afro-Caribbeans, I find that more recently arrive Haitians (3.9%,  $p < 0.001$ ), Trinidadian & Tobagoans (3.4%,  $p < 0.001$ ), and Guyanese (5.4%,  $p < 0.05$ ) migrants report significantly lower predicted probabilities for pre-diabetes/diabetes than this referent. More tenured peers, along with Jamaicans of any duration, experience statistically indistinguishable probabilities for pre-diabetes/diabetes. All Central/South Africans and East Africans, as well as more recently arrived West Africans, maintain significantly lower probabilities for pre-diabetes/diabetes than U.S.-born non-Hispanic Black respondents.

Across Models 2 and 3, I observe slight attenuation in the predicted probabilities for pre-diabetes/diabetes for all groups, save Central/South Africans and West Africans who have been in the United States for 10 or more years. In the final model, I find that more recently arrived migrants, be they Afro-Caribbean or African, consistently display significantly lower predicted probabilities for pre-diabetes/diabetes than the U.S.-born reference. More tenured migrants, on the other hand, all maintain statistically indistinguishable probabilities. The only exception to this rule is East Africans. These findings stand out from those presented thus far. Specifically, this is one of the cleanest examples of the association between time spent in the United States

and health deterioration. This, of course, only reflects cross-sectional analyses and does not measure true trends in health over time.

**Table 4.11** Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.506	0.009	***	0.578	0.010	***	0.549	0.010	***	0.600	0.011	***
USB NH Other	0.887	0.040	**	0.958	0.041		0.944	0.043		0.993	0.044	
USB Hispanic	0.984	0.033		1.028	0.034		1.080	0.036	*	1.103	0.037	**
Puerto Rican	1.149	0.066	*	1.194	0.068	**	1.147	0.066	*	1.169	0.067	**
Haitian Black < 10 Years	0.323	0.179	*	0.299	0.164	*	0.315	0.180	*	0.305	0.172	*
Haitian Black ≥ 10 Years	1.147	0.150		1.201	0.154		1.134	0.157		1.189	0.161	
Jamaican Black < 10 Years	0.640	0.202		0.628	0.196		0.613	0.190		0.612	0.189	
Jamaican Black ≥ 10 Years	0.910	0.103		0.962	0.111		0.925	0.104		0.961	0.109	
Trinidadian & Tobagoan Black < 10 Years	0.282	0.229		0.287	0.236		0.351	0.288		0.350	0.290	
Trinidadian & Tobagoan Black ≥ 10 Years	0.869	0.206		0.956	0.228		0.957	0.231		1.018	0.247	
Guyanese Black < 10 Years	0.453	0.226		0.469	0.236		0.441	0.213	+	0.453	0.220	
Guyanese Black ≥ 10 Years	1.234	0.281		1.327	0.297		1.383	0.321		1.449	0.329	
Central/South African < 10 Years	0.087	0.064	***	0.092	0.068	***	0.090	0.067	***	0.094	0.069	***
Central/South African ≥ 10 Years	0.410	0.193	+	0.532	0.251		0.443	0.210	+	0.551	0.260	
East African < 10 Years	0.425	0.147	*	0.430	0.150	*	0.453	0.162	*	0.465	0.164	*
East African ≥ 10 Years	0.557	0.127	**	0.606	0.137	*	0.570	0.138	*	0.606	0.145	*
West African < 10 Years	0.341	0.090	***	0.366	0.097	***	0.358	0.095	***	0.386	0.102	***
West African ≥ 10 Years	0.886	0.135		1.066	0.162		0.881	0.136		1.016	0.156	
Other Foreign-Born < 10 Years	0.362	0.022	***	0.406	0.024	***	0.402	0.024	***	0.450	0.027	***
Other Foreign-Born ≥ 10 Years	0.642	0.018	***	0.731	0.020	***	0.705	0.020	***	0.779	0.022	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.111	0.002	***	0.099	0.001	***	0.092	0.001	***	0.086	0.001	***
Haitian Black < 10 Years	0.039	0.021	+	0.032	0.017	+	0.031	0.017	+	0.028	0.015	+
Haitian Black ≥ 10 Years	0.125	0.014	***	0.117	0.013	***	0.104	0.013	***	0.100	0.012	***
Jamaican Black < 10 Years	0.074	0.022	***	0.065	0.019	***	0.059	0.017	***	0.054	0.016	***
Jamaican Black ≥ 10 Years	0.102	0.010	***	0.096	0.010	***	0.086	0.009	***	0.083	0.008	***

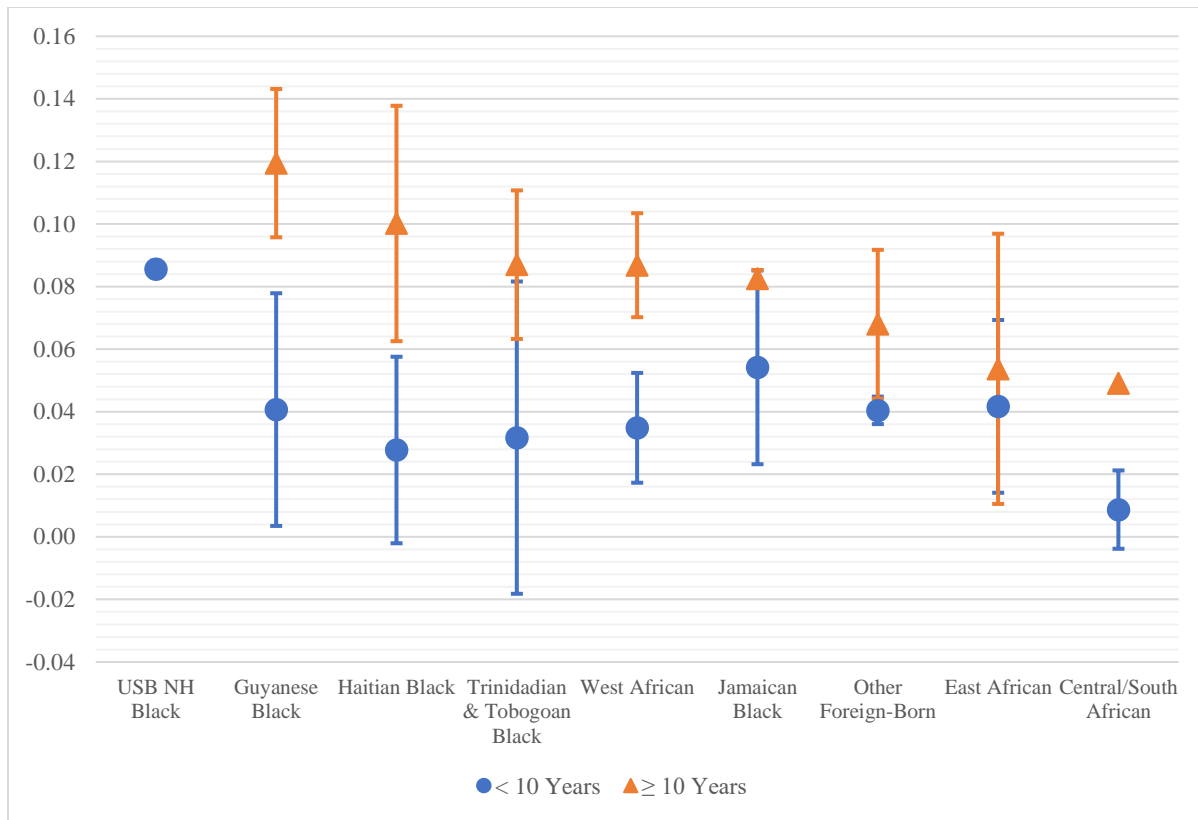
Trinidadian & Tobagoan Black < 10 Years	0.034	0.027		0.031	0.024		0.035	0.027		0.032	0.025	
Trinidadian & Tobagoan Black ≥ 10 Years	0.098	0.021	***	0.095	0.020	***	0.089	0.019	***	0.087	0.019	***
Guyanese Black < 10 Years	0.054	0.025	*	0.049	0.023	*	0.043	0.020	*	0.041	0.019	*
Guyanese Black ≥ 10 Years	0.134	0.026	***	0.128	0.025	***	0.124	0.025	***	0.119	0.024	***
Central/South African < 10 Years	0.011	0.008		0.010	0.007		0.009	0.007		0.009	0.006	
Central/South African ≥ 10 Years	0.049	0.022	*	0.055	0.025	*	0.043	0.020	*	0.049	0.022	*
East African < 10 Years	0.050	0.017	**	0.045	0.015	**	0.044	0.015	**	0.042	0.014	**
East African ≥ 10 Years	0.065	0.014	***	0.063	0.013	***	0.055	0.013	***	0.054	0.012	***
West African < 10 Years	0.041	0.010	***	0.039	0.010	***	0.035	0.009	***	0.035	0.009	***
West African ≥ 10 Years	0.100	0.014	***	0.105	0.014	***	0.082	0.012	***	0.087	0.012	***
Other Foreign-Born < 10 Years	0.043	0.002	***	0.043	0.002	***	0.039	0.002	***	0.040	0.002	***
Other Foreign-Born ≥ 10 Years	0.074	0.001	***	0.074	0.001	***	0.067	0.001	***	0.068	0.001	***
F-Statistic	F(24, 1223)	906.4	10	F(27, 1220)	884.3	40	F(32, 1215)	771.4	70	F(35, 1212)	741.8	20
Prob > F	0.000			0.000			0.000			0.000		

*N* = 467,988

*Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file*

+ *p* < 0.10; \**p* < 0.05; \*\**p* < 0.01; \*\*\*  
*p* < 0.001

**Figure 4.11** Marginal Predicted Probabilities for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



### Additional African-Origin Categorizations

In Table 4.12 and Figure 4.12, I present the results for pre-diabetes or diabetes by African categorization. When grouped by geography, EI, and GNI, I find that only the most recently arrived show significant differences relative to the U.S.-born non-Hispanic Black reference. The sole exception to this trend can be found among East Africans. Here, both more recent arrivals and tenured migrants display significantly lower predicted probabilities for reporting pre-diabetes or diabetes than the referent. While sample size may, and likely does, play a role in this trend, it is worth discussing. In several cases, the predicted probabilities lie quite close to that of the U.S.-born sample. Indeed, West Africans (8.7%), Sub-Saharan African from middle EI nations (8.3%), and Sub-Saharan Africans from low-middle GNI nations (8.6%) all fall quite close to the predicted probability for U.S.-born non-Hispanic Black respondents (8.6%). These

findings could point toward a closely shared experience for this sample of migrants as well as a shared experience with the U.S.-born non-Hispanic Black sample.

When categorized by language, all groups, save tenured migrants from non-English speaking nations, maintain significantly lower odds for reporting pre-diabetes or diabetes than the U.S.-born reference. In the second panel and in Figure 4.12, I find that all respondents, regardless of national language, maintain significantly lower predicted probabilities for pre-diabetes or diabetes. For all categories, I observe increases in predicted probabilities with higher duration.

**Table 4.12** Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.094	0.069	***									
Central/South African ≥ 10 Years	0.551	0.260										
East African < 10 Years	0.465	0.164	*									
East African ≥ 10 Years	0.606	0.145	*									
West African < 10 Years	0.386	0.102	***									
West African ≥ 10 Years	1.016	0.156										
Sub-Saharan African Low EI < 10 Years				0.415	0.146	*						
Sub-Saharan African Low EI ≥ 10 Years				0.660	0.174							
Sub-Saharan African Average EI < 10 Years				0.391	0.096	***						
Sub-Saharan African Average EI ≥ 10 Years				0.965	0.129							
Sub-Saharan African High EI < 10 Years				0.133	0.135	*						
Sub-Saharan African High EI ≥ 10 Years				0.690	0.244							
Sub-Saharan African Low GNI < 10 Years							0.440	0.124	**			
Sub-Saharan African Low GNI ≥ 10 Years							0.773	0.139				
Sub-Saharan African Low-Mid GNI < 10 Years							0.364	0.105	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							1.008	0.161				
Sub-Saharan African Upper-Mid GNI < 10 Years							0.119	0.121	*			

Sub-Saharan African Upper-Mid GNI ≥ 10 Years							0.639	0.226				
Sub-Saharan African English- Speaking < 10 Years										0.397	0.157	*
Sub-Saharan African English- Speaking ≥ 10 Years										0.921	0.204	
Sub-Saharan African non-English-Speaking < 10 Years										0.336	0.143	*
Sub-Saharan African non-English- Speaking ≥ 10 Years										0.533	0.138	*
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.086	0.001	***	0.086	0.001	***	0.086	0.001	***	0.086	0.001	***
Central/South African < 10 Years	0.009	0.006										
Central/South African ≥ 10 Years	0.049	0.022	*									
East African < 10 Years	0.042	0.014	**									
East African ≥ 10 Years	0.054	0.012	***									
West African < 10 Years	0.035	0.009	***									
West African ≥ 10 Years	0.087	0.012	***									
Sub-Saharan African Low EI < 10 Years				0.037	0.013	**						
Sub-Saharan African Low EI ≥ 10 Years				0.058	0.014	***						
Sub-Saharan African Average EI < 10 Years				0.035	0.008	***						
Sub-Saharan African Average EI ≥ 10 Years				0.083	0.010	***						
Sub-Saharan African High EI < 10 Years				0.012	0.012							
Sub-Saharan African High EI ≥ 10 Years				0.061	0.020	**						
Sub-Saharan African Low GNI < 10 Years							0.040	0.011	***			
Sub-Saharan African Low GNI ≥ 10 Years							0.067	0.011	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.033	0.009	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							0.086	0.013	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.011	0.011				
Sub-Saharan African Upper-Mid GNI ≥ 10 Years							0.056	0.019	**			
Sub-Saharan African English- Speaking < 10 Years										0.036	0.014	**
Sub-Saharan African English- Speaking ≥ 10 Years										0.080	0.016	***
Sub-Saharan African non-English-Speaking < 10 Years										0.031	0.013	*
Sub-Saharan African non-English- Speaking ≥ 10 Years										0.048	0.012	***
F-Statistic	F(35, 1212)	741.82		F(35, 1212)	735.84		F(35, 1212)	735.34		F(33, 1214)	633.31	
Prob > F		0			0			0			0	

N = 467,988

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

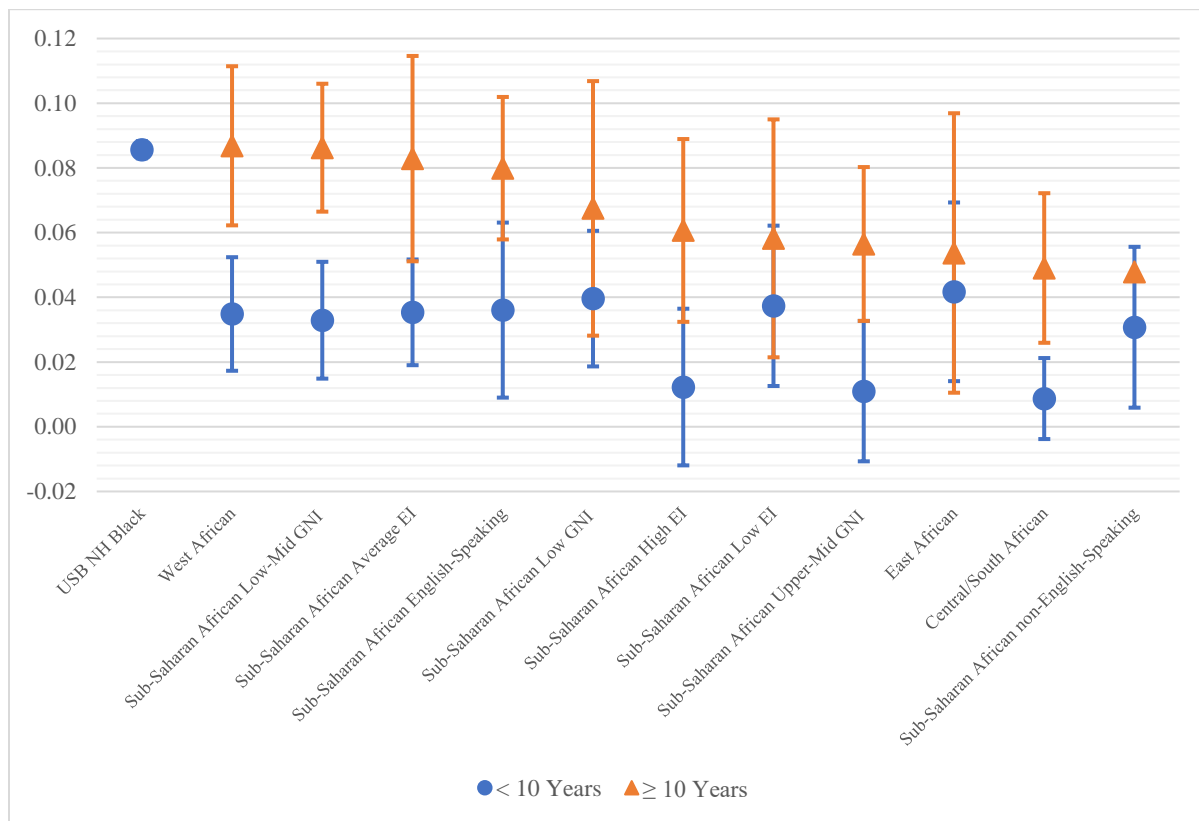
Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.12** Marginal Predicted Probabilities for Pre-Diabetes/Diabetes by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on



Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+,  
National Health Interview Survey 2000-2018



### *Asthma*

#### National and Regional Origin

When compared U.S.-born non-Hispanic Black respondents, more recently arrived Haitians (0.29,  $p < 0.05$ ) and tenured Haitians (0.53,  $p < 0.001$ ), Jamaicans (0.68,  $p < 0.01$ ), Trinidadian & Tobagoans (0.40,  $p < 0.001$ ), and Guyanese (0.50,  $p < 0.05$ ) maintain significantly lower odds of reporting asthma. Among Africans, I observe significantly lower odds for asthma for recently arrived Central/South Africans (0.06,  $p < 0.001$ ), all East Africans (0.17,  $p < 0.001$ ; 0.32,  $p < 0.001$ ), and all West Africans (0.37,  $p < 0.001$ ; 0.31,  $p < 0.001$ ).

Model 1 in Table 4.13 shows that U.S.-born non-Hispanic Black respondents maintain a predicted probability of 13.5% for reporting lifetime asthma. In this model, I find that Haitians,

Jamaicans, Central/South Africans, East Africans, and West Africans of any duration experience significantly lower predicted probabilities for reporting lifetime asthma. The same is true for more recently arrived migrants from Trinidad & Tobago and Guyana. In addition to these differences, I observe another key finding. Trinidadian & Tobagoan, Guyanese, and West African immigrants display an inverted trend in the duration-health relationship as outlined in the immigrant health advantage. For example, more recently arrived Guyanese migrants report a predicted probability of 10.2%, while their tenured peers report a probability at 6.6%.

In Models 2 and 3, I observe little change in predicted probabilities. In Model 2, there are slight declines for the U.S.-born reference, Haitians, and Jamaicans. Most other groups show little to no change in their predicted probabilities for reporting asthma. There is no change in statistical significance for those in Model 2 relative to Model 1. In Model 3, the predicted probabilities for Jamaican migrants converge with one another and the probability for more recent arrivals becomes statistically insignificant.

In the final model, as shown in Table 4.13 and Figure 4.13, I observe no noteworthy changes in statistical significance when comparing the predicted probability values for Afro-Caribbean and African groups to U.S.-born non-Hispanic Blacks. Another interesting trend remains, however. As mentioned earlier in this section, there is an expected relationship between duration in the United States and health. Specifically, health is expected to worsen as time in the United States increases. There are four instances where this does not appear to hold true. Among Jamaicans, I observe no change in the predicted probability of reporting lifetime asthma for those who more recently arrived relative to their tenured peers (9.1%). Migrants from Trinidad & Tobago, Guyana, and West Africa display an inverted association. Here, more recently arrived

migrants maintain higher predicted probabilities for asthma than their more tenured peers. While these differences are not significant, it does reveal a potentially intriguing divergence.

**Table 4.13** Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.913	0.017	***	0.979	0.018		0.896	0.017	***	0.952	0.018	**
USB NH Other	1.238	0.041	***	1.285	0.043	***	1.234	0.041	***	1.272	0.042	***
USB Hispanic	0.968	0.028		1.009	0.029		0.984	0.028		1.022	0.030	
Puerto Rican	1.825	0.105	***	1.838	0.105	***	1.815	0.104	***	1.820	0.104	***
Haitian Black < 10 Years	0.274	0.147	*	0.256	0.138	*	0.306	0.165	*	0.292	0.158	*
Haitian Black ≥ 10 Years	0.488	0.094	***	0.496	0.096	***	0.520	0.099	***	0.534	0.103	***
Jamaican Black < 10 Years	0.619	0.167	+	0.640	0.174	+	0.655	0.179		0.682	0.188	
Jamaican Black ≥ 10 Years	0.633	0.080	***	0.659	0.083	***	0.656	0.084	***	0.682	0.087	**
Trinidadian & Tobagoan Black < 10 Years	0.449	0.302		0.482	0.320		0.467	0.314		0.501	0.334	
Trinidadian & Tobagoan Black ≥ 10 Years	0.369	0.103	***	0.387	0.108	***	0.382	0.108	***	0.400	0.113	***
Guyanese Black < 10 Years	0.728	0.369		0.773	0.389		0.759	0.386		0.808	0.409	
Guyanese Black ≥ 10 Years	0.451	0.123	**	0.478	0.129	**	0.475	0.129	**	0.501	0.136	*
Central/South African < 10 Years	0.058	0.041	***	0.057	0.041	***	0.062	0.044	***	0.061	0.043	***
Central/South African ≥ 10 Years	0.319	0.295		0.330	0.308		0.336	0.311		0.342	0.319	
East African < 10 Years	0.148	0.053	***	0.146	0.052	***	0.166	0.060	***	0.166	0.060	***
East African ≥ 10 Years	0.289	0.074	***	0.295	0.075	***	0.309	0.079	***	0.315	0.080	***
West African < 10 Years	0.333	0.093	***	0.330	0.093	***	0.369	0.104	***	0.369	0.104	***
West African ≥ 10 Years	0.281	0.058	***	0.295	0.061	***	0.293	0.061	***	0.306	0.064	***
Other Foreign-Born < 10 Years	0.310	0.016	***	0.317	0.016	***	0.334	0.017	***	0.343	0.017	***
Other Foreign-Born ≥ 10 Years	0.496	0.015	***	0.521	0.016	***	0.515	0.016	***	0.541	0.017	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.135	0.002	***	0.128	0.002	***	0.134	0.002	***	0.127	0.002	***
Haitian Black < 10 Years	0.041	0.021	+	0.036	0.019	+	0.045	0.023	+	0.041	0.021	+
Haitian Black ≥ 10 Years	0.071	0.013	***	0.068	0.012	***	0.074	0.013	***	0.072	0.013	***
Jamaican Black < 10 Years	0.088	0.022	***	0.086	0.021	***	0.092	0.023	***	0.091	0.023	***
Jamaican Black ≥ 10 Years	0.090	0.010	***	0.088	0.010	***	0.092	0.011	***	0.091	0.010	***

Trinidadian & Tobagoan Black < 10 Years	0.066	0.041		0.066	0.041		0.067	0.042		0.068	0.042	
Trinidadian & Tobagoan Black ≥ 10 Years	0.055	0.014	***	0.054	0.014	***	0.056	0.015	***	0.055	0.015	***
Guyanese Black < 10 Years	0.102	0.046	*	0.102	0.046	*	0.105	0.048	*	0.106	0.048	*
Guyanese Black ≥ 10 Years	0.066	0.017	***	0.066	0.017	***	0.068	0.017	***	0.068	0.017	***
Central/South African < 10 Years	0.009	0.006		0.008	0.006		0.009	0.007		0.009	0.006	
Central/South African ≥ 10 Years	0.048	0.042		0.046	0.041		0.049	0.043		0.048	0.042	
East African < 10 Years	0.023	0.008	**	0.021	0.007	**	0.025	0.009	**	0.024	0.008	**
East African ≥ 10 Years	0.043	0.011	***	0.042	0.010	***	0.045	0.011	***	0.044	0.011	***
West African < 10 Years	0.049	0.013	***	0.046	0.012	***	0.054	0.014	***	0.051	0.014	***
West African ≥ 10 Years	0.042	0.008	***	0.042	0.008	***	0.043	0.009	***	0.043	0.009	***
Other Foreign-Born < 10 Years	0.046	0.002	***	0.045	0.002	***	0.049	0.002	***	0.048	0.002	***
Other Foreign-Born ≥ 10 Years	0.072	0.002	***	0.071	0.002	***	0.074	0.002	***	0.073	0.002	***
F-Statistic	F(24, 1223)	145.750		F(27, 1220)	157.970		F(32, 1215)	146.600		F(35, 1212)	159.070	
Prob > F	0.000			0.000			0.000			0.000		

*N* = 467,920

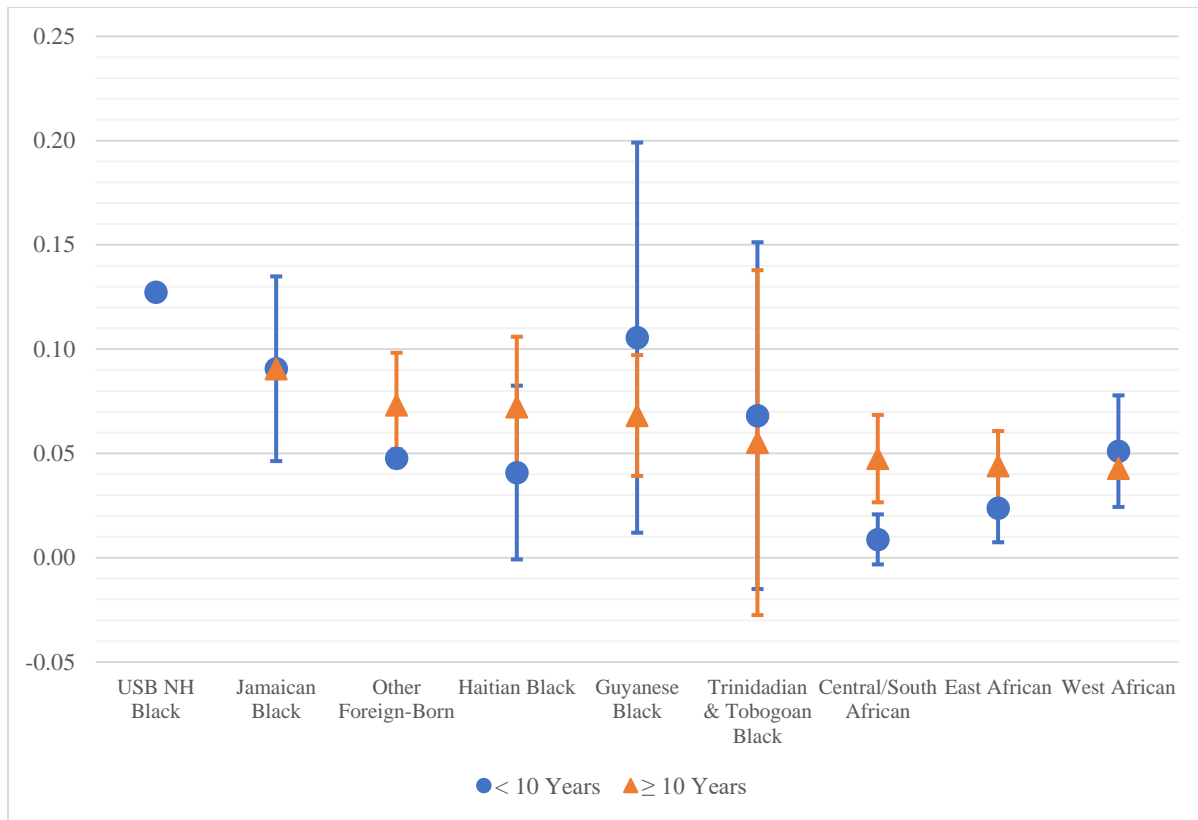
Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+ *p* < 0.10; \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001

### Figure 4.13 Marginal Predicted Probabilities for Asthma by Race/Ethnicity and

National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic

Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



#### Additional African-Origin Categorizations

Table 4.14 and Figure 4.14 present the findings of binomial logistic regression models for asthma by each of the four categorizations of African-origin migrants. Beginning with EI categories, I find that all groups, save more recently arrived migrants from high EI nations, maintain significantly lower predicted probabilities of reporting asthma than U.S.-born non-Hispanic Blacks. A similar trend can be seen for GNI. Indeed, respondents from low and low-mid GNI nations maintain significantly lower predicted probabilities of reporting asthma than the referent. Again, those from upper-mid GNI nations who arrived within the last 10 years show the only non-significant results. While the trends in statistical significance appear consistent, the coefficients themselves show some variation. Take migrants from low EI and low GNI nations as an example. By duration, those from low EI nations report predicted probabilities at 1.0% and

6.1%, respectively. For GNI, these rest at 2.1% and 4.8%. Overall, the trend remains consistent: both groups maintain significantly lower probabilities of reporting asthma than the referent and these probabilities increase with time spent in the United States. The difference is the range of these values. Indeed, one may observe a larger absolute increase between the most recently arrived and more tenured for EI (5.1 percentage points) than for GNI (2.7 percentage points).

Based on language in origin nation, I find that all respondents maintain significantly lower odds ratios and predicted probabilities for reporting asthma than the U.S.-born non-Hispanic Black sample. Relative to their English-speaking origin peers, I find that those from non-English-speaking nations maintain significantly lower odds of reporting asthma in the earliest duration category (0.324 v. 0.066,  $p < 0.05$ ). The same is true for predicted probabilities. Indeed, those from English-speaking nations maintain a predicted probability at 4.6% for reporting asthma. Those from non-English-speaking nations in the same duration category rest at 1.0%.

**Table 4.14** Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.061	0.043	***									
Central/South African ≥ 10 Years	0.342	0.319										
East African < 10 Years	0.166	0.060	***									
East African ≥ 10 Years	0.315	0.080	***									
West African < 10 Years	0.369	0.104	***									
West African ≥ 10 Years	0.306	0.064	***									
Sub-Saharan African Low EI < 10 Years				0.072	0.030	***						
Sub-Saharan African Low EI ≥ 10 Years				0.442	0.110	***						

Sub-Saharan African Average EI < 10 Years	0.320	0.076	***									
Sub-Saharan African Average EI ≥ 10 Years	0.326	0.059	***									
Sub-Saharan African High EI < 10 Years	0.778	0.392										
Sub-Saharan African High EI ≥ 10 Years	0.527	0.212										
Sub-Saharan African Low GNI < 10 Years							0.150	0.051	***			
Sub-Saharan African Low GNI ≥ 10 Years							0.349	0.068	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.340	0.091	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							0.364	0.078	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.634	0.325				
Sub-Saharan African Upper-Mid GNI ≥ 10 Years							0.505	0.203	+			
Sub-Saharan African English-Speaking < 10 Years										0.324	0.098	***
Sub-Saharan African English-Speaking ≥ 10 Years										0.507	0.117	**
Sub-Saharan African non-English-Speaking < 10 Years										0.066	0.029	***
Sub-Saharan African non-English-Speaking ≥ 10 Years										0.369	0.105	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.127	0.002	***	0.127	0.002	***	0.127	0.002	***	0.127	0.002	***
Central/South African < 10 Years	0.009	0.006										
Central/South African ≥ 10 Years	0.048	0.042										
East African < 10 Years	0.024	0.008	**									
East African ≥ 10 Years	0.044	0.011	***									
West African < 10 Years	0.051	0.014	***									
West African ≥ 10 Years	0.043	0.009	***									
Sub-Saharan African Low EI < 10 Years				0.010	0.004	*						
Sub-Saharan African Low EI ≥ 10 Years				0.061	0.014	***						
Sub-Saharan African Average EI < 10 Years				0.045	0.010	***						
Sub-Saharan African Average EI ≥ 10 Years				0.045	0.008	***						
Sub-Saharan African High EI < 10 Years				0.102	0.046	*						
Sub-Saharan African High EI ≥ 10 Years				0.071	0.027	**						
Sub-Saharan African Low GNI < 10 Years							0.021	0.007	**			
Sub-Saharan African Low GNI ≥ 10 Years							0.048	0.009	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.047	0.012	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							0.050	0.010	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.085	0.040	*			
Sub-Saharan African Upper-Mid GNI ≥ 10 Years							0.069	0.026	**			
Sub-Saharan African English-Speaking < 10 Years										0.046	0.013	***
Sub-Saharan African English-Speaking ≥ 10 Years										0.070	0.015	***
Sub-Saharan African non-English-Speaking < 10 Years										0.010	0.004	*
Sub-Saharan African non-English-Speaking ≥ 10 Years										0.052	0.014	***
F-Statistic	F(35, 1212)	159.07		F(35, 1212)	160.51		F(35, 1212)	159.41		F(33, 1214)	114.34	
Prob > F		0			0			0			0	

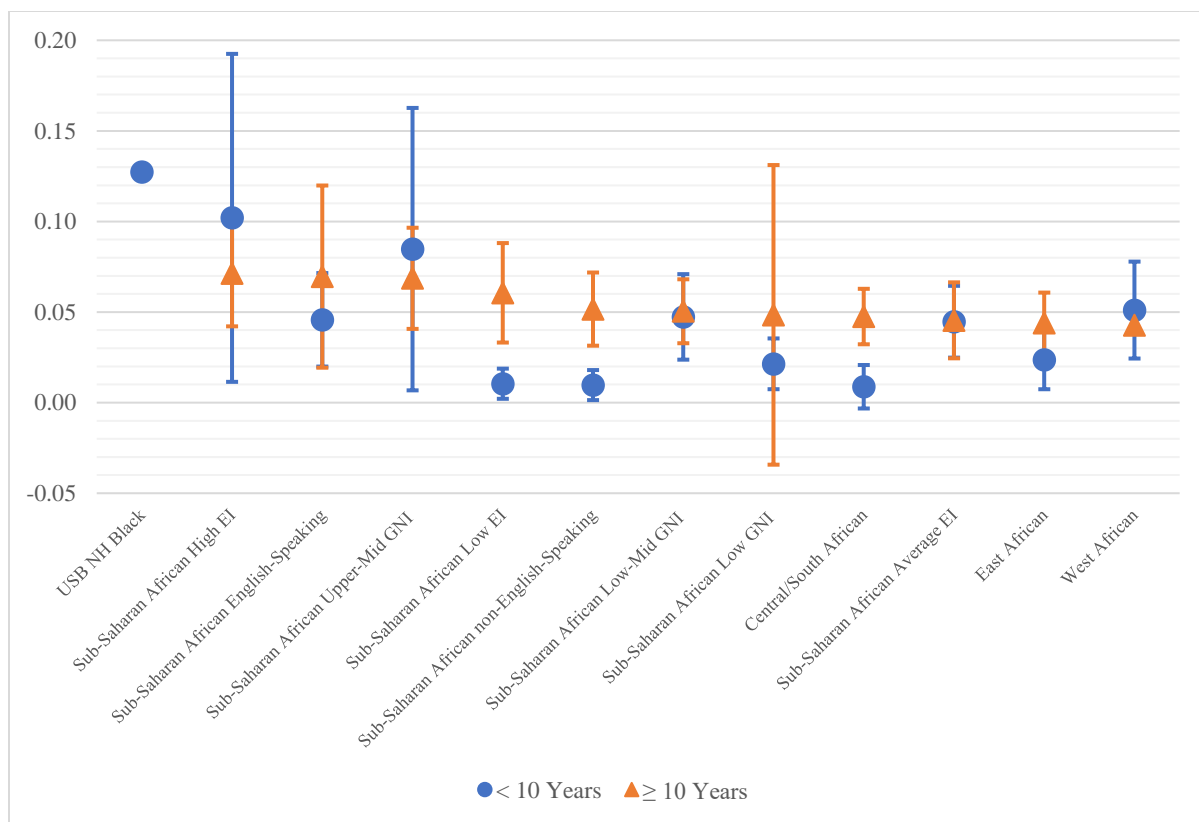
$N = 467,920$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.14** Marginal Predicted Probabilities for Asthma by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



## Overweight/Obese

### National and Regional Origin

In Table 4.6, I present the findings of sample-weighted, binomial logistic regression models for overweight or obese BMIs relative to BMIs in the normal range. When compared to the U.S.-born Black reference, I find that Haitians, Trinidadian & Tobagoans, and East Africans maintain



significantly lower odds for a BMI in the overweight/obese range. Additionally, I observe significantly lower odds among more recently arrived Jamaicans (0.49,  $p < 0.001$ ), Guyanese (0.47,  $p < 0.05$ ), Central/South Africans (0.41,  $p < 0.001$ ), and West Africans (0.49,  $p < 0.001$ ).

U.S.-born non-Hispanic Black respondents report a predicted probability of 75.1% for reporting a BMI in the overweight or obese range, in the first model of Table 4.15. When comparing the results for the Afro-Caribbean sample to this reference group, I find varying levels of statistical significance. Immigrants hailing from Haiti and Trinidad & Tobago, regardless of their time in the United States, maintain significantly lower predicted probabilities of overweight or obese BMI. More recently arrived Jamaicans experience significantly lower probabilities (61.3%,  $p < 0.001$ ), whereas those with greater tenure show no discernable difference from the U.S.-born non-Hispanic Black reference group (71.8%,  $p > 0.05$ ). There is no statistical difference between Guyanese migrants of any duration and the U.S.-born Black referent. I find that East Africans, regardless of their time in the U.S., are at significantly lower probability of reporting overweight or obese BMI than the referent. Central/South Africans and West Africans share a trend in that more recently arrived migrants are at significantly lower probability of reporting overweight or obese BMI (52.9% and 57.5%, respectively;  $p < 0.001$ ), while their more tenured peers show no significant difference (67.8% and 74.4%, respectively).

Moving from Model 1 to Model 2, I observe a slight, consistent attenuation of predicted probabilities for the U.S.-born non-Hispanic Black and Afro-Caribbean samples. While recently arrived East Africans experience a slight attenuation, all other African migrant groups experience an increase in their predicted probabilities of reporting overweight or obese BMI. When comparing models 1 and 3, I find that more recently arrived Afro-Caribbean migrants experience consistent attenuation in their predicted probabilities for overweight or obese BMI. Those with

greater tenure experience little to no change. Central/South and East Africans who have more recently arrived see a slight increase in their predicted probabilities while those with greater tenure enjoy a slight decline. These changes are slight, often at a tenth of a percent. In both sets of models, there is no change in statistical significance when compared to the U.S.-born non-Hispanic Black reference group.

Based on Model 4, respondents who arrived within the last 10 years and those who have resided in the United States for 10 or greater years from Haiti (54.2% and 69.1%) and Trinidad & Tobago (45.1% and 66.1%) maintain significantly lower predicted probabilities for reporting overweight and obese BMI. More recently arrived migrants from Jamaica (58.9%) and Guyana (57.9%) are also at significantly lower probability for this outcome. As in previous models, Jamaicans and Guyanese with greater tenure show no significant difference from the U.S.-born reference category. East Africans, both more recently arrived (49.2%) and tenured (58.9%), as well as recently arrived Central/South Africans (54.5%) and West Africans (58.9%) maintain significantly lower probabilities for overweight or obese BMI. When taken together, most of these foreign-born groups show a trend towards higher BMI among those with greater tenure. Further, these higher BMIs tend to be statistically indistinguishable from the U.S.-born reference.

**Table 4.15** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.568	0.009	***	0.588	0.009	***	0.577	0.009	***	0.590	0.009	***
USB NH Other	0.557	0.017	***	0.573	0.017	***	0.568	0.017	***	0.580	0.017	***
USB Hispanic	0.885	0.021	***	0.878	0.021	***	0.891	0.021	***	0.877	0.021	***

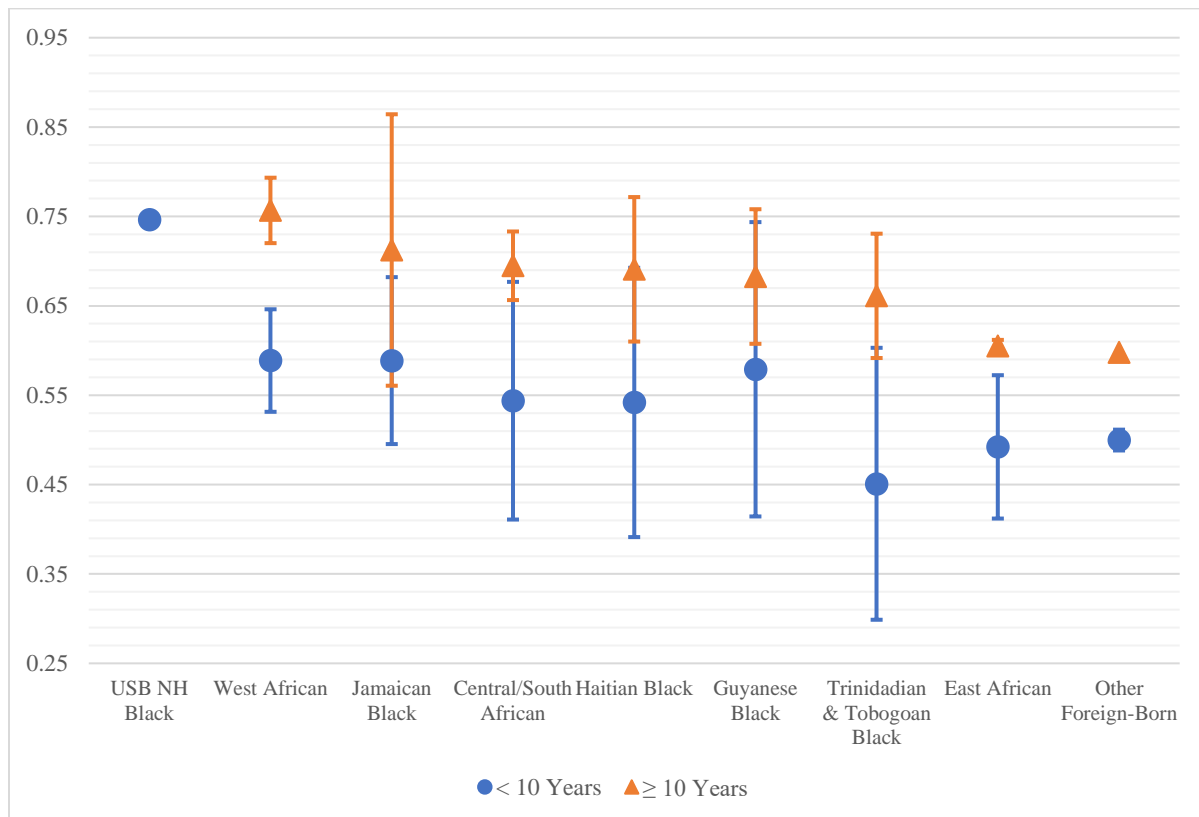
Puerto Rican	0.718	0.037	***	0.731	0.038	***	0.714	0.037	***	0.726	0.038	***
Haitian Black < 10 Years	0.401	0.125	**	0.397	0.125	**	0.401	0.124	**	0.402	0.124	**
Haitian Black ≥ 10 Years	0.737	0.068	***	0.747	0.069	**	0.751	0.070	**	0.759	0.071	**
Jamaican Black < 10 Years	0.525	0.102	***	0.515	0.100	***	0.494	0.097	***	0.486	0.096	***
Jamaican Black ≥ 10 Years	0.841	0.077	+	0.856	0.078	+	0.837	0.078	+	0.842	0.078	+
Trinidadian & Tobogean Black < 10 Years	0.295	0.101	***	0.291	0.096	***	0.286	0.092	***	0.279	0.088	***
Trinidadian & Tobogean Black ≥ 10 Years	0.646	0.112	*	0.664	0.115	*	0.652	0.112	*	0.663	0.114	*
Guyanese Black < 10 Years	0.502	0.169	*	0.493	0.164	*	0.478	0.166	*	0.467	0.161	*
Guyanese Black ≥ 10 Years	0.732	0.140		0.737	0.142		0.733	0.139		0.732	0.140	
Central/South African < 10 Years	0.373	0.102	***	0.403	0.112	***	0.377	0.103	***	0.405	0.111	***
Central/South African ≥ 10 Years	0.699	0.251		0.811	0.297		0.681	0.245		0.774	0.283	
East African < 10 Years	0.322	0.053	***	0.329	0.053	***	0.320	0.053	***	0.329	0.054	***
East African ≥ 10 Years	0.480	0.070	***	0.506	0.075	***	0.496	0.073	***	0.521	0.077	***
West African < 10 Years	0.448	0.054	***	0.485	0.058	***	0.449	0.054	***	0.487	0.059	***
West African ≥ 10 Years	0.964	0.111		1.060	0.121		0.973	0.113		1.057	0.122	
Other Foreign-Born < 10 Years	0.314	0.009	***	0.344	0.010	***	0.310	0.009	***	0.340	0.010	***
Other Foreign-Born ≥ 10 Years	0.481	0.010	***	0.506	0.011	***	0.485	0.010	***	0.506	0.011	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.751	0.003	***	0.746	0.003	***	0.750	0.003	***	0.746	0.003	***
Haitian Black < 10 Years	0.548	0.078	***	0.538	0.078	***	0.546	0.077	***	0.542	0.077	***
Haitian Black ≥ 10 Years	0.690	0.019	***	0.687	0.019	***	0.693	0.019	***	0.691	0.020	***
Jamaican Black < 10 Years	0.613	0.046	***	0.602	0.046	***	0.597	0.047	***	0.589	0.048	***
Jamaican Black ≥ 10 Years	0.718	0.018	***	0.715	0.018	***	0.715	0.019	***	0.712	0.019	***
Trinidadian & Tobogean Black < 10 Years	0.471	0.085	***	0.461	0.082	***	0.462	0.080	***	0.451	0.078	***
Trinidadian & Tobogean Black ≥ 10 Years	0.661	0.039	***	0.660	0.039	***	0.662	0.038	***	0.661	0.038	***
Guyanese Black < 10 Years	0.602	0.080	***	0.591	0.080	***	0.589	0.084	***	0.579	0.084	***
Guyanese Black ≥ 10 Years	0.688	0.041	***	0.684	0.041	***	0.688	0.041	***	0.683	0.041	***
Central/South African < 10 Years	0.529	0.068	***	0.541	0.069	***	0.531	0.068	***	0.544	0.068	***
Central/South African ≥ 10 Years	0.678	0.078	***	0.704	0.076	***	0.671	0.079	***	0.695	0.077	***
East African < 10 Years	0.493	0.041	***	0.491	0.040	***	0.490	0.041	***	0.492	0.041	***
East African ≥ 10 Years	0.591	0.035	***	0.597	0.035	***	0.598	0.035	***	0.605	0.035	***
West African < 10 Years	0.575	0.029	***	0.587	0.029	***	0.574	0.030	***	0.589	0.029	***
West African ≥ 10 Years	0.744	0.022	***	0.757	0.021	***	0.745	0.022	***	0.757	0.021	***
Other Foreign-Born < 10 Years	0.487	0.006	***	0.502	0.006	***	0.482	0.006	***	0.500	0.006	***
Other Foreign-Born ≥ 10 Years	0.592	0.004	***	0.597	0.003	***	0.593	0.004	***	0.598	0.003	***
F-Statistic	F(24, 1223)	483.89 0		F(27, 1220)	488.69 0		F(32, 1215)	432.60 0		F(35, 1212)	434.53 0	
Prob > F	0.000			0.000			0.000			0.000		

N = 449,424

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.15** Marginal Predicted Probabilities for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



#### Additional African-Origin Categorizations

In my analysis of BMI, I find that most African-origin groups display significantly odds ratios and lower predicted probabilities for a BMI in the overweight or obese range relative to U.S.-born non-Hispanic Black respondents. These findings align closely with those from prior models and suggest that the health of African immigrants is better than their U.S.-born Black counterparts. There is an interesting distinction in this table, however. Tenured Africans hailing from average EI nations EI (72.0%,  $p > 0.05$ ) and low-mid GNI nations (71.2%,  $p > 0.05$ )

display the highest predicted probabilities for reporting an overweight or obese BMI within their respective categorizations.

By language, I find that those from non-English-speaking and English-speaking nations both maintain significantly lower odds and predicted probabilities for reporting overweight or obese BMIs relative to the U.S.-born reference ( $p < 0.001$ ). This is true regardless of duration. In all categories, I observe an increase in both odds ratios and predicted probabilities as duration in the United States increases.

**Table 4.16** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.405	0.111	***									
Central/South African ≥ 10 Years	0.774	0.283										
East African < 10 Years	0.329	0.054	***									
East African ≥ 10 Years	0.521	0.077	***									
West African < 10 Years	0.487	0.059	***									
West African ≥ 10 Years	1.057	0.122										
Sub-Saharan African Low EI < 10 Years				0.257	0.042	***						
Sub-Saharan African Low EI ≥ 10 Years				0.494	0.068	***						
Sub-Saharan African Average EI < 10 Years				0.473	0.050	***						
Sub-Saharan African Average EI ≥ 10 Years				0.876	0.088							
Sub-Saharan African High EI < 10 Years				0.460	0.157	*						
Sub-Saharan African High EI ≥ 10 Years				0.458	0.104	***						
Sub-Saharan African Low GNI < 10 Years							0.339	0.044	***			
Sub-Saharan African Low GNI ≥ 10 Years							0.652	0.074	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.468	0.054	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							0.842	0.099				

Sub-Saharan African Upper-Mid GNI < 10 Years	0.369	0.123	**									
Sub-Saharan African Upper-Mid GNI ≥ 10 Years	0.456	0.102	***									
Sub-Saharan African English-Speaking < 10 Years									0.436	0.073	***	
Sub-Saharan African English-Speaking ≥ 10 Years									0.521	0.079	***	
Sub-Saharan African non-English-Speaking < 10 Years									0.281	0.049	***	
Sub-Saharan African non-English-Speaking ≥ 10 Years									0.501	0.071	***	
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.746	0.003	***	0.746	0.003	***	0.746	0.003	***	0.746	0.003	***
Central/South African < 10 Years	0.544	0.068	***									
Central/South African ≥ 10 Years	0.695	0.077	***									
East African < 10 Years	0.492	0.041	***									
East African ≥ 10 Years	0.605	0.035	***									
West African < 10 Years	0.589	0.029	***									
West African ≥ 10 Years	0.757	0.021	***									
Sub-Saharan African Low EI < 10 Years				0.431	0.040	***						
Sub-Saharan African Low EI ≥ 10 Years				0.593	0.033	***						
Sub-Saharan African Average EI < 10 Years				0.582	0.026	***						
Sub-Saharan African Average EI ≥ 10 Years				0.720	0.020	***						
Sub-Saharan African High EI < 10 Years				0.575	0.083	***						
Sub-Saharan African High EI ≥ 10 Years				0.574	0.056	***						
Sub-Saharan African Low GNI < 10 Years							0.499	0.032	***			
Sub-Saharan African Low GNI ≥ 10 Years							0.657	0.025	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.579	0.028	***			
Sub-Saharan African Low-Mid GNI ≥ 10 Years							0.712	0.024	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.521	0.083	***			
Sub-Saharan African Upper-Mid GNI ≥ 10 Years							0.573	0.055	***			
Sub-Saharan African English-Speaking < 10 Years										0.560	0.041	***
Sub-Saharan African English-Speaking ≥ 10 Years										0.603	0.036	***
Sub-Saharan African non-English-Speaking < 10 Years										0.450	0.043	***
Sub-Saharan African non-English-Speaking ≥ 10 Years										0.594	0.034	***
F-Statistic	F(35, 1212)	434.53		F(35, 1212)	431.81		F(35, 1212)	431.73		F(33, 1214)	387.41	
Prob > F		0			0			0			0	

N = 449,424

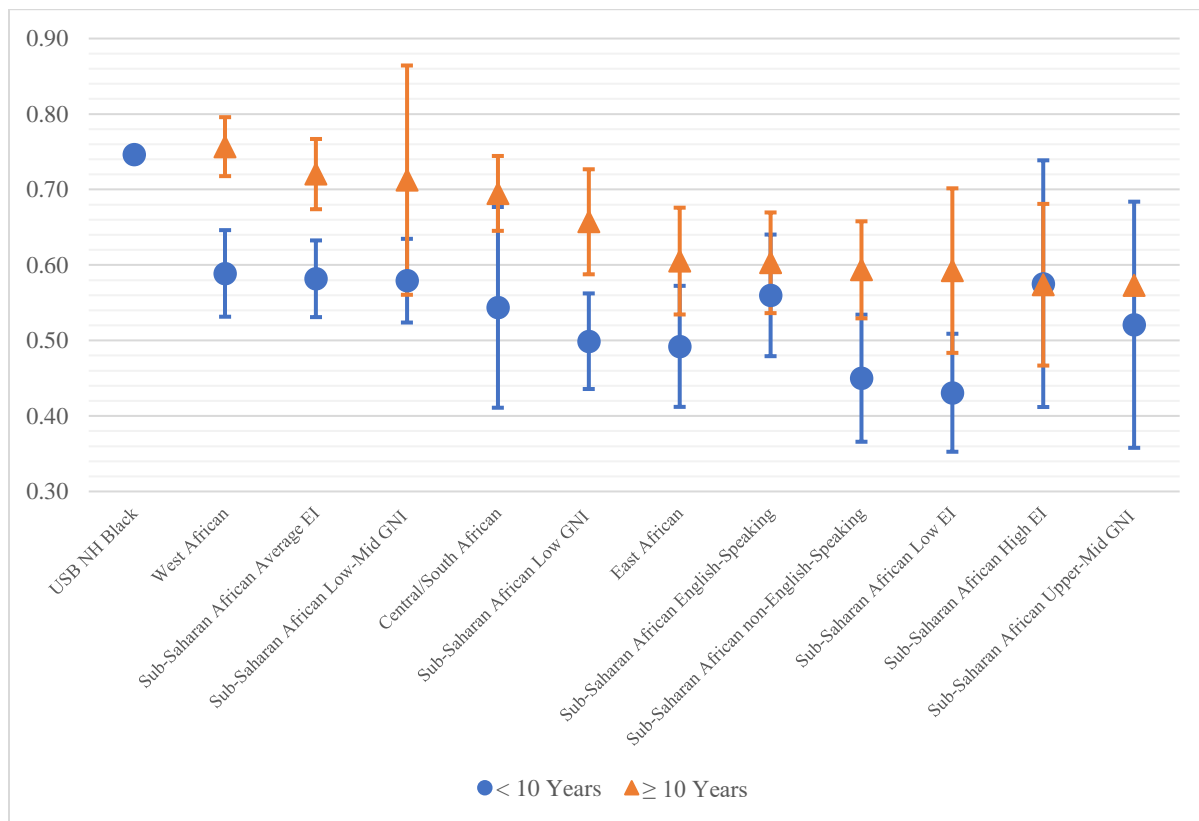
Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.16** Marginal Predicted Probabilities for Overweight/Obese BMI Relative to Normal BMI by African Regional Origin, Educational Index, Gross National Income, and Language

Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



### Depressive Symptoms

#### National and Regional Origin

Table 4.17 presents the results of binomial logistic regression models for clinically significant depressive symptoms (henceforth, depressive symptoms). Relative to the U.S.-born reference, only tenured Jamaicans (0.75,  $p < 0.05$ ), tenured Trinidadian & Tobagoans (0.39,  $p < 0.05$ ), tenured Guyanese (0.32,  $p < 0.01$ ), and more recently arrived East Africans (0.37,  $p < 0.001$ ) display significantly lower odds for depressive symptoms. Each other foreign-born group displays significantly indistinguishable odds.

Turning to the second panel, U.S.-born non-Hispanic Black respondents maintain an 11.4% predicted probability of reporting depressive symptoms in Model 1. When compared to

this value, Afro-Caribbean migrants with greater tenure in the United States tend to report significantly lower probabilities of reporting depressive symptoms than the U.S.-born referent. For instance, Guyanese respondents who more recently arrived report a predicted probability of 9.6% ( $p > 0.05$ ). Their more tenured peers report a probability of only 2.9% ( $p < 0.001$ ), nearly 7 percentage points lower. West Africans also fall into this trend. More recent arrivals report a probability of 7% ( $p < 0.001$ ), while more tenured migrants maintain a probability of 5.6% ( $p < 0.001$ ).

This trend is not consistent among Haitians and Africans. Haitians show no significant difference in their predicted probability of reporting depressive symptoms as compared to the referent. Indeed, those who more recently arrived maintain a probability of 8% ( $p > 0.05$ ) and those with greater tenure of 9.8% ( $p > 0.05$ ). Central/South Africans show no significant difference from the referent category, regardless of duration. Those who arrived within the last 10 years maintain a probability of 7.2% ( $p > 0.05$ ) and those with 10 or greater years rest at 11.1% ( $p > 0.05$ ). East Africans are similar. Recent arrivals have a predicted probability of 3.7% ( $p < 0.001$ ) while those with greater tenure are at 8.4% ( $p > 0.05$ ). Despite a general lack of statistical significance, these three groups both show a substantive trend of increasing probabilities of depressive symptoms as time in the United States increases.

Between Model 1 and 2, there is a consistent attenuation of predicted probabilities across all foreign-born groups. Despite this change, there are no shifts in statistical significance. The predicted probabilities seen in Model 3 increase relative to Model 2 and, in many cases, Model 1. It appears that socioeconomic characteristics play a larger role in predicting depressive symptoms than do health behaviors.



Model 4, as shown in both Tables 4.17 and Figure 4.17, displays predicted probabilities when considering all model covariates. In this model, there is a noteworthy loss of statistical significance for most foreign-born groups. Indeed, in this model, only the most tenured migrants from Jamaica (5.8%,  $p < 0.05$ ), Trinidad & Tobago (3.1%,  $p < 0.001$ ), and Guyana (2.6%,  $p < 0.001$ ) experience significantly lower predicted probabilities for depressive symptoms relative to the referent. Additionally, recently arrived East Africans (3%,  $p < 0.001$ ) maintain significantly lower predicted probabilities. Taken together, these findings suggest that many Afro-Caribbean migrants experience higher levels, comparable to that of U.S.-born non-Hispanic Blacks, of depressive symptoms upon arrival to the United States and, with time, these dissipate. African migrants, on the other hand, either experience comparable levels of depressive symptoms regardless of duration or experience the anticipated worsening of mental health with greater tenure. The variation observed in these models is likely an important indicator of differential experiences based on national or regional origin as well as the context of reception in the United States.

**Table 4.17** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.824	0.017	***	1.144	0.024	***	0.866	0.018	***	1.085	0.023	***
USB NH Other	1.117	0.045	**	1.350	0.058	***	1.177	0.048	***	1.330	0.056	***
USB Hispanic	0.936	0.030	*	1.085	0.035	*	1.047	0.033		1.162	0.037	***
Puerto Rican	1.528	0.099	***	1.652	0.110	***	1.623	0.106	***	1.696	0.112	***
Haitian Black < 10 Years	0.676	0.189		0.546	0.170	+	0.815	0.241		0.745	0.235	
Haitian Black ≥ 10 Years	0.845	0.116		0.925	0.135		1.025	0.142		1.138	0.164	

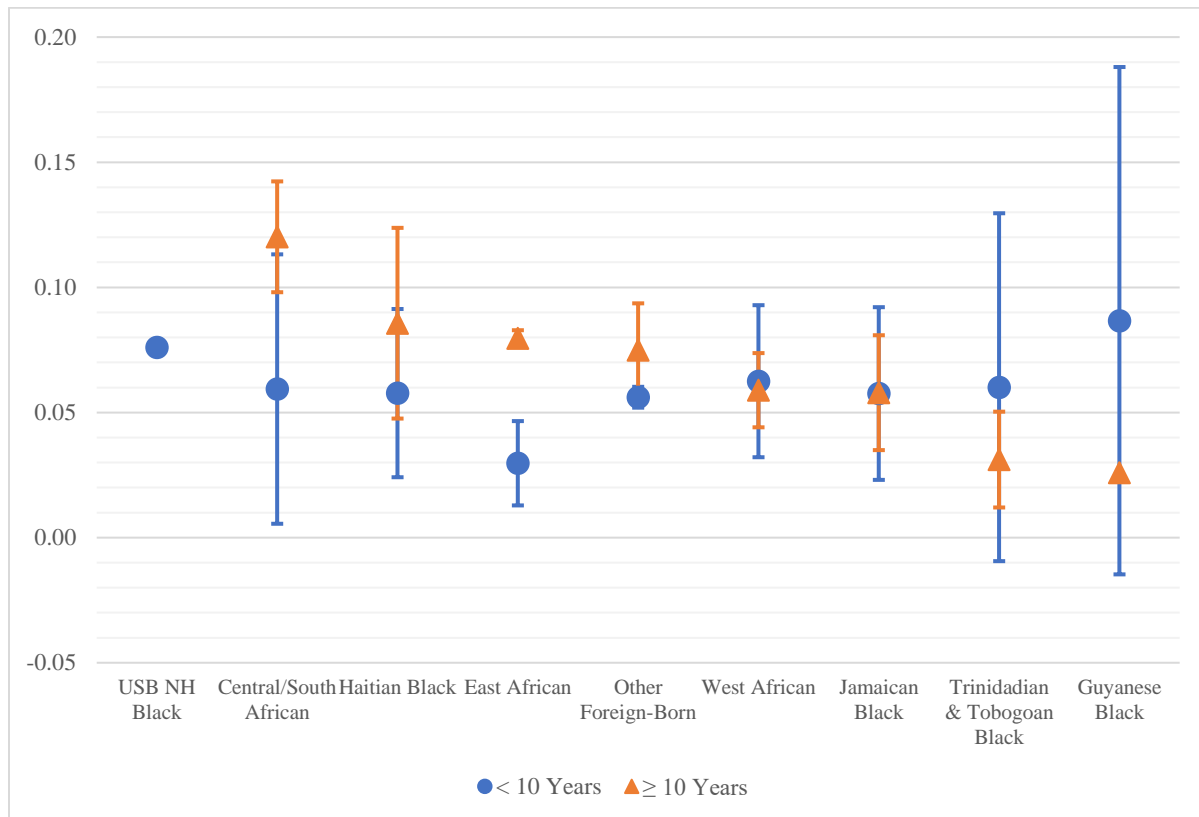
Jamaican Black < 10 Years	0.607	0.200		0.646	0.211		0.686	0.227		0.742	0.241	
Jamaican Black ≥ 10 Years	0.546	0.076	***	0.646	0.091	**	0.660	0.090	**	0.747	0.104	*
Trinidadian & Tobagoan Black < 10 Years	0.526	0.316		0.676	0.404		0.646	0.412		0.777	0.488	
Trinidadian & Tobagoan Black ≥ 10 Years	0.299	0.118	**	0.363	0.144	*	0.327	0.128	**	0.391	0.152	*
Guyanese Black < 10 Years	0.824	0.516		1.000	0.651		0.975	0.611		1.153	0.753	
Guyanese Black ≥ 10 Years	0.236	0.098	***	0.287	0.118	**	0.281	0.111	***	0.324	0.126	**
Central/South African < 10 Years	0.608	0.308		0.654	0.327		0.726	0.362		0.767	0.377	
Central/South African ≥ 10 Years	0.972	0.401		1.409	0.651		1.254	0.539		1.660	0.754	
East African < 10 Years	0.298	0.086	***	0.291	0.087	***	0.354	0.103	***	0.372	0.111	***
East African ≥ 10 Years	0.715	0.188		0.827	0.216		0.917	0.246		1.051	0.280	
West African < 10 Years	0.586	0.149		0.645	0.164		0.709	0.188		0.810	0.213	
West African ≥ 10 Years	0.464	0.081	***	0.644	0.111	*	0.587	0.104	**	0.760	0.131	
Other Foreign-Born < 10 Years	0.523	0.022	***	0.651	0.028	***	0.583	0.025	***	0.722	0.032	***
Other Foreign-Born ≥ 10 Years	0.694	0.020	***	0.901	0.028	***	0.797	0.024	***	0.984	0.031	
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.114	0.002	***	0.080	0.001	***	0.096	0.002	***	0.076	0.001	***
Haitian Black < 10 Years	0.080	0.021	***	0.045	0.013	***	0.080	0.022	***	0.058	0.017	***
Haitian Black ≥ 10 Years	0.098	0.012	***	0.075	0.010	***	0.099	0.012	***	0.086	0.011	***
Jamaican Black < 10 Years	0.072	0.022	***	0.053	0.016	***	0.068	0.021	***	0.058	0.018	***
Jamaican Black ≥ 10 Years	0.066	0.008	***	0.053	0.007	***	0.066	0.008	***	0.058	0.008	***
Trinidadian & Tobagoan Black < 10 Years	0.063	0.036	+	0.056	0.031	+	0.064	0.038	+	0.060	0.035	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.037	0.014	**	0.031	0.012	**	0.034	0.013	**	0.031	0.012	**
Guyanese Black < 10 Years	0.096	0.054	+	0.080	0.048	+	0.094	0.054	+	0.087	0.052	+
Guyanese Black ≥ 10 Years	0.029	0.012	*	0.024	0.010	*	0.029	0.011	**	0.026	0.010	**
Central/South African < 10 Years	0.072	0.034	*	0.054	0.026	*	0.072	0.033	*	0.059	0.027	*
Central/South African ≥ 10 Years	0.111	0.041	**	0.109	0.045	*	0.118	0.045	**	0.120	0.048	*
East African < 10 Years	0.037	0.010	***	0.025	0.007	***	0.036	0.010	***	0.030	0.009	***
East African ≥ 10 Years	0.084	0.020	***	0.067	0.016	***	0.089	0.022	***	0.080	0.019	***
West African < 10 Years	0.070	0.017	***	0.053	0.013	***	0.070	0.017	***	0.063	0.015	***
West African ≥ 10 Years	0.056	0.009	***	0.053	0.009	***	0.059	0.010	***	0.059	0.010	***
Other Foreign-Born < 10 Years	0.063	0.002	***	0.054	0.002	***	0.059	0.002	***	0.056	0.002	***
Other Foreign-Born ≥ 10 Years	0.082	0.002	***	0.073	0.002	***	0.078	0.002	***	0.075	0.002	***
F-Statistic	F(24, 1223)	68.800		F(27, 1220)	329.660		F(32, 1215)	302.960		F(35, 1212)	399.950	
Prob > F	0.000			0.000			0.000			0.000		

N = 462,821

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.17** Marginal Predicted Probabilities for Depressive Symptoms by Race/Ethnicity and National/Regional Origin Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



#### Additional African-Origin Categorizations

In my final set of analyses in this chapter, I examine self-reported distress or depressive symptoms. In Table 4.18 and Figure 4.18, I find that most of the African-origin groups show no significant differences in their predicted probabilities for reporting depressive symptoms when compared to the U.S.-born reference category. For EI, the only significant differences exist for migrants hailing from average national EI nations (4.5%,  $p < 0.001$ ; 5.9%,  $p < 0.05$ ). For GNI, only those with the greatest tenure from low-mid GNI nations exhibit significant differences

(4.4%,  $p < 0.001$ ). In all three instances, these groups report significantly lower predicted probabilities for reporting depressive symptoms than the referent.

Only the most tenured respondents from non-English-speaking (0.45,  $p < 0.05$ ) and English-speaking nations (0.46,  $p < 0.05$ ) maintain significantly lower odds for reporting depressive symptoms relative to the referent. These groups do not differ significantly from one another. In the second panel and in Figure 4.18, I find that all language categories report significantly lower predicted probabilities for reporting depressive symptoms. This is true for all duration groups. The predicted probabilities do not differ significantly when compared to like-duration peers. As anticipated, the predicted probabilities for all EI, GNI, and language groups increase with greater duration in the United States.

**Table 4.18** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 4			Model 4			Model 4			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
Central/South African < 10 Years	0.767	0.377										
Central/South African $\geq$ 10 Years	1.660	0.754										
East African < 10 Years	0.372	0.111	***									
East African $\geq$ 10 Years	1.051	0.280										
West African < 10 Years	0.810	0.213										
West African $\geq$ 10 Years	0.760	0.131										
Sub-Saharan African Low EI < 10 Years				0.799	0.251							
Sub-Saharan African Low EI $\geq$ 10 Years				1.035	0.295							
Sub-Saharan African Average EI < 10 Years				0.571	0.120	**						
Sub-Saharan African Average EI $\geq$ 10 Years				0.761	0.115	+						
Sub-Saharan African High EI < 10 Years				0.543	0.539							
Sub-Saharan African High EI $\geq$ 10 Years				0.812	0.344							
Sub-Saharan African Low GNI < 10 Years							0.732	0.191				

Sub-Saharan African Low GNI $\geq 10$ Years							0.851	0.184				
Sub-Saharan African Low-Mid GNI < 10 Years							0.558	0.128	*			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.865	0.148				
Sub-Saharan African Upper-Mid GNI < 10 Years							0.523	0.464				
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							0.761	0.325				
Sub-Saharan African English-Speaking < 10 Years										0.455	0.155	*
Sub-Saharan African English-Speaking $\geq 10$ Years										0.763	0.176	
Sub-Saharan African non-English-Speaking < 10 Years										0.447	0.147	*
Sub-Saharan African non-English-Speaking $\geq 10$ Years										1.080	0.306	
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.076	0.001	***	0.076	0.001	***	0.076	0.001	***	0.076	0.001	***
Central/South African < 10 Years	0.059	0.027	*									
Central/South African $\geq 10$ Years	0.120	0.048	*									
East African < 10 Years	0.030	0.009	***									
East African $\geq 10$ Years	0.080	0.019	***									
West African < 10 Years	0.063	0.015	***									
West African $\geq 10$ Years	0.059	0.010	***									
Sub-Saharan African Low EI < 10 Years				0.062	0.018	***						
Sub-Saharan African Low EI $\geq 10$ Years				0.079	0.021	***						
Sub-Saharan African Average EI < 10 Years				0.045	0.009	***						
Sub-Saharan African Average EI $\geq 10$ Years				0.059	0.008	***						
Sub-Saharan African High EI < 10 Years				0.043	0.041							
Sub-Saharan African High EI $\geq 10$ Years				0.063	0.025	*						
Sub-Saharan African Low GNI < 10 Years							0.057	0.014	***			
Sub-Saharan African Low GNI $\geq 10$ Years							0.065	0.013	***			
Sub-Saharan African Low-Mid GNI < 10 Years							0.044	0.010	***			
Sub-Saharan African Low-Mid GNI $\geq 10$ Years							0.066	0.011	***			
Sub-Saharan African Upper-Mid GNI < 10 Years							0.041	0.035				
Sub-Saharan African Upper-Mid GNI $\geq 10$ Years							0.059	0.024	*			
Sub-Saharan African English-Speaking < 10 Years										0.035	0.012	**
Sub-Saharan African English-Speaking $\geq 10$ Years										0.058	0.013	***
Sub-Saharan African non-English-Speaking < 10 Years										0.035	0.011	**
Sub-Saharan African non-English-Speaking $\geq 10$ Years										0.080	0.021	***
F-Statistic	F(35, 1212)	399.95		F(35, 1212)	398.19		F(35, 1212)	397.71		F(33, 1214)		378.04
Prob > F		0			0			0			0	

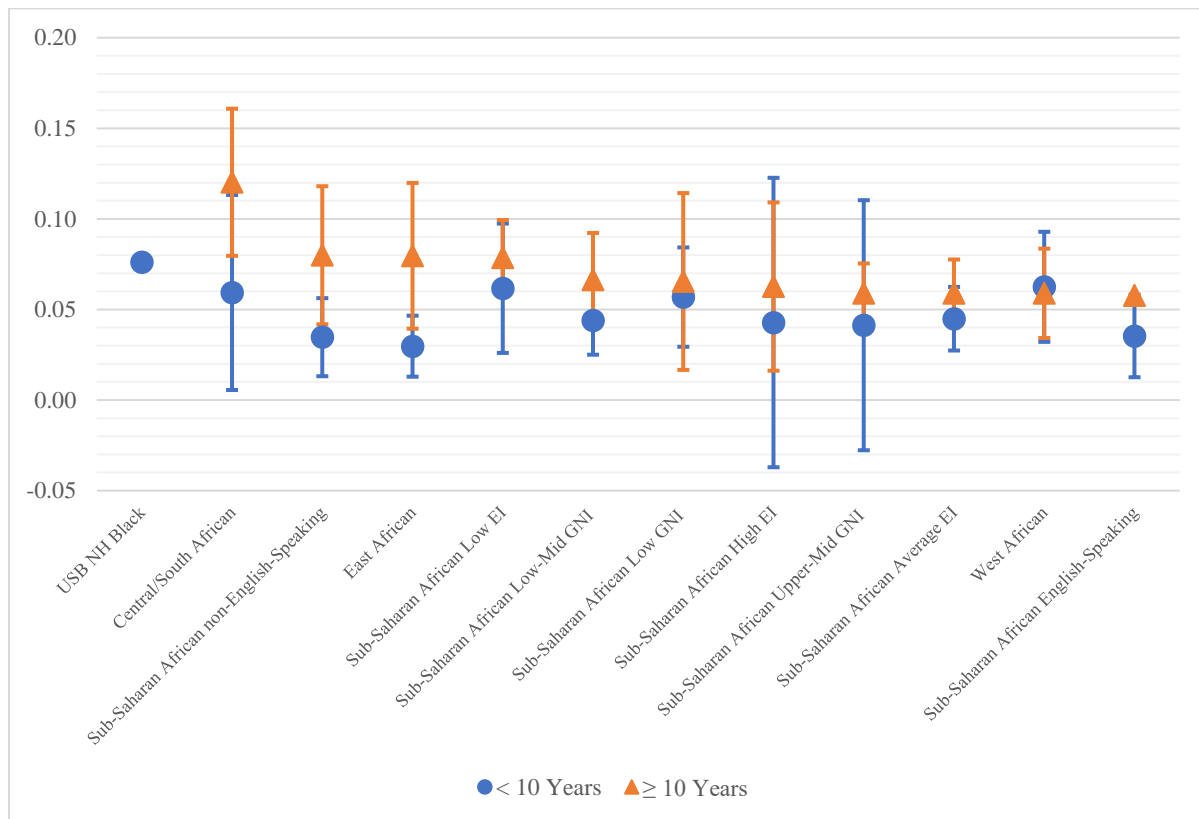
$N = 462,821$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

Low EI =  $EI \leq -1\sigma$ ; Average =  $-1\sigma < EI < 1\sigma$ ; High =  $1\sigma \leq EI$

+  $p < 0.10$ ; \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Figure 4.18** Marginal Predicted Probabilities for Depressive Symptoms by African Regional Origin, Educational Index, Gross National Income, and Language Categorizations Based on Unconditional Sample-Weighted, Binomial Logistic Regression Models, Adults Aged 18-65+, National Health Interview Survey 2000-2018



## Discussion

### *Hypothesis 1 – The Immigrant Health Advantage and National/Regional Origin*

In this chapter, I examine variations in health for Afro-Caribbean and African immigrants relative to U.S.-born non-Hispanic Black respondents. Specifically, I investigate variation within these groups based on national origin and regional origin. To do this, I use self-reported data from the 2000 through 2018 waves of the National Health Interview Survey. In partial support of my first hypothesis and in line with much of the existing research (Carlisle, 2012; Commodore-

Mensah et al., 2016; Ford et al., 2015; Hamilton, 2019; Hamilton & Hummer, 2011; Jackson & Antonucci, 2005; Mehta et al., 2015; Palarino, 2021), I find that most Afro-Caribbean and African groups maintain significantly lower predicted probabilities for reporting poor or fair self-rated health and hypertension. Afro-Caribbeans also enjoy significantly lower probabilities for heart conditions and reporting a BMI in the overweight or obese range, relative to their U.S.-born peers, while Africans show significantly lower probabilities for a lifetime history of asthma.

Taken together, these findings provide a great deal of support for the immigrant health advantage among Haitian, Jamaican, Trinidadian & Tobagoan, East African, and West African immigrants for several health outcomes. While this general trend exists, it is important to note that the degree of support for this advantage varies by both national and regional origin. This point is essential to our understanding of health variation in this sample of Black immigrants because it highlights that, not only is there variation relative to U.S.-born Black adults, but there is also variation between Black immigrant groups. One explanation for these differences rests with the racial context of origin perspective. I engage with this perspective in detail in my discussion of my second hypothesis. Alongside variation by national and regional origin, health selection, cultural buffering, and access to and utilization of health care may all potentially explain the findings from these models.

Beginning with health selectivity, it may be the case that these immigrant groups are among the healthiest from their respective sending nations and regions (Elo et al., 2011; Hamilton, 2019; Model, 2008). Explicitly, those residing in the United States may be significantly healthier than those who remain in their origin nations. This is an understandable assumption for many of these immigrant groups, given that the geographic distance required to migrate to the United States is quite far. As Hamilton (2019) emphasizes, the farther the

geographic distance of migration, the greater toll it takes on migrants' finances, psychological well-being, and health. This also aligns with descriptive findings highlight relatively high levels of college graduations among several of these Black immigrant groups, suggesting potential educational selection.

East Africans present a unique case in the discussion of health selection. In Chapter 2, I discuss the importance of choice in health selectivity. Namely, the notion of selective migration applies only to those who are voluntarily migrating (Akresh & Frank, 2008; Elo et al., 2011). As of 2010, nearly 25% of all refugees living in the United States came from four African nations: Ethiopia, Liberia, Somalia, and Sudan (Capps et al., 2011). Three of these four nations fall within the East Africa geographic category. Based on this knowledge, one could reasonably assume that East Africans would display worse health than other African-origin groups due to the potentially high concentration of involuntary migrants. This is not the case. Instead, East Africans consistently display the best health based on the seven outcomes assessed in these models. Admittedly, the NHIS data do not contain any information on the mode of entry for immigrants. As such, it is impossible to ascertain how many migrants are involuntary or how their health may differ from those who left their home countries voluntarily. Further inquiry into the health of immigrants from these regions could provide a great deal of clarity on these seemingly contradictory findings.

A second potential explanation for these trends is cultural buffering (Abraído-Lanza et al., 1999; Hao & Kim, 2009; Jasso et al., 2004; Taylor & Sarathchandra, 2016). Using this perspective, one may argue that the better health observed for these foreign-born groups reflects a stronger presence of protective health behaviors and other protective social factors. This may include higher social cohesion, higher rates of cigarette and alcohol abstaining, and higher



consumption of fruits and vegetables. There is some evidence to support this perspective from descriptive results. In this sample, all Afro-Caribbean and African-origin groups maintain significantly lower levels of cigarette smoking when compared U.S.-born Blacks. Here, 21.1% of the U.S.-born referent reports currently smoking cigarettes. Comparatively, Haitians report the lowest levels of current cigarette smokers for all foreign-born respondents at 4.3% and Trinidadian & Tobagoans are at the high end with 12.5%. In all cases, these levels are significantly lower than the referent. Additionally, Haitians, Jamaicans, East Africans, and West Africans all maintain significantly lower levels of current alcohol consumers. While there are no noteworthy differences in physical activity, these behaviors align closely with multivariate findings. The four groups that report lower cigarette smoking and alcohol consumption also report “better” health than the reference group.

A third, related explanation reflects health care access and utilization. In descriptive analyses, I find that Haitians, Central/South Africans, East Africans, and West Africans all report significantly lower levels of health care utilization than U.S.-born non-Hispanic Blacks. NHIS data rely entirely on self-reported health conditions; specifically, whether the respondent has been told by a health professional that they have a condition or not. Lower levels of health care utilization may not solely impact the health of these immigrant groups. It may impact the quality of responses. Respondents with less frequent health care visits may experience higher levels of undiagnosed conditions than those who more regularly receive care. As such, Haitians and African immigrants may display better health simply as a result of mis- or undiagnosed health conditions, resulting in unintentional under-reporting. The best way to assess this potential issue is to rely more heavily on physiological measures of health (e.g., diastolic and systolic blood pressure, blood glucose levels).

Finally, there are several instances where the health of more recently arrived migrants is “worse” than that of their more tenured, like-origin peers. These findings stand out because they contradict the anticipated relationship between time spent in the United States and health (Antecol & Bedard, 2006; Frisbie et al., 2001; Goel et al., 2004; Jasso et al., 2004; Palarino, 2021; Urquia et al., 2012; Van Hook et al., 2018). For instance, West Africans with greater tenure report a predicted probability of 14.9% for reporting hypertension. This is nearly half that of their more recently arrived peers at 29%. Additionally, Guyanese, Trinidadian & Tobagoan, and West African immigrants all exhibit declines in their predicted probabilities for asthma with increasing duration. While many of these differences are not statistically significant, they highlight an interesting substantive divergence from what one may expect. One explanation for this could be rising prevalence in sending nations, effectively increasing prevalence in the United States among recently arrived immigrants. There is evidence that asthma prevalence is increasing across several regions in the Caribbean and much of Africa (Adeloye et al., 2013; Gowrie et al., 2016). That said, much of this research emphasizes widespread increases that are not geographically confined to Guyana, Trinidad & Tobago, and Western African nations. While it is more difficult to argue this point for a region as large as West Africa, if these increases were the result of rising prevalence in the Caribbean, I would anticipate seeing a similar increase for Haitians and Jamaicans. I do not. Another explanation for this increase may be that migration is becoming easier from these sending regions. Established migration flows, decreased fiscal costs associated with travel, and strong receiving communities can lessen the costs of migration, including those on physical health.

### *Hypothesis 2 – Racial Context of Origin*

I find limited support for my second hypothesis rooted in the racial context of origin perspective. Through this perspective, one must consider the racial composition and hierarchy of the nation of origin to understand an immigrant's response or reaction to the racial structure of the United States. This, ultimately, impacts the health of immigrants in different ways. Read and Emmerson (2005) argue that those from similarly structured racial hierarchies will display worse health than those from dissimilar. Namely, those from Black-majority nations will have better health from having less exposure to race-based discrimination than those from Black-minority nations. In this sample, I identify two nations as being "Black-minority": Trinidad & Tobago and Guyana (UNSD, 2022). Note that I do not compare these groups to one another.

Relative to Trinidadian & Tobagoan migrants, I find significant differences only for hypertension in this foreign-born sample. Recently arrived Haitians, Central/South Africans, East Africans, and West Africans, alongside tenured Jamaicans and West Africans, display significantly higher predicted probabilities for hypertension than their Trinidadian & Tobagoan peers. The most consistent differences are among East and West Africans. Relative to Guyanese immigrants, I observe significant differences for heart conditions, hypertension, and pre-diabetes or diabetes for East Africans. Tenured Haitians, Jamaicans, East Africans, and West Africans also report significantly higher probabilities for reporting depressive symptoms than their like-tenured Guyanese peers.

Together, these findings provide nation-specific support for the racial context of origin perspective. Specifically, when compared to Trinidadian & Tobagoan immigrants, East and West Africans appear to have significantly worse health. While it is difficult to say with certainty what the racial composition of each of the nations captured in these categories is, one can reasonably assume that each nation does maintain a majority "Black" population. I observe fewer

differences when compared to other Afro-Caribbean groups. Guyanese migrants, on the other hand, appear more consistently similar to other Afro-Caribbean and African groups. Instances of statistical significance go in the opposite direction from Trinidadian & Tobagoans, however. Indeed, with the exception of mental health, the only significant differences observed emphasize better health among East Africans and Central/South Africans than Guyanese. These results must be interpreted with caution, however. In these analyses, I make several assumptions about the notion of race and the racial structure for each nation. Specifically, I assume that each definition of race and ethnicity aligns with that seen in the United States. This is unlikely. Further, I am assuming that the racial hierarchy is similar to that of the United States. This, too, is unlikely. While a more well-rounded approach to these social constructs is ideal, I am limited to my own social experiences and understanding of race in the United States.

In line with the racial context of origin perspective, some argue that a history of colonial subjugation by the United States may impact perceptions of immigrants in the United States (Grosfoguel, 2003; Hamilton, 2019). Through this explanation, a lack of colonial history places Black immigrants higher in the discrimination hierarchy than U.S.-born Blacks, who were subjected to antebellum slavery, Jim Crow discrimination, and discrimination following the passage of the Civil Rights Act of 1964. This argument aligns well with findings that Jamaicans, East Africans, and West Africans all experience better health outcomes than their U.S.-born peers. Haitians are a different case, however. In 1915, the United States began a military occupation of Haiti that lasted until 1934 (Plummer, 1982). During this occupation, American forces exerted “extreme racism” (Plummer, 1982, p. 125) toward Black Haitians. Based on this perspective, Haitians should experience notably worse health than these other groups, but I find limited evidence of this.

### *Hypothesis 3 – National Origin and Language*

My third hypothesis focuses on official language in each country or region of origin. This hypothesis extends the racial context of origin perspective by investigating potential similarities between the United States and respective origin nations. Here, I investigate differences between those who come from nations with English as a national language relative to those whose national origin does not list English as a national language. Based on the categories in my analyses, there are two groups who hail from non-English-speaking regions: Haitians and Africans from non-English-speaking nations.

I find little support for my third hypothesis that those from English-speaking nations will perform better than those from other nations. Within the Afro-Caribbean sample, I find that Haitians do not differ from their Jamaican, Trinidadian & Tobagoan, and Guyanese peers for more health outcomes. The only exception is depressive symptoms. Here, tenured Haitians display significantly higher probabilities for reporting this outcome relative to like-tenured Afro-Caribbean peers. Between Africans, I observe a similar trend. The exceptions are for hypertension and asthma. In both cases, Africans hailing from non-English-speaking nations experience significantly lower probabilities for either health condition relative to their like-tenured peers from English-speaking nations.

Based on extant research, one could reasonably expect those from English-speaking nations to experience better health than their peers from non-English-speaking nations (Avila & Bramlett, 2013; Pottie et al., 2008; Okafor et al., 2013). One central reason for this is that language is a crucial component of immigrant incorporation and has a noteworthy impact on access to and quality of health care (Avila & Bramlett, 2013; Okafor et al., 2013). Given this, the

contrary findings reported in my analyses are intriguing. One reason for the lack of noteworthy differences between those from non-English-speaking nations and those from English-speaking nations could be a result of the modeling approach. I include both a measure of national origin and a measure of interview language. In many of the existing studies, researchers control for one of these measures rather than both. It may be the case that, once one can appropriately control for national origin and language of interview, the effects of language are largely reduced or eliminated. Another empirical explanation for the lack of differences observed could be my selection of immigrant groups. In other words, if there were other national-origin groups included, there may be furthered evidence of language-based differences in health outcomes.

A third explanation returns to the notion of health selection. It may be the case that this sample of immigrants reflects a trend of language-based selection alongside potential health and socioeconomic selection. For example, it may be that those emigrating from Haiti or non-English-speaking African nations are more proficient in the English language than their non-migrant peers. As a result, language poses less of a barrier to these migrants upon arrival in the United States than one may expect. By categorizing these respondents by national language, and lacking a reliable measure of English proficiency, I am unable to capture this potential selection meaningfully.

## **Conclusion**

In this chapter, I investigate potential sources of variation in the health of Afro-Caribbean and African-origin immigrants living in the United States when compared to their U.S.-born non-Hispanic Black peers. The findings in this chapter contribute to empirical research and theory in several ways. First, my findings emphasize that disaggregating Caribbean and African

immigrants into more descriptive national-origin or regional-origin categories highlights key differences both when comparing these groups to the U.S.-born population and to one another. Second, I find that the ways in which researchers choose to categorize African nations has an impact on substantive findings. Future analyses of African-origin immigrants should consider the goals of their research and implications of categorizations before conducting their analyses.

Third, my findings engage directly with the immigrant health advantage literature. Within this literature, there is a growing consensus that Afro-Caribbean and African immigrants exhibit an immigrant health advantage relative to their U.S.-born non-Hispanic Black peers. That said, this body of literature is still rapidly developing. I contribute to this growing body of literature by showing that Haitians, Jamaicans, Trinidadians & Tobagoans, East Africans, and West Africans all display an immigrant health advantage and its associated relationship between time spent in the United States and health declines. Importantly, and related to my first point, the degree of support for the immigrant health advantage varies by health outcome and national- or regional-origin group.

Fourth, I build on the racial context of origin perspective by showing that Trinidadian & Tobagoan immigrants do not differ largely from peers from Black-majority nations, whereas Guyanese migrants show more consistent differences. These are largely between these two groups and African immigrants. This is important because it may highlight key differences in the social hierarchies of these nations, particularly surrounding race, ethnicity, or skin tone. I find less support for the notion of colonial subjugation and the health of immigrants. In this sample, there is only one country whose migrants have a history of colonialism by the United States: Haiti. In this instance, I find no evidence that these migrants fare significantly worse than others.

Fifth, I contribute to an ongoing discussion of cumulative disadvantage theory regarding immigrants. While this theory is not always explicitly mentioned in many studies of immigrant health, it clearly applies to conversations of health deterioration related to time spent in the United States (Riosmena et al., 2015). When controlling for age, immigrant health declines as duration increases, often thought to be related to acculturation processes (e.g., changes in diet) or exposure to health insults (e.g., socioeconomic instability, unemployment, residential segregation, xenophobia). In the case of Afro-Caribbean and African immigrants, I observe continued support for this trend. While I cannot explicitly measure many of these factors, nearly every group displays worse health among more tenured migrants that likely correlates with these types of exposures.

Finally, I find that there are few differences between respondents hailing from English-speaking and non-English-speaking nations. These findings both contradict and build on existing work highlighting the importance of language in our understanding of the health of immigrants in the United States. My contribution to this literature is a continued emphasis on national origin and its importance in the overall picture of Black immigrant health.

Taken together, these findings fill a gap in the existing Black immigrant health literature and serve to potentially inform future empirical research, the theoretical understanding of Black immigrant health in the United States, and in health care practice.



## **Chapter 5**

### **Duration of Residence and the Health of Caribbean and Sub-Saharan African Immigrants in the United States**

The health of immigrants tends to erode as duration of residence increases (Abraído-Lanza et al., 2005; Akresh, 2007; Antecol & Bedard, 2006; Riosmena & Dennis, 2012; Riosmena et al., 2014; Ro, 2014; Palarino, 2021; Urquia et al., 2012; Van Hook et al., 2018). This process occurs both within and between immigrant generations. Among first-generation immigrants, increasing time in the United States is often associated with worsening health. This is often tested by comparing the health of recent arrivals to that of more seasoned immigrant groups (e.g., 10 or greater years in the United States) (Goel et al., 2004). Between generations, second-generation immigrants often display and report worse health than their first-generation parents (Acevedo-Garcia et al., 2010; Riosmena et al., 2015). Ro (2014) emphasizes that, despite being well-documented, empirical support for the relationship between health and duration is “uneven” (Ro, 2014, p. 8039). The association appears for some health outcomes, but not others; further, it is seen in some immigrant populations, but not others (Ro, 2014).

In what follows, I discuss approaches to understanding the incorporation of immigrants into American society and the importance of time in understanding trends in population health.

### **Understanding Immigrant Incorporation**

#### *Assimilation*

The incorporation of immigrant populations into mainstream American culture has long been a topic of interest for immigration scholars (Alba & Nee, 1997; Gordon, 1961; Hale & Rivero-Fuentes, 2011; Park, 1928; Riosmena et al., 2015; Ro, 2014; Zhou, 1997). Notions of integration

historically fell into two processes: assimilation and acculturation. Assimilation tends to refer to a process in which immigrant populations learn and adopt characteristics of a host society (Alba & Nee, 1997; Zhou, 1997). Through this inevitable and irreversible process, immigrants and their children adopt American beliefs, ideals, and behaviors while those of their origin nation and culture wane (Park, 1928; Zhou, 1997). This process results in the eventual incorporation of an immigrant or immigrant's progeny into American society (Alba & Nee, 1997; Zhou, 1997). This approach to understanding immigrant incorporation largely focuses on European immigrants' incorporation into a primarily middle-class Anglo-American culture and left much to be desired regarding non-European and non-White immigrants (Alba & Nee, 1997; Ro, 2014; Zhou, 1997).

A subsequent approach to understanding immigrant incorporation is segmented assimilation theory. This middle-range theoretical approach understands that the contemporary American context has changed notably since the establishment of classic theories of assimilation (Zhou, 1997). This theoretical approach expands the potential pathways of incorporation and acknowledges that many immigrant populations do not fall into a middle-class Anglo culture (Portes & Zhou, 1993; Zhou, 1997). Rather, they may enter the existing systems of stratification. Portes and Zhou (1993) identify three possible pathways of incorporation through the segmented assimilation theoretical framework. First, there is the traditional path of incorporation into middle-class White American. The second pathway leads to perpetual poverty and assimilation into lower socioeconomic classes. The third pathway leads to rapid economic success and aligns with "deliberate preservation of the immigrant community's values and tight solidarity" (Portes & Zhou, 1993, p. 82).

Jung acknowledges the improvements segmented assimilation makes on classic assimilation theory; however, he is critical of the notion of downward assimilation (Jung, 2009;

Portes & Zhou, 1993; Zhou, 1997). Specifically, Jung suggests that the process of downward assimilation serves as an antithesis of the traditional incorporation into White culture while indirectly implying that assimilating downward is synonymous with assimilating into poor Black culture (Jung, 2009).

### *Acculturation*

The process of acculturation is a way in which immigrants become incorporated into receiving societies. Acculturation, unlike assimilation, suggests that immigrants learn and adopt the cultural and societal characteristics of the United States but do not sacrifice their own cultural heritage and identity in the process. While the process of acculturation is ultimately indicative of more successful adaptation and incorporation into American society, a seemingly positive outcome, it is also associated with health declines among immigrants (Riosmena et al., 2015; Ro, 2014). Immigrant health research consistently shows that the process of acculturation is associated with a greater likelihood of risky health behaviors such as cigarette smoking, substance overuse and abuse, poor nutrition, and decreased recreational exercise (Abraído-Lanza et al., 2005; Akresh, 2007; Lara et al., 2005; Hale & Rivero-Fuentes, 2009; Riosmena et al., 2015).

That said, Riosmena and colleagues (2015) state that this approach to understanding immigrant health may over-rely on changes in immigrant health behaviors. They suggest that other key structural factors play an essential role in the duration-health relationship. Specifically, socioeconomic barriers, legal vulnerability (or the perception of legal vulnerability), and stagnant socioeconomic mobility may be important predictors of immigrant health (Riosmena et al., 2015). While their research largely focuses on Hispanic immigrants, the concepts apply to other

migrant populations. In lieu of the traditional “negative acculturation,” Riosmena and colleagues put forth an explanation using cumulative disadvantage theory (Riosmena et al., 2015).

### *Cumulative Disadvantage Theory*

Cumulative disadvantage theory is devoted to understanding how cohorts differ over time (Dannefer, 1987; Ferraro & Kelley-Moore, 2003). This life course perspective emphasizes how early life advantages and disadvantages are essential in understanding both short- and long-term outcomes, thus contributing to greater heterogeneity in outcomes in later adulthood (Dannefer, 1987; Ferraro & Kelley-Moore, 2003). This theory also explicitly considers compounding (dis)advantage over time (Ferraro & Kelley-Moore, 2003). Those who experience advantages may be propelled onto more promising health trajectories, while those who experience disadvantages face compounding risks to health and well-being (Ferraro & Kelley-Moore, 2003).

Riosmena and colleagues take this perspective and apply it to the duration-health correlation among immigrant groups (Riosmena et al., 2015). They suggest that there are at least two pathways in which cumulative disadvantage impacts the health of immigrants. First, the cumulative effects of repetitive manual labor, work-related accidents, and poor working conditions common in immigrant-dominated occupations may impact physical health and the likelihood of disability among immigrants (Riosmena et al., 2015). Second, immigrants may lack access to adequate health care. The tenuous socioeconomic and legal status of immigrants, low levels of health insurance coverage, and limited access to regular preventive care may impede timely utilization of quality health care among immigrants (Riosmena et al., 2015). These barriers may, in turn, be associated with worse long-term health outcomes among immigrant populations.

When placed into the context of Afro-Caribbean and Black Sub-Saharan African migration, cumulative disadvantage theory proves useful. Necessarily, as time in the United States increases, so too does age and the potential for greater exposure to health insults. The health of immigrant groups may be negatively impacted by poor working conditions, socioeconomic disadvantage, a lack of access to adequate health care, precarious legal status, and experiences of discrimination (e.g., racism, anti-immigrant sentiment) (Dannefer, 1987; Ferraro & Kelley-Moore, 2003; Palarino, 2021; Riosmena et al., 2015). For Black immigrants, it may also be the case that heightened exposure to acts of discrimination or racism across the life course contributes to an exacerbated erosion of health with increasing duration (Elo et al., 2008; Palarino, 2021). As such, it is imperative that Black immigrants be compared to their U.S.-born Black and African American counterparts, but also to other Black and non-Black immigrants to better understand the ways in which their experiences vary upon arrival to the United States.

### **The Role of Time**

In the study of population-level outcomes, temporal context is an important consideration. Traditionally, three time-related components stand out: age, period, and cohort (Yang & Lang, 2013). Age effects reflect variation in some outcome as associated with chronological age or age groups (Yang & Land, 2013). Variation as associated with age is often attributed to changes in physiology, shifts in social roles or status, and/or the accumulation of social, economic, and human capital (Yang & Land, 2013). Cohort effects reflect the experiences of a group of individuals who experienced a shared initial event at the same time (Yang & Lang, 2013). Birth is often used as an initial event but can also be events such as marriage or migration. These cohorts move together through time and experience key historical events at the same ages or age

ranges. When brought together into an age-period-cohort (APC) analysis, the goal is to estimate the effects associated with age, period, and cohort unique from one another (Yang & Land, 2013).

A factor that adds an additional complicating layer to questions of time is nativity. Foreign-born populations maintain different period and cohort exposures when compared to U.S.-born populations (Yang & Land, 2013). Their exposure to key historical events is not solely based on their birth cohort but rather on both their birth and arrival cohort. Additionally, foreign-born populations experience an additional time exposure relative to U.S.-born populations: duration of residence in the United States.

#### *The Addition of Duration of Residence to the Age-Period-Cohort Approach*

To date, research in the field of immigrant health acknowledges the importance of time, namely duration, in understanding trends in the health of immigrant populations both in the United States and abroad. Despite this recognition, few studies have investigated the health of immigrants using an approach akin to an APC analysis. Neeraj Kaushal conducted one such study. In her 2009 study, Kaushal examines the prevalence of obesity among immigrant populations with a specific focus on time (Kaushal, 2009). Specifically, she seeks to better understand the role that duration plays in the immigration-obesity relationship. Using 15 years of repeated cross-sectional data from the National Health Interview Survey, Kaushal creates synthetic arrival cohorts to examine the association between length of stay (i.e., duration) and obesity prevalence (Kaushal, 2009). In addition to this measure of duration, Kaushal includes controls for chronological age at the time of interview, age upon arrival to the United States, and period of arrival to the United States.

In her analytic approach, Kaushal measures period of arrival based on the categorical measure of duration in the United States. This variable reports duration in one of five categories: less than 1 year, between 1 and 4.99 years, 5 and 9.99 years, 10 and 14.99 years, and 15 or more years. She then subtracts duration from the calendar year of interview to obtain three period categories:  $\leq 21$  years; more than 21 years but less than 30; and  $\geq 30$  years. She controls for age using 42 dummy variables for each one-year age category between 18 and 59 years. These approaches remove the linear specification of age and period, allowing these variables into a three-way cohort analysis (Kaushal, 2009; Mason et al., 1973). She finds that duration in the United States is associated with obesity prevalence among immigrants and that this relationship depends upon immigrants' ethnic identity and education level (Kaushal, 2009). For example, she finds that Hispanic immigrants experience noteworthy increases in obesity prevalence as their residency in the United States increases, but Asian and White immigrants do not display any significant increase over time (Kaushal, 2009). Not only do these findings emphasize the importance of time on health in the United States, but that the immigrant population is heterogenous (Ro, 2014; Kaushal, 2009; Palarino, 2021). It is often assumed that increasing duration in the United States will play a similar role for all immigrant populations. These findings show that this is not the case. Further, the lack of ability to draw conclusions about Black immigrants provides further motivation for the current research.

### **Research Question and Hypotheses**

Despite the clear importance of time since arrival on the health of immigrants, few studies examine the relationship between time since arrival and health among immigrant groups,

particularly those from the Caribbean and Sub-Saharan Africa. To address this gap in the literature, I pose this research questions.

*Does time since arrival to the United States, otherwise stated as “duration”, differentially impact the health of Caribbean and Sub-Saharan African immigrants when compared to the health of non-Black immigrants? Do these potential differences differ by arrival cohort?*

In response to these research questions, I offer the following hypotheses.

*Hypothesis 1: Time since arrival in the United States will impact the health of Caribbean and Sub-Saharan African immigrants differently than that of non-Black immigrant groups. Specifically, the health of Black immigrants will deteriorate more rapidly than non-Black immigrants (e.g., non-Hispanic White, Southeast Asian).*

*Hypothesis 2: Arrival cohort will play a distinct role in the importance of time since arrival. Specifically, more recently arrived cohorts will display worse health in the earliest duration categories and more rapid deterioration than those who arrived in more distant cohorts.*

## **Methods and Sample**

### *Dependent Variables*

My analyses for this research question uses measures of self-rated health, hypertension, and body mass index<sup>9</sup>.

---

<sup>9</sup> In addition to these three outcomes, I conducted preliminary descriptive analyses for asthma and depressive symptoms (K6). I found little within-origin variation across duration. Looking between origin groups, nearly every national/regional origin group displayed the same low, stable proportion of respondents reporting either condition. Multivariate analyses echo these preliminary findings by showing no variation between groups, regardless of cohort. Because of these factors, and to provide a concise investigation of my research questions, I opt to exclude these findings from my analyses. If desired, they are available upon request.



### *National Origin*

I am explicitly interested in the experiences of foreign-born respondents in these analyses. As such, I identify 14 mutually exclusive categories for foreign-born respondents based on national or regional origin. These categories reflect respondents who are Mexican, Canadian, East Asian, Southeast Asian, Southwest Asian, Chinese or Hongkongers, Middle Easterners, Europeans, Central Americans, South Americans, Caribbeans, Sub-Saharan Africans, North Africans, and those who are foreign-born but do not fall into any of these pre-specific categories. One should note that Caribbean and Sub-Saharan African immigrants are aggregated into relatively large categories. The central reason for this decision is sample size restrictions. This is not ideal; however, it is an unavoidable limitation of the data. I choose to use Mexican immigrants as the reference category because they are both the largest immigrant group in the United States and the most well-represented population in current immigrant health research.

East Asian nations include Japan, Mongolia, North Korea, South Korea, and Taiwan. Southeast Asian nations include Brunei, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar (Burma), Philippines, Singapore, Thailand, and Vietnam. Southwest Asia includes Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan, and Sri Lanka. Middle Eastern nations include Bahrain, Cyprus, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Palestine, Qatar, Saudi Arabia, Syria, Turkey, United Arab Emirates, and Yemen. Russia is included in the category “Europe.” Table 5.1 provides a description of this sample.

**Table 5.1** Sample Distribution by Region of Origin, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

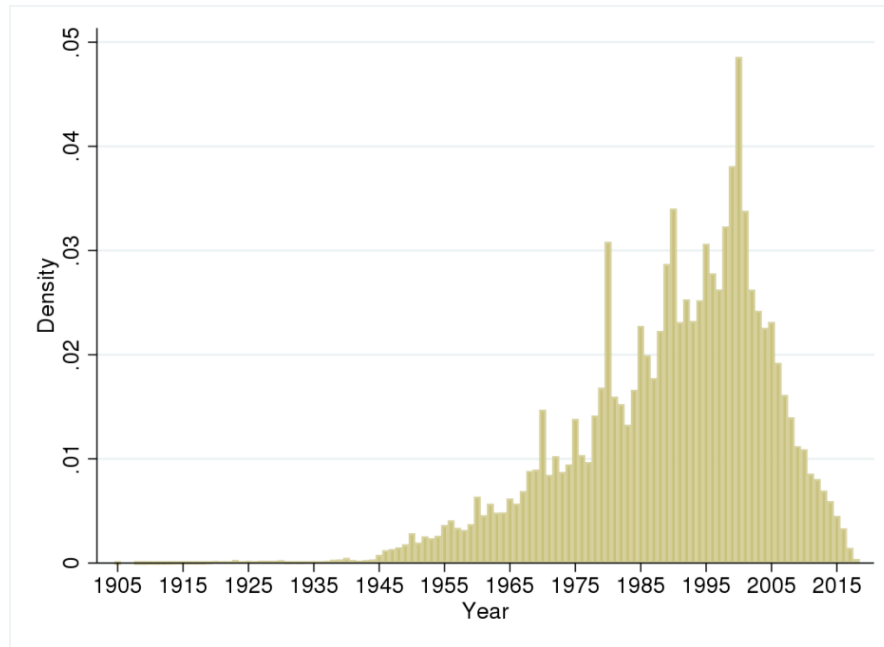
	Sample Size	Sample Weighted Proportion of Total Sample	Sample Weighted Proportion of Sample Adult
Mexico	101,168	0.278	0.278
Canada	4,474	0.021	0.021
East Asia	9,412	0.035	0.034
Southeast Asia	27,111	0.091	0.093
Southwest Asia	14,933	0.061	0.061
China/Hong Kong	8,841	0.032	0.032
Middle East	5,840	0.028	0.028
Europe	26,742	0.127	0.127
Central America	21,875	0.065	0.066
South America	1,159	0.004	0.004
Caribbean	27,487	0.089	0.090
Sub-Saharan Africa	7,653	0.031	0.030
North Africa	1,422	0.006	0.006
Other Foreign-Born	43,954	0.133	0.129

Source: National Health Interview Survey 2000-2018

### *Measures of Time: Cohort, Age, and Duration in the United States*

To examine arrival cohort differences in these 5 health outcomes, I create 4 synthetic arrival cohorts. In restricted-use NHIS data, respondents who were born outside of the United States were asked to report the exact year that they immigrated to the United States. Figure 5.1 provides a visualization of the distribution of year of arrival to the United States for foreign-born Americans.

**Figure 5.1** Distribution of Year of Arrival to the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018



I subtract each respondent's self-reported arrival year from the calendar year of their interview. I then categorize each respondent into one of four mutually exclusive cohorts: pre-1965, 1965-1984, 1985-1999, and 2000-2018<sup>10</sup>. I choose to use a lower bound of 1965 because this is the year that the Immigration and Nationality Act was passed, a pivotal piece of immigration legislation that qualitatively changes the composition of the foreign-born population of the United States. Each of the other three cohorts are approximately the same width and allow for enough variation to capture the relationship between arrival cohort and duration in the United States for this foreign-born sample. Table 5.2 provides the sample-weighted distribution of foreign-born respondents across these 4 cohorts.

---

<sup>10</sup> I conducted supplementary analyses using 6 cohorts based on immigration policies in the United States. These cohorts are pre-Immigration and Nationality Act (pre-1965), Immigration and Nationality Act (1965-1975), Immigration and Nationality Act Amendment of 1976 (1976-1979), The Refugee Act of 1980 (1980-1989), Immigrant Act of 1990 (1990-2001), and the Enhanced Border Security and Visa Entry Reform Act (2002-2018). While these analyses allow for an interesting perspective on the differences in health outcomes for the foreign-born sample, they do not differ notably from the four-cohort approach detailed in this chapter. To preserve sample size and emphasize parsimony, I opt to use this four-cohort approach in lieu of this policy cohort approach. Interested parties can find the output of these models in Appendix 2.

**Table 5.2** Sample Distribution by Cohort of Arrival, Foreign-Born Adults Aged 18-65+,  
National Health Interview Survey 2000-2018

	Total Sample		Arrival Cohort							
			Pre-1965		1965-1984		1985-1999		2000-2018	
	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error
Origin										
Mexico	27.75	0.49	3.63	0.14	20.99	0.41	46.28	0.44	29.11	0.52
Canada	2.14	0.08	29.47	1.23	21.28	1.15	28.58	1.32	20.68	1.16
East Asia	3.48	0.11	8.62	0.57	34.10	1.22	30.81	1.04	26.47	1.07
Southeast Asia	9.06	0.19	2.01	0.17	35.91	0.67	38.02	0.75	24.06	0.66
Southwest Asia	6.09	0.17	0.60	0.13	14.44	0.72	34.08	0.98	50.88	1.29
China/Hong Kong	3.17	0.11	4.77	0.45	13.24	0.76	39.91	1.13	42.07	1.23
Middle East	2.81	0.12	3.51	0.46	25.49	1.59	34.32	1.67	36.68	1.61
Europe	12.68	0.20	24.00	0.55	24.32	0.52	32.87	0.60	18.80	0.53
Central America	6.50	0.16	2.55	0.22	21.87	0.65	42.54	0.83	33.04	0.96
South America	0.40	0.03	8.69	1.79	20.63	2.48	21.52	2.45	49.16	3.34
Caribbean	8.86	0.25	6.89	0.29	30.40	0.62	36.76	0.62	25.95	0.76
Sub-Saharan Africa	3.10	0.11	0.86	0.18	12.15	0.75	34.17	1.30	52.82	1.40
North Africa	0.63	0.04	6.31	1.08	13.76	1.71	32.10	2.58	47.83	2.76
Other Foreign- Born	13.32	0.22	10.73	0.36	23.54	0.50	33.65	0.54	32.08	0.67

I measure age continuously, centered at age 18. This serves as a zero point, as the sample is restricted to those ages 18 years and older. Duration, or time since arrival to the United States, is measured continuously. The variable is centered at 0 years and is right censored at 50 years.

## Analytic Approach

To investigate my research question and evaluate my hypotheses, I conduct stratified sample-weighted, binomial logistic regression models. I conduct all of the models using Stata 16. To best understand how different measures of time impact the relationship between foreign-born groups and health, I employ a nested modeling approach. In the first model, I include sex, age, interview language, educational attainment, family income-to-needs ratio (INR), health insurance status, time since last healthcare visit, cigarette smoking status, alcohol use status, and vigorous exercise

status<sup>11</sup>. In model 2, I maintain these same controls and introduce the continuous measure of duration in the United States. In the final model, I maintain all model covariates and introduce an interaction of national/regional origin and duration. This interaction allows for a meaningful interpretation of national/regional-origin differences in the role of duration. I run each set of models by arrival cohort. In other words, my analyses are stratified by arrival cohort.

As with those found in Chapter 4, I primarily rely upon average marginal effects at means in my model interpretations. Throughout the following sections, remember that the NHIS data are cross-sectional. As such, I cannot truly determine the effect of time in the United States on the health of immigrant groups. Rather, I approximate the effect of time by constructing synthetic cohorts.

## **Results**

In the following subsections, I opt to present descriptive and multivariate analyses grouped by outcome. This grouping allows for a more streamlined understanding of each health outcome and avoids confusion when attempting to compare descriptive and multivariate analyses. I begin with self-rated health, followed by hypertension and overweight/obese status.

### *Self-Rated Health*

#### **Descriptive Findings**

---

<sup>11</sup> Sex is measured dichotomously as male (0) and female (1); interview language is measured dichotomously as having had an English interview (0) or non-English interview (1); educational attainment is measured as have completed a college degree or greater (0) or less than college (1); INR is measured categorically as < 1.00 (reference), 1.00-1.99, and ≥ 2.00; insurance status is measured dichotomously as insured (0) and uninsured (1); last healthcare visit is measured dichotomously as within the last calendar year (0) and greater than or equal to one calendar year (1); cigarette smoking and alcohol use status are both measured as lifetime abstainer (reference), former user, and current user; and vigorous exercise status is measured categorically as none (reference), < 75 minutes/week, and ≥ 75 minutes/week.

Figure 5.2 provides a visualization of the proportion of respondents who report having poor/fair health by national/regional origin group across the number of years lived in the United States. In all instances, the proportion increases with years lived in the United States, aligning well with extant research on the topic of duration and health. Caribbean and Sub-Saharan African immigrants display similar increases across duration until late life. At the greatest duration, Caribbean immigrants display a great deal of variation, likely reflecting small sample sizes. Sub-Saharan African immigrants also show signs of rapid increases after about 60 years but are more stable than their Caribbean peers. In both cases, the initial increase across duration in the United States are quite similar to those seen in all other foreign-born groups, both in level and type of change. In some cases, the proportion declines at the greatest tenure, which may reflect survival bias.

**Figure 5.2** Proportion Respondents Who Self-Report Poor or Fair Self-Rated Health by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

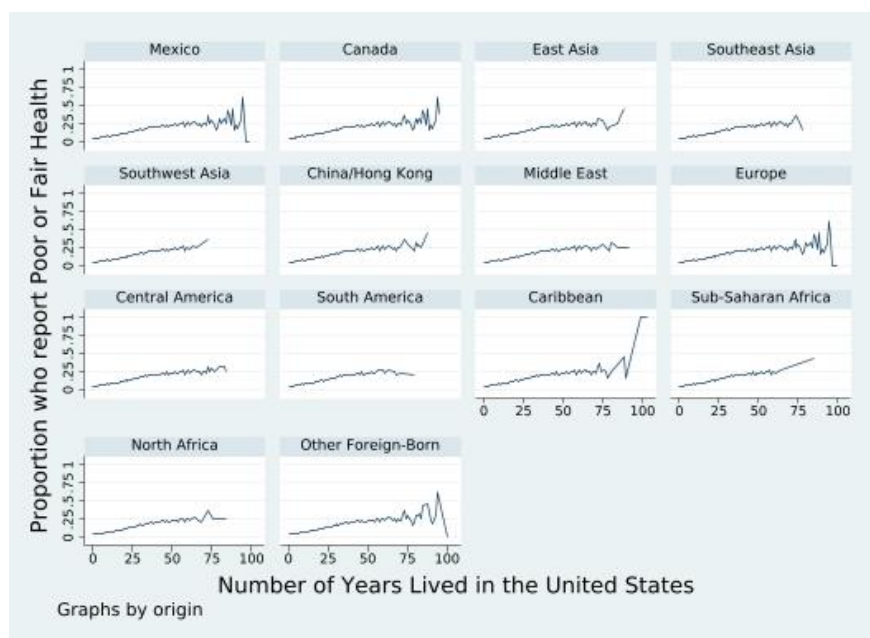


Table 5.3 contain descriptive results for each foreign-born group by arrival cohort. In the total sample, Caribbean immigrants maintain the highest percent of respondents who report poor/fair health at 15.85%, followed by Mexican immigrants at 13.04%. The lowest percent is seen for Sub-Saharan Africans at 5.13%. By arrival cohort, the proportion of respondents who self-report poor or fair self-rated health is highest among those with the greatest tenure in the United States and progressively decreases with more recent arrival cohorts. This is true for most national/regional origin groups. Some such exception can be seen for immigrants from the Middle East. Approximately 12% of the most tenured respondents report poor/fair self-rated health, while 18% of those in the 1965-1984 cohort report the same.

**Table 5.3** Percent of Respondents Who Self-Report Poor or Fair Self-Rated Health by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

Total Sample	Arrival Cohort			
	Pre-1965	1965-1984	1985-1999	2000-2018

	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error
Total			21.55	0.53	17.16	0.31	10.25	0.22	5.98	0.20
Origin										
Mexico	13.04	0.28	32.40	1.60	22.75	0.69	10.59	0.34	7.29	0.40
Canada	6.52	0.68	13.32	1.84	6.79	1.36	2.75	1.08	1.43	0.56
East Asia	7.93	0.55	14.15	2.32	9.56	0.94	9.29	1.15	2.21	0.52
Southeast Asia	10.45	0.43	13.90	2.58	13.44	0.73	10.54	0.72	5.46	0.67
Southwest Asia	5.91	0.44	4.16	3.37	11.70	1.51	6.93	0.76	3.48	0.49
China/Hong Kong	9.05	0.66	13.37	3.03	17.17	2.30	9.81	1.03	5.18	0.83
Middle East	11.74	1.03	12.40	3.64	17.75	1.98	13.44	1.94	5.66	1.33
Europe	11.08	0.38	18.35	0.80	12.27	0.76	8.92	0.64	3.58	0.54
Central America	12.11	0.51	16.52	2.69	19.19	1.15	12.61	0.81	6.65	0.65
South America	6.42	1.34	9.81	4.29	14.11	4.02	3.91	2.09	3.87	1.75
Caribbean	15.85	0.48	24.25	1.57	20.97	0.89	14.19	0.76	10.13	0.88
Sub-Saharan Africa	5.13	0.55	10.84	6.14	9.00	1.76	5.72	0.90	3.69	0.83
North Africa	11.42	1.73	21.48	7.57	17.53	4.58	14.77	4.03	6.17	1.67
Other Foreign-Born	12.56	0.35	29.41	1.31	18.54	0.80	9.17	0.59	7.11	0.54

## Multivariate Findings

In Table 5.4, I present the results of stratified sample-weighted, binomial logistic regression models for poor or fair self-rated health for foreign-born adults. These findings follow the nested model structure outlined in my analytic approach section<sup>12</sup> and are shown in four panels: Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) arrival cohorts. The results presented in the top half of each panel contain odds ratios, standard errors, and p-values for each coefficient. The results presented in the bottom half of each panel contain average marginal effects (AMEs). Note that the AMEs for model 3 differ from those in models 1 and 2. This is because I estimate the effects at 6 duration cutoffs derived from the interaction term. I employ this format in my tables for all remaining health outcomes.

<sup>12</sup> Model 1 contains sex, age, interview language, educational attainment, family income-to-needs ratio (INR), health insurance status, time since last healthcare visit, cigarette smoking status, alcohol use status, and vigorous exercise status. Model 2 maintains all covariates in Model 1 and introduces duration. Model 3 maintains all covariates in Model 2 and introduces an interaction term for national/regional origin and duration.



Beginning with model 1 in Panel A, I find no significant differences between Caribbean immigrants ( $OR=0.84$ ;  $p > 0.05$ ) and Sub-Saharan African immigrants ( $OR=0.50$ ;  $p > 0.05$ ) when compared to the referent category of Mexican immigrants. This remains true in models 2 and 3. Further, model 3 sees a dramatic rise in odds ratios for several foreign-born groups, including Sub-Saharan Africans. To better understand these changes across model, we can turn to AMEs. Between models 1 and 2, there is no substantive change for Caribbean or Sub-Saharan African immigrants. Indeed, both groups maintain the exact same coefficients for both models. In model 3, distinct trends emerge for Caribbeans and Sub-Saharan Africans. The predicted probability of reporting poor/fair self-rated health among Caribbeans increases slightly with each subsequent decade of tenure. Sub-Saharan Africans, on the other hand, display declines across duration. In both cases, these predicted probabilities converge with those of Mexican immigrants. An important point to note here is that many of these predicted probabilities are strictly estimates, as there cannot be any respondents in this cohort with less than 40 year's duration in the United States. Therefore, particular emphasis should be placed on these when interpreting findings.

In Panel B, Caribbean immigrants ( $0.76$ ,  $p < 0.001$ ) display significantly lower odds of reporting poor/fair self-rated health in model 1 relative to Mexicans. Sub-Saharan Africans remain statistically indistinguishable from the reference ( $0.64$ ,  $p > 0.05$ ). In model 2, both foreign-born groups display statistically indistinguishable odds for reporting poor/fair health. As with Panel A, many foreign-born groups see a drastic change in their odds ratios in model 3. This corresponds with the inclusion of the interaction term for origin and duration. Turning to AMEs, Caribbean and Sub-Saharan African immigrants both display lower predicted probabilities for poor/fair health in both models 1 and 2. These differences are only significant for Caribbean

immigrants, however. Across duration, I observe an identical trend for both groups. Caribbeans and Sub-Saharan Africans both maintain predicted probabilities over that of Mexicans at the 20-year duration mark and decline progressively with increased tenure. Caribbeans enjoy significant differences save the 20 and 30-year markers. Sub-Saharan Africans are not significantly different until the 40 and 50-year markers. Again, this cohort has duration limitations that must be considered. Those who arrived between 1965 and 1984 cannot have a duration of less than 16 years. Therefore, predicted probabilities at the 0 and 10-year markers must be interpreted with caution, if at all.

For the 1985-1999 arrival cohort, I turn to Panel C. In the first model, I observe a significantly higher odds ratio of reporting poor/fair health for Caribbean immigrants (1.17,  $p < 0.05$ ). This is the first instance of significantly higher odds for this foreign-born group across these first three cohorts. In models 2 and 3, Caribbean and Sub-Saharan African immigrants do not have significantly different odds ratio relative to the referent. Across duration, Caribbean immigrants display significant higher predicted probabilities of reporting poor/fair health at the 0, 10, and 20-year duration markers. At the 30-year marker, they show no significant differences. All coefficients for the 40 or 50-year markers must be interpreted with caution, as no respondents in this cohort can maintain a duration greater than 33 years. Sub-Saharan Africans do not differ significantly in their predicted probabilities, regardless of duration.

In the most recent arrival cohort (Panel D), I observe no significant differences between the odds ratios for reporting poor/fair health among Caribbean and Sub-Saharan Africans relative to Mexican immigrants in any of the three models. Further, I observe no significant differences in the predicted probabilities for duration markers 0, 10, and 20 years for either group.

**Table 5.4** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018<sup>13</sup>

**Panel A. Pre-1965**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.37	0.08	***	0.37	0.08	***	0.05	0.05	***
East Asia	0.51	0.13	***	0.51	0.13	***	0.16	0.19	
Southeast Asia	0.39	0.11	***	0.39	0.11	***	0.08	0.18	
Southwest Asia	0.31	0.27		0.31	0.27		2.81	8.30	
China/Hong Kong	0.54	0.20		0.53	0.20		0.07	0.13	
Middle East	0.25	0.12	***	0.25	0.12	***	8.92	22.42	
Europe	0.59	0.08	***	0.59	0.08	***	0.37	0.22	
Central America	0.43	0.11	***	0.43	0.11	***	2.93	4.91	
South America	0.55	0.30		0.55	0.30		0.94	3.11	
Caribbean	0.84	0.12		0.84	0.12		0.65	0.57	
Sub-Saharan Africa	0.50	0.43		0.50	0.43		76.61	221.29	
North Africa	1.29	0.69		1.28	0.69		3.83	10.71	
Other Foreign-Born	0.83	0.11		0.83	0.11		1.13	0.78	
Age (Centered at 18)	1.01	0.00	***	1.01	0.00	***	1.01	0.00	***
Time in the United States (Centered at 0 years)				1.00	0.00		0.99	0.01	
Origin * Time in the United States (Centered at 0 years)									
							<i>Included</i>		
Intercept	0.73	0.22		0.78	0.25		1.09	0.57	
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	-0.03	0.02		-0.03	0.02		-	-	-
0	-	-	-	-	-	-	-0.08	0.16	
10	-	-	-	-	-	-	-0.07	0.12	
20	-	-	-	-	-	-	-0.06	0.09	
30	-	-	-	-	-	-	-0.05	0.06	
40	-	-	-	-	-	-	-0.04	0.04	
50	-	-	-	-	-	-	-0.03	0.02	
Sub-Saharan Africa	-0.10	0.10		-0.10	0.10		-	-	-
0	-	-	-	-	-	-	0.61	0.14	***
10	-	-	-	-	-	-	0.57	0.21	***

<sup>13</sup> For tables containing full model covariates, please see Appendix 2.

20	-	-	-	-	-	-	0.46	0.30
30	-	-	-	-	-	-	0.28	0.30
40	-	-	-	-	-	-	0.07	0.21
50	-	-	-	-	-	-	-0.09	0.11

$N = 16,297$

## Panel B. 1965-1984

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.43	0.12	***	0.43	0.12	***	0.96	0.86	
East Asia	0.49	0.07	***	0.50	0.07	***	4.70	2.66	***
Southeast Asia	0.85	0.08		0.88	0.09		2.67	0.99	***
Southwest Asia	0.70	0.13		0.73	0.14		1.35	0.91	
China/Hong Kong	0.62	0.13	*	0.64	0.14	*	0.44	0.39	
Middle East	0.96	0.16		0.99	0.17		4.60	3.23	*
Europe	0.69	0.07	***	0.69	0.07	***	2.05	0.82	
Central America	0.89	0.10		0.91	0.10		1.98	0.80	
South America	0.57	0.22		0.58	0.23		0.57	1.00	
Caribbean	0.76	0.06	***	0.77	0.06	***	2.77	0.92	***
Sub-Saharan Africa	0.64	0.16		0.67	0.17		11.62	10.80	***
North Africa	1.11	0.38		1.15	0.40		7.65	8.67	
Other Foreign-Born	0.86	0.07		0.87	0.07		1.84	0.68	
Age (Centered at 18)									
	1.04	0.00	***	1.04	0.00	***	1.03	0.00	***
Time in the United States (Centered at 0 years)									
				1.01	0.00	*	1.03	0.01	***
Origin * Time in the United States (Centered at 0 years)									
							<i>Included</i>		
Intercept	0.29	0.04	***	0.25	0.03	***	0.12	0.03	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean									
	-0.03	0.01	***	-0.03	0.01	***	-	-	-
0	-	-	-	-	-	-	0.10	0.04	***
10	-	-	-	-	-	-	0.06	0.03	***
20	-	-	-	-	-	-	0.03	0.02	
30	-	-	-	-	-	-	-0.01	0.01	
40	-	-	-	-	-	-	-0.06	0.01	***
50	-	-	-	-	-	-	-0.11	0.02	***
Sub-Saharan Africa									
	-0.05	0.03		-0.05	0.03		-	-	-
0	-	-	-	-	-	-	0.33	0.17	
10	-	-	-	-	-	-	0.20	0.11	
20	-	-	-	-	-	-	0.08	0.06	
30	-	-	-	-	-	-	-0.02	0.03	
40	-	-	-	-	-	-	-0.11	0.03	***

50	-	-	-	-	-	-	-0.19	0.03	***
----	---	---	---	---	---	---	-------	------	-----

$N = 61,682$

### Panel C. 1985-1999

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.64	0.29		0.69	0.31		0.28	0.54	
East Asia	1.49	0.27	*	1.56	0.28	**	2.08	0.82	
Southeast Asia	1.12	0.12		1.18	0.13		1.92	0.54	*
Southwest Asia	1.13	0.18		1.21	0.20		1.31	0.45	
China/Hong Kong	0.84	0.13		0.90	0.14		0.55	0.27	
Middle East	1.25	0.21		1.32	0.23		1.65	0.87	
Europe	1.27	0.14	*	1.37	0.15	***	2.57	0.72	***
Central America	1.18	0.12		1.19	0.12		1.63	0.41	*
South America	0.13	0.10	**	0.13	0.11	*	1.28	3.69	
Caribbean	1.17	0.09	*	1.22	0.10	*	1.74	0.38	**
Sub-Saharan Africa	0.85	0.17		0.91	0.18		1.15	0.49	
North Africa	1.81	0.59		1.94	0.63	*	3.34	1.89	*
Other Foreign-Born	0.87	0.09		0.90	0.09		1.17	0.30	
Age (Centered at 18)	1.05	0.00	***	1.05	0.00	***	1.05	0.00	***
Time in the United States (Centered at 0 years)				1.02	0.00	***	1.03	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	0.10	0.01	***	0.08	0.01	***	0.07	0.01	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	0.01	0.01		0.02	0.01	*	-	-	-
0	-	-	-	-	-	-	0.03	0.02	*
10	-	-	-	-	-	-	0.03	0.01	***
20	-	-	-	-	-	-	0.01	0.01	*
30	-	-	-	-	-	-	0.00	0.02	
40	-	-	-	-	-	-	-0.02	0.03	
50	-	-	-	-	-	-	-0.05	0.04	
Sub-Saharan Africa	-0.01	0.01		-0.01	0.01		-	-	-
0	-	-	-	-	-	-	0.01	0.02	
10	-	-	-	-	-	-	0.00	0.01	
20	-	-	-	-	-	-	-0.01	0.02	
30	-	-	-	-	-	-	-0.02	0.04	
40	-	-	-	-	-	-	-0.04	0.06	
50	-	-	-	-	-	-	-0.06	0.10	

$N = 97,565$

## Panel D. 2000-2018

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.59	0.26		0.66	0.29		0.72	0.41	
East Asia	0.37	0.12	***	0.41	0.13	**	0.42	0.27	
Southeast Asia	0.83	0.16		0.91	0.17		0.94	0.35	
Southwest Asia	0.89	0.17		0.96	0.18		1.14	0.32	
China/Hong Kong	0.65	0.14	*	0.70	0.15		0.45	0.20	
Middle East	0.80	0.21		0.89	0.23		1.29	0.47	
Europe	0.79	0.15		0.84	0.16		0.43	0.15	***
Central America	0.96	0.12		0.98	0.12		1.97	0.50	***
South America	0.36	0.20		0.37	0.19		0.07	0.08	*
Caribbean	1.13	0.17		1.20	0.18		0.81	0.20	
Sub-Saharan Africa	0.65	0.14	*	0.70	0.15		0.91	0.36	
North Africa	1.30	0.46		1.39	0.50		0.96	0.54	
Other Foreign-Born	1.01	0.13		1.07	0.14		1.15	0.25	
Age (Centered at 18)	1.06	0.00	***	1.06	0.00	***	1.06	0.00	***
Time in the United States (Centered at 0 years)				1.03	0.01	***	1.03	0.02	
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	0.07	0.01	***	0.06	0.01	***	0.06	0.01	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	0.01	***	0.44	0.01	0.01		-	-	-
0	-	-	-	-	-	-	-0.01	0.01	
10	-	-	-	-	-	-	0.02	0.01	
20	-	-	-	-	-	-	0.07	0.04	
30	-	-	-	-	-	-	0.16	0.10	
40	-	-	-	-	-	-	0.28	0.17	
50	-	-	-	-	-	-	0.40	0.23	
Sub-Saharan Africa	-0.02	***	0.03	-0.02	0.01		-	-	-
0	-	-	-	-	-	-	0.00	0.02	
10	-	-	-	-	-	-	-0.02	0.01	
20	-	-	-	-	-	-	-0.04	0.03	
30	-	-	-	-	-	-	-0.07	0.06	
40	-	-	-	-	-	-	-0.09	0.08	
50	-	-	-	-	-	-	-0.13	0.11	

N = 67,669

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

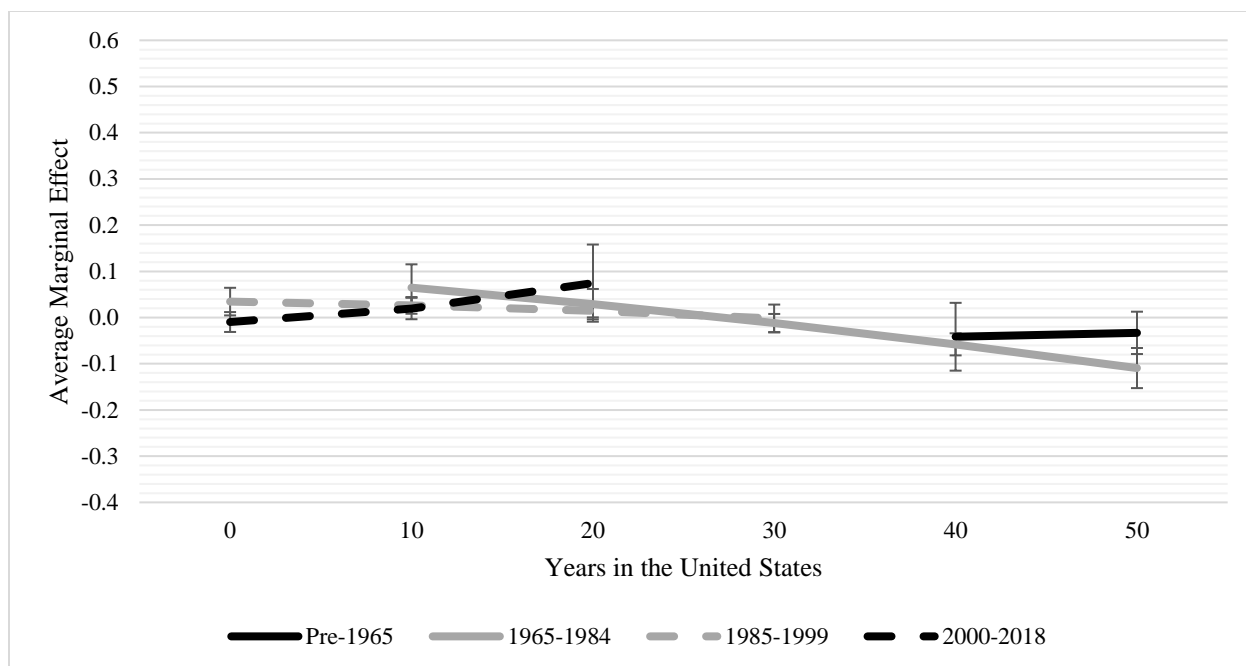
Figure 5.3 presents a visualization of predicted probabilities for Caribbean (Panel A) and Sub-Saharan African (Panel B) immigrants by arrival cohort. Note that the axes for these two groups differ. This reflects sizable differences in standard errors between the two samples. Additionally, one should note that I do not extrapolate duration for any cohorts. As such, there are no cohorts that span the entirety of the duration spectrum.

Caribbean immigrants generally show convergence with Mexican immigrants (0.00). The main divergence from this trend is for the most recently arrived cohort. Those who arrived between 2000-2018 appear to be separating from Mexican immigrants and increasing in their predicted probabilities. This may reflect a worsening of self-rated health with increased duration in this cohort of immigrants. It may also reflect an improvement in self-rated health among Mexican immigrants. Regardless of reason, this divergence is not statistically significant but may point toward a unique experience for this cohort.

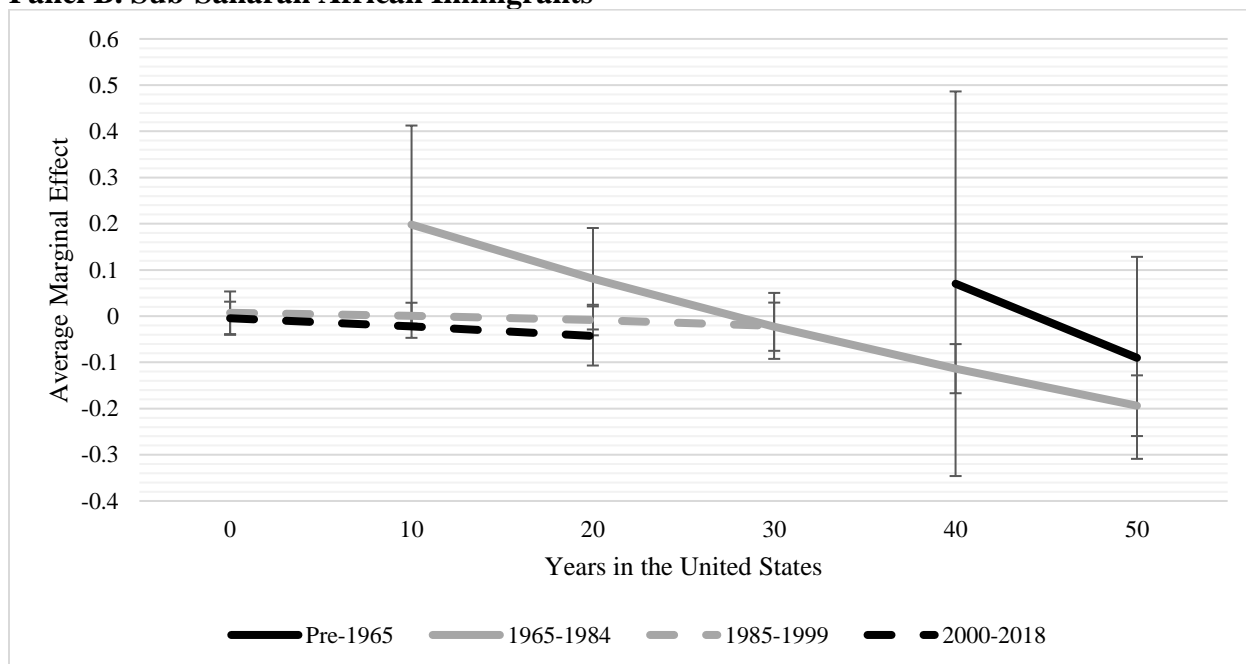
Trends among Sub-Saharan African immigrants are more stable than those of their Caribbean peers. Indeed, all four cohort remain quite close to 0, reflecting a strong similarity between Sub-Saharan Africans and Mexicans for self-rated health across duration. In both cases, these findings do not lend support to the idea of accelerated health deterioration for Black immigrants relative to others.

**Figure 5.3** Average Marginal Effects for Reporting Poor/Fair Self-Rated Health for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Caribbean Immigrants**



### Panel B. Sub-Saharan African Immigrants



### Comparing Caribbeans and Sub-Saharan Africans to Other Immigrant Groups

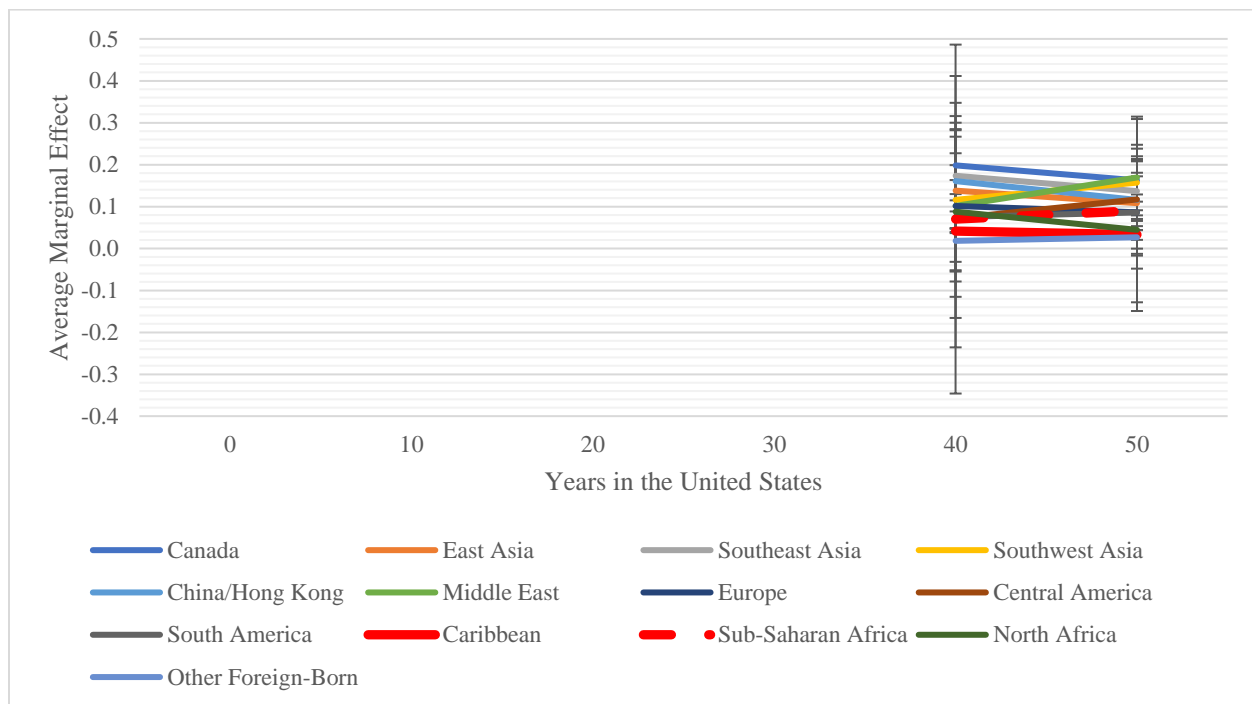
Relative to other foreign-born groups, Caribbean and Sub-Saharan African immigrants in the pre-1965 arrival cohort do not display notably different self-rated health outcomes at the 40- or 50-year duration markers (Figure 5.4, Panel A). Indeed, these two groups fall within the general



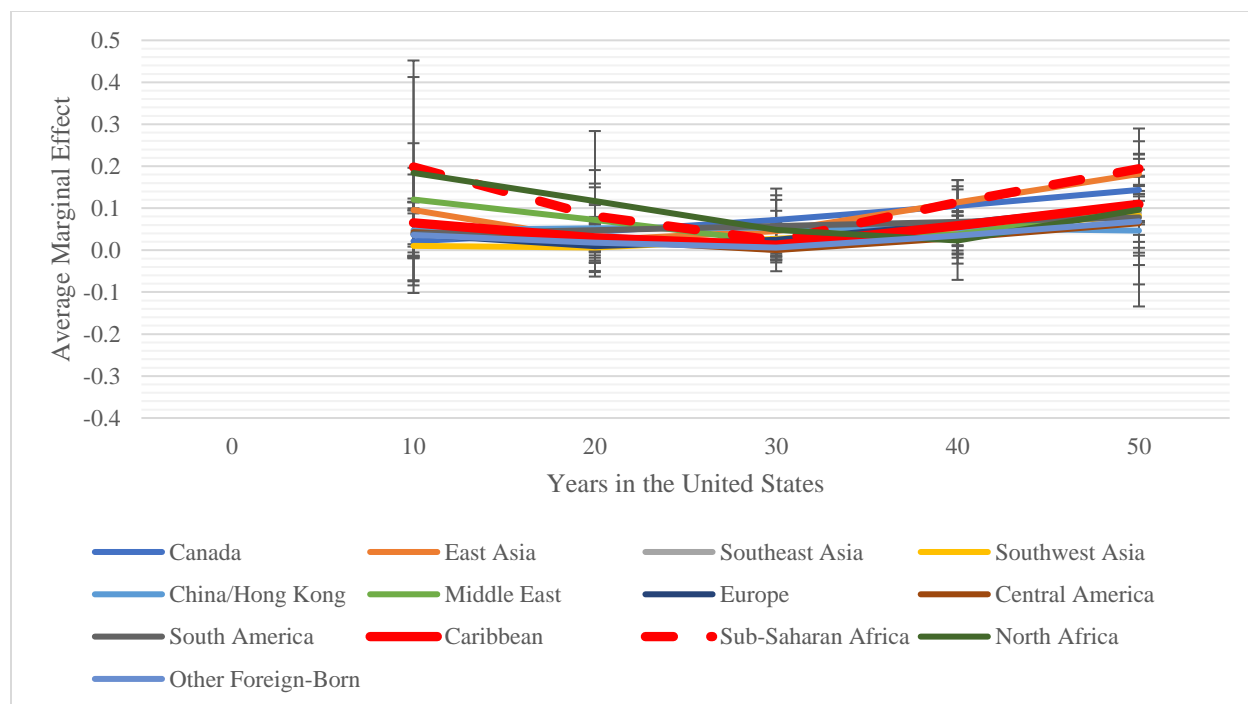
“pack”, with Sub-Saharan Africans being nearest to the bottom. These trends remain consistent for all three additional arrival cohorts (Figure 5.4, Panels B-D).

**Figure 5.4** Average Marginal Effects at Means for Reporting Poor/Fair Self-Rated Health by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018

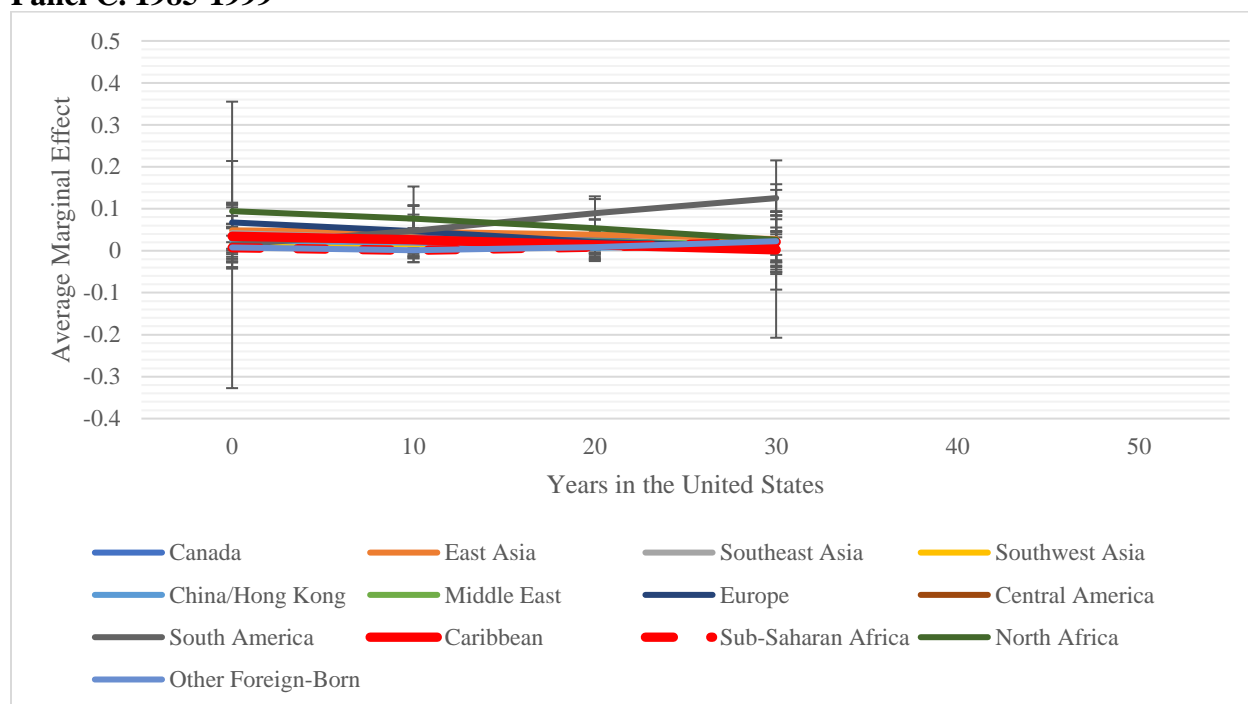
**Panel A. Pre-1965**



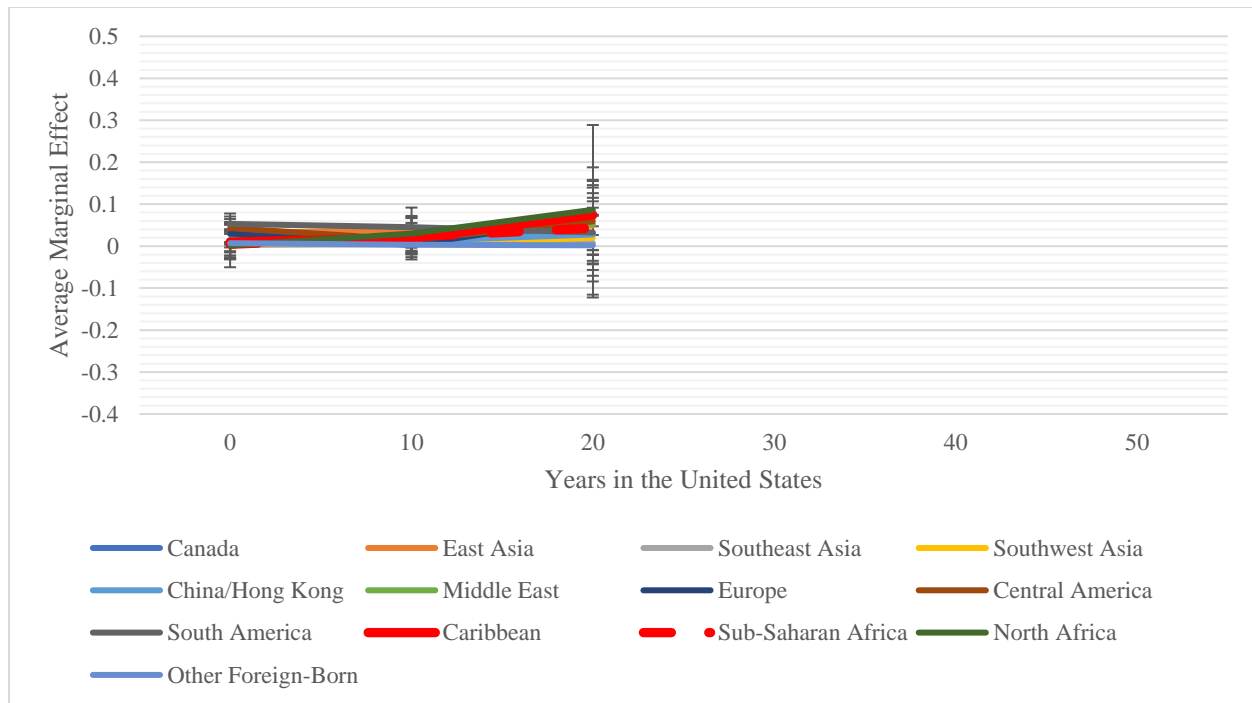
**Panel B. 1965-1984**



**Panel C. 1985-1999**



**Panel D. 2000-2018**



## Hypertension

### Descriptive Findings

Figure 5.4 visualizes the proportion of respondents who self-report having been told by a physician or other medical professional that they have hypertension by national/regional origin group across duration in the United States. In each instance, the proportion of respondents who self-report this condition increases with duration, reflecting a positive correlation. For several groups, I observe a greater degree of variation at the greatest levels of tenure. This is quite similar to those findings for poor/fair self-reported health. Again, these fluctuations may reflect small sample sizes or survivorship. Caribbean and Sub-Saharan African immigrants show quite similar changes with duration until approximately 60 years. After this point, Caribbean immigrants see a great deal of variability in their proportion of self-reported hypertension. Sub-Saharan African immigrants do not experience this same fluctuation. Rather, this sample

stabilizes between the 60-year duration marker and terminal duration marker, approximately 80 years.

**Figure 5.5** Proportion Respondents Who Self-Report Having Hypertension by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

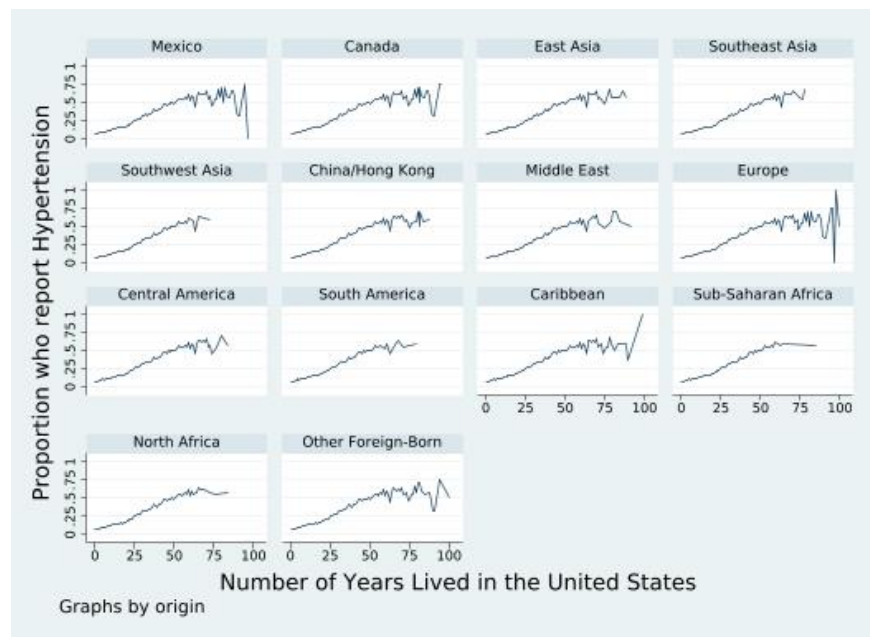


Table 5.5 provides descriptive results for self-reported hypertension by foreign-born group by arrival cohort. In the total sample, respondents in the pre-1965 arrival cohort maintain the highest percent of respondents who report hypertension at 49.17%. With each subsequent arrival cohort, this percent declines. In the most recent cohort, 2000-2018, 11.22% of respondents report hypertension. These findings align with existing research on aging and duration in the United States. The earliest arrival cohorts necessarily contain the oldest respondents and the respondents with the greatest duration in the United States. These older respondents are at risk of worse health associated with aging. Further, these older migrants have

greater tenure in the country which should align with worse health outcomes than more recently arrived peers.

When broken out by national/regional origin, I find that Southwest Asian immigrants (16.46%) maintain the lowest percent of respondents with hypertension. Conversely, Caribbean immigrants (30.96%) maintain this highest percent, nearly double that of Southwest Asians. As with the total foreign-born sample, the percent of respondents who report hypertension tends to be highest in the pre-1965 cohort and progressively declines with each subsequent cohort. There are some exceptions to this trend, though. For example, Sub-Saharan Africans in the 1965-1984 cohort maintain a higher percent of respondents with hypertension than the pre-1965 cohort. These differences are not statistically significant.

**Table 5.5** Percent of Respondents Who Self-Report Hypertension by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Total Sample		Arrival Cohort							
			Pre-1965		1965-1984		1985-1999		2000-2018	
	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error
Total			49.17	0.64	31.43	0.37	17.37	0.27	11.22	0.29
Origin										
Mexico	17.19	0.32	51.36	1.53	29.38	0.78	13.24	0.36	8.19	0.43
Canada	26.67	1.27	49.26	2.38	22.96	2.46	15.82	2.53	6.78	1.66
East Asia	20.57	0.92	40.81	3.23	27.01	1.45	16.30	1.76	6.80	1.08
Southeast Asia	26.12	0.64	53.78	4.24	32.48	1.14	23.58	0.91	17.13	1.31
Southwest Asia	16.46	0.69	48.24	10.01	30.70	1.88	18.10	1.26	10.20	0.82
China/Hong Kong	17.31	1.01	45.11	4.79	36.26	2.88	15.87	1.31	8.37	1.16
Middle East	20.38	1.19	33.99	5.90	30.34	2.95	19.09	2.09	11.59	1.53
Europe	27.40	0.56	47.12	1.01	28.67	0.96	18.46	0.92	12.07	1.29
Central America	18.29	0.65	56.08	3.97	31.56	1.52	15.00	0.95	9.42	1.06
South America	21.69	2.94	30.23	8.86	30.80	5.50	20.40	6.99	16.36	4.85
Caribbean	30.96	0.63	52.40	1.86	39.87	1.07	26.11	0.90	19.50	1.21
Sub-Saharan Africa	18.34	0.91	31.54	10.01	39.67	3.24	18.75	1.63	12.01	1.05

North Africa	19.13	2.16	35.00	8.37	28.47	5.22	16.16	3.80	16.33	3.04
Other Foreign-Born	23.29	0.49	53.95	1.58	31.21	0.92	17.74	0.74	11.80	0.79

## Multivariate Findings

Beginning with Panel A of Table 5.6, I observe no significant differences in the odds of reporting hypertension for Caribbean and Sub-Saharan African immigrants relative to Mexican immigrants in all three models. This reflects a larger trend where there are no significant differences for any of the foreign-born groups relative to their Mexican-born peers. In the AMEs for model 3 for the pre-1965 cohort, I observe two distinct trends by regional origin. To aid in the interpretation of these and all other AMEs for hypertension, please see Figure 5.5. Again, one must be cautious when interpreting any coefficients below duration marker 40 years. Caribbean immigrants are stable and not statistically difference, regardless of duration. Indeed, at both the 40- and 50-year markers, Caribbean immigrants maintain the exact same predicted probability. Among Sub-Saharan Africans, I observe an increase in the predicted probability of reporting hypertension between those at the 40-year duration marker (-0.42,  $p < 0.001$ ) and the 50-year marker (-0.23,  $p > 0.05$ ). Not only do these migrants experience a convergence toward Mexican immigrants, but the difference also becomes nonsignificant.

Among the second arrival cohort, 1965-1984, I observe no significant difference between Caribbean (1.10,  $p > 0.05$ ) immigrants relative to Mexicans; however, Sub-Saharan Africans (1.75,  $p < 0.001$ ) display significantly higher odds of reporting hypertension than Mexican immigrants. In model 2, Sub-Saharan African immigrants maintain significantly higher odds of reporting hypertension at 1.90 ( $p < 0.001$ ). Caribbean immigrants show no significant difference. In the final model, Caribbean immigrants' main effect of origin reflects significantly higher odds of reporting hypertension than Mexican immigrants at 3.46 ( $p < 0.001$ ). Sub-Saharan Africans

show no significant difference. To better understand the changes between these models, I turn to AMEs.

In models 1 and 2, Caribbean immigrants show no significant difference from Mexican immigrants and their predicted probability remains stable (0.02). By the final model, I observe significantly higher predicted probabilities for the Caribbean sample at the 20- and 30-year duration markers, followed by a cross-over with Mexican immigrants at the 40-year marker. At the 50-year marker, Caribbean immigrants display a significantly lower predicted probability once again. For Sub-Saharan Africans, models 1 and 2 display significantly higher predicted probabilities at 0.10 and 0.12, respectively. Broken out by duration, Respondents with 20-years duration show no significant difference from their Mexican peers. After this point, Sub-Saharan Africans diverge from Mexican immigrants and experience significantly higher predicted probabilities at each subsequent duration marker, potentially reflecting worsening health with increased tenure. Another less likely interpretation may be rapidly improving health among the Mexican immigrant sample combined with relative stability in the Sub-Saharan African sample. As with the first set of analyses, predicted probabilities at the 0 and 10-year markers must be interpreted with caution, if at all.

In Panel C, I provide the results for the 1985-1999 arrival cohort. Here, I observe significantly higher odds of reporting hypertension among Caribbean immigrants in models 1 (1.31,  $p < 0.001$ ) and model 2 (1.37,  $p < 0.01$ ), with nonsignificant findings in model 3. Sub-Saharan Africans show no significant difference in all three models. Examining the AMEs across duration, I find that Caribbean immigrants show no significant differences at the 0- and 10-year markers. At the 20- and 30-year duration markers, Caribbean immigrants diverge significantly from Mexican immigrants and display higher predicted probabilities for reporting hypertension.

Turning to Sub-Saharan Africans, I observe a similar upward trend with increased duration. That said, these migrants do not differ significantly from Mexican immigrants until the 30-year marker. Here, the predicted probability of reporting resets above that of Mexicans at 0.10; however, this is only marginally significant.

For the final arrival cohort, I find that Caribbean immigrants maintain significantly higher odds of reporting hypertension than Mexican immigrants in model 1 (1.37,  $p < 0.01$ ) and model 2 (1.40,  $p < 0.01$ ). There are no significant differences in the main effect of origin with the introduction of the interaction term for this group. Among Sub-Saharan Africans, I observe only one instance of significant difference in model 2 (1.35,  $p < 0.05$ ). Using AMEs and looking across duration, I find that Caribbean immigrants show little difference at the 0-, 10-, and 20-year duration markers relative to Mexican immigrants. The only instance of statistical significance is at the 10-year marker. Sub-Saharan Africans show no significant difference at the 0-year marker and display an upward trend with increased tenure. At the 10-year marker, this group maintains significantly higher predicted probabilities for reporting hypertension (0.03,  $p < 0.05$ ). While the value increases again at the 20-year marker to 0.07, the difference is non-significant.

**Table 5.6** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models Hypertension by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

Model 1			Model 2			Model 3		
OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t



Origin (Mexico)									
Canada	0.90	0.13		0.89	0.13		1.05	0.83	
East Asia	0.88	0.18		0.89	0.18		1.85	2.32	
Southeast Asia	1.25	0.26		1.30	0.26		1.05	1.58	
Southwest Asia	2.09	0.90		2.21	0.96		0.55	1.92	
China/Hong Kong	0.65	0.15		0.67	0.15		1.27	1.84	
Middle East	0.57	0.17		0.58	0.17		0.06	0.13	
Europe	0.86	0.09		0.86	0.09		0.82	0.50	
Central America	1.49	0.35		1.51	0.35		2.12	2.87	
South America	0.43	0.23		0.44	0.23		0.17	0.53	
Caribbean	1.04	0.13		1.08	0.14		1.08	0.92	
Sub-Saharan Africa	0.53	0.30		0.54	0.30		0.00	0.00	
North Africa	0.75	0.33		0.76	0.34		0.20	0.57	
Other Foreign-Born	1.08	0.12		1.08	0.12		1.65	1.16	
Age (Centered at 18)									
	1.04	0.00	***	1.03	0.00	***	1.03	0.00	***
Time in the United States (Centered at 0 years)									
				1.01	0.00	*	1.01	0.01	
Origin * Time in the United States (Centered at 0 years)									
							<i>Included</i>		
Intercept	0.29	0.07	***	0.23	0.06	***	0.21	0.12	***
	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Caribbean									
	0.01	0.03		0.02	0.03		-	-	-
0	-	-	-	-	-	-	0.02	0.18	
10	-	-	-	-	-	-	0.02	0.15	
20	-	-	-	-	-	-	0.02	0.11	
30	-	-	-	-	-	-	0.02	0.08	
40	-	-	-	-	-	-	0.02	0.05	
50	-	-	-	-	-	-	0.02	0.03	
Sub-Saharan Africa									
	-0.14	0.12		-0.13	0.12		-	-	-
0	-	-	-	-	-	-	-0.38	0.12	***
10	-	-	-	-	-	-	-0.40	0.10	***
20	-	-	-	-	-	-	-0.42	0.08	***
30	-	-	-	-	-	-	-0.44	0.06	***
40	-	-	-	-	-	-	-0.42	0.10	***
50	-	-	-	-	-	-	-0.23	0.16	

*N* = 16,294

## Panel B. 1965-1984

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.77	0.13		0.77	0.13		1.56	1.09	
East Asia	0.88	0.10		0.91	0.10		1.23	0.54	

Southeast Asia	1.17	0.09	*	1.24	0.10	**	1.67	0.53	
Southwest Asia	0.88	0.11		0.94	0.11		1.47	0.76	
China/Hong Kong	0.86	0.14		0.91	0.14		0.74	0.56	
Middle East	0.90	0.15		0.96	0.16		0.21	0.17	*
Europe	0.95	0.08		0.95	0.08		1.37	0.45	
Central America	1.10	0.11		1.15	0.11		1.43	0.58	
South America	0.67	0.18		0.70	0.18		0.20	0.26	
Caribbean	1.10	0.08		1.13	0.08		3.46	1.08	***
Sub-Saharan Africa	1.75	0.29	***	1.90	0.32	***	1.42	0.99	
North Africa	0.50	0.16	*	0.54	0.18		11.72	14.47	*
Other Foreign-Born	0.98	0.07		1.00	0.07		1.63	0.50	
Age (Centered at 18)	1.06	0.00	***	1.06	0.00	***	1.06	0.00	***
Time in the United States (Centered at 0 years)				1.02	0.00	***	1.03	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	0.10	0.01	***	0.07	0.01	***	0.05	0.01	***
	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Caribbean	0.02	0.01		0.02	0.01		-	-	-
0	-	-	-	-	-	-	0.20	0.05	***
10	-	-	-	-	-	-	0.15	0.04	***
20	-	-	-	-	-	-	0.10	0.02	***
30	-	-	-	-	-	-	0.05	0.01	***
40	-	-	-	-	-	-	-0.01	0.02	
50	-	-	-	-	-	-	-0.07	0.03	*
Sub-Saharan Africa	0.10	0.03	***	0.12	0.03	***	-	-	-
0	-	-	-	-	-	-	0.05	0.10	
10	-	-	-	-	-	-	0.07	0.08	
20	-	-	-	-	-	-	0.09	0.05	
30	-	-	-	-	-	-	0.12	0.03	***
40	-	-	-	-	-	-	0.14	0.05	***
50	-	-	-	-	-	-	0.16	0.08	*

*N* = 61,661

## Panel C. 1985-1999

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.94	0.25		1.03	0.28		0.75	0.41	
East Asia	0.95	0.15		0.99	0.15		0.39	0.14	**
Southeast Asia	1.15	0.10		1.21	0.10	*	1.20	0.28	
Southwest Asia	0.93	0.11		0.99	0.12		0.90	0.27	
China/Hong Kong	0.47	0.07	***	0.51	0.07	***	0.69	0.25	

Middle East	0.68	0.11	*	0.71	0.12	*	0.62	0.31	
Europe	0.92	0.08		0.99	0.09		1.11	0.25	
Central America	0.91	0.08		0.91	0.08		1.00	0.26	
South America	0.70	0.26		0.76	0.29		0.67	0.69	
Caribbean	1.31	0.09	***	1.37	0.10	***	1.06	0.21	
Sub-Saharan Africa	1.11	0.15		1.20	0.16		0.56	0.21	
North Africa	0.81	0.25		0.87	0.27		0.45	0.30	
Other Foreign-Born	0.85	0.07	*	0.89	0.07		1.13	0.24	
Age (Centered at 18)	1.08	0.00	***	1.07	0.00	***	1.07	0.00	***
Time in the United States (Centered at 0 years)				1.02	0.00	***	1.02	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	0.04	0.00	***	0.04	0.00	***	0.04	0.00	***
	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Caribbean	0.03	0.01	***	0.04	**	***	-	-	-
0	-	-	-	-	-	-	0.01	0.02	
10	-	-	-	-	-	-	0.02	0.01	
20	-	-	-	-	-	-	0.04	0.01	***
30	-	-	-	-	-	-	0.06	0.02	***
40	-	-	-	-	-	-	0.09	0.04	*
50	-	-	-	-	-	-	0.12	0.06	
Sub-Saharan Africa	0.01	0.02		0.02	*		-	-	-
0	-	-	-	-	-	-	-0.05	0.03	
10	-	-	-	-	-	-	-0.02	0.02	
20	-	-	-	-	-	-	0.03	0.02	
30	-	-	-	-	-	-	0.10	0.05	*
40	-	-	-	-	-	-	0.18	0.09	*
50	-	-	-	-	-	-	0.27	0.13	*

*N* = 97,525

## Panel D. 2000-2018

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.65	0.19		0.67	0.20		0.61	0.29	
East Asia	0.62	0.13	*	0.64	0.14	*	0.47	0.19	
Southeast Asia	1.24	0.17		1.28	0.18		1.23	0.30	
Southwest Asia	1.08	0.16		1.11	0.16		1.00	0.25	
China/Hong Kong	0.53	0.10	***	0.55	0.10	***	0.38	0.12	***
Middle East	0.89	0.19		0.93	0.20		0.58	0.22	
Europe	1.08	0.18		1.11	0.18		0.74	0.26	
Central America	1.30	0.20		1.31	0.20		1.27	0.35	

South America	0.86	0.40		0.86	0.40		0.39	0.34	
Caribbean	1.37	0.17	**	1.40	0.17	**	1.39	0.35	
Sub-Saharan Africa	1.31	0.19		1.35	0.20	*	0.97	0.24	
North Africa	1.85	0.49	*	1.89	0.51	*	3.01	1.22	**
Other Foreign-Born	0.94	0.11		0.96	0.11		0.99	0.21	
Age (Centered at 18)	1.09	0.00	***	1.08	0.00	***	1.08	0.00	***
Time in the United States (Centered at 0 years)				1.01	0.01		1.00	0.01	
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	0.03	0.00	***	0.03	0.00	***	0.03	0.01	***
	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Caribbean	0.03	0.01	**	0.03	0.01	**	-	-	-
0	-	-	-	-	-	-	0.03	0.02	
10	-	-	-	-	-	-	0.03	0.01	*
20	-	-	-	-	-	-	0.03	0.03	
30	-	-	-	-	-	-	0.02	0.05	
40	-	-	-	-	-	-	0.02	0.07	
50	-	-	-	-	-	-	0.02	0.09	
Sub-Saharan Africa	0.02	0.01		0.02	0.01	*	-	-	-
0	-	-	-	-	-	-	0.00	0.02	
10	-	-	-	-	-	-	0.03	0.02	*
20	-	-	-	-	-	-	0.07	0.04	
30	-	-	-	-	-	-	0.12	0.08	
40	-	-	-	-	-	-	0.18	0.13	
50	-	-	-	-	-	-	0.25	0.19	

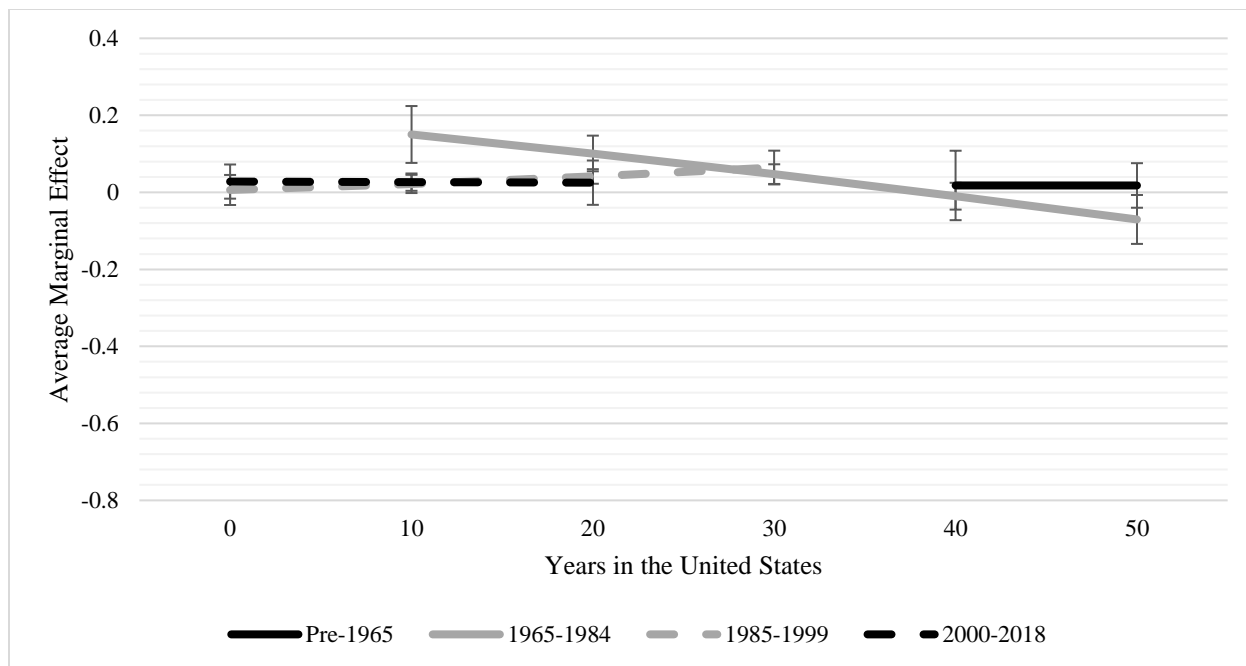
*N* = 67,651

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

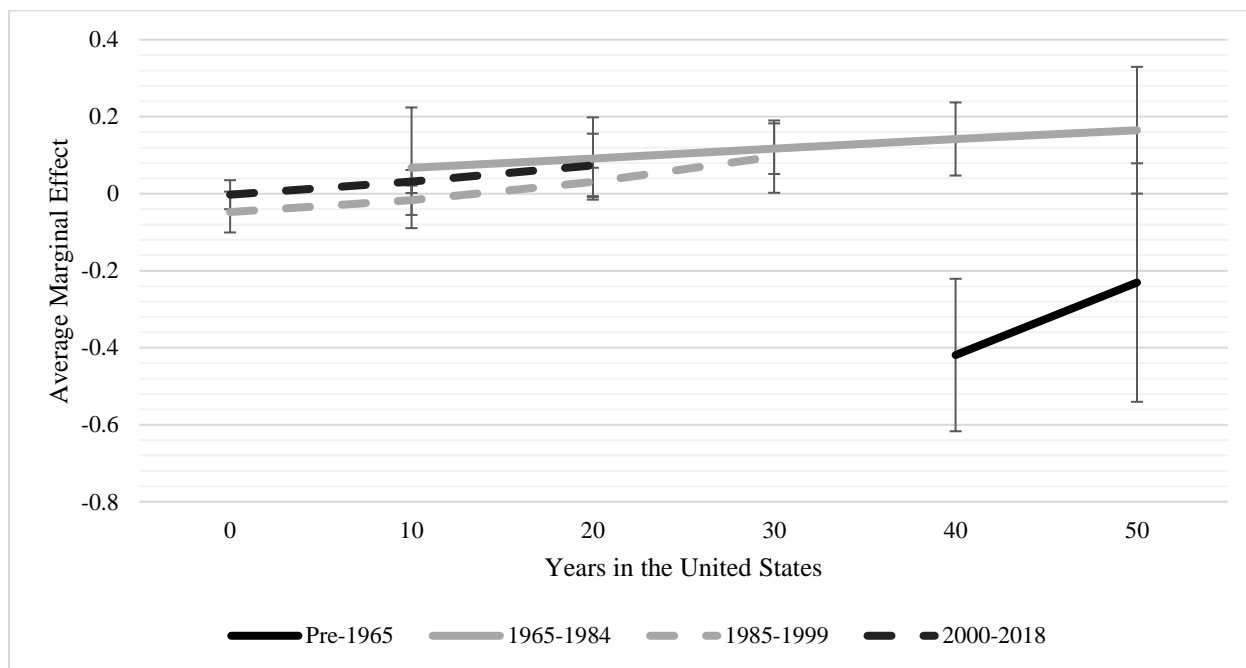
\**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Figure 5.6** Average Marginal Effects for Reporting Hypertension for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Caribbean Immigrants**



### Panel B. Sub-Saharan African Immigrants



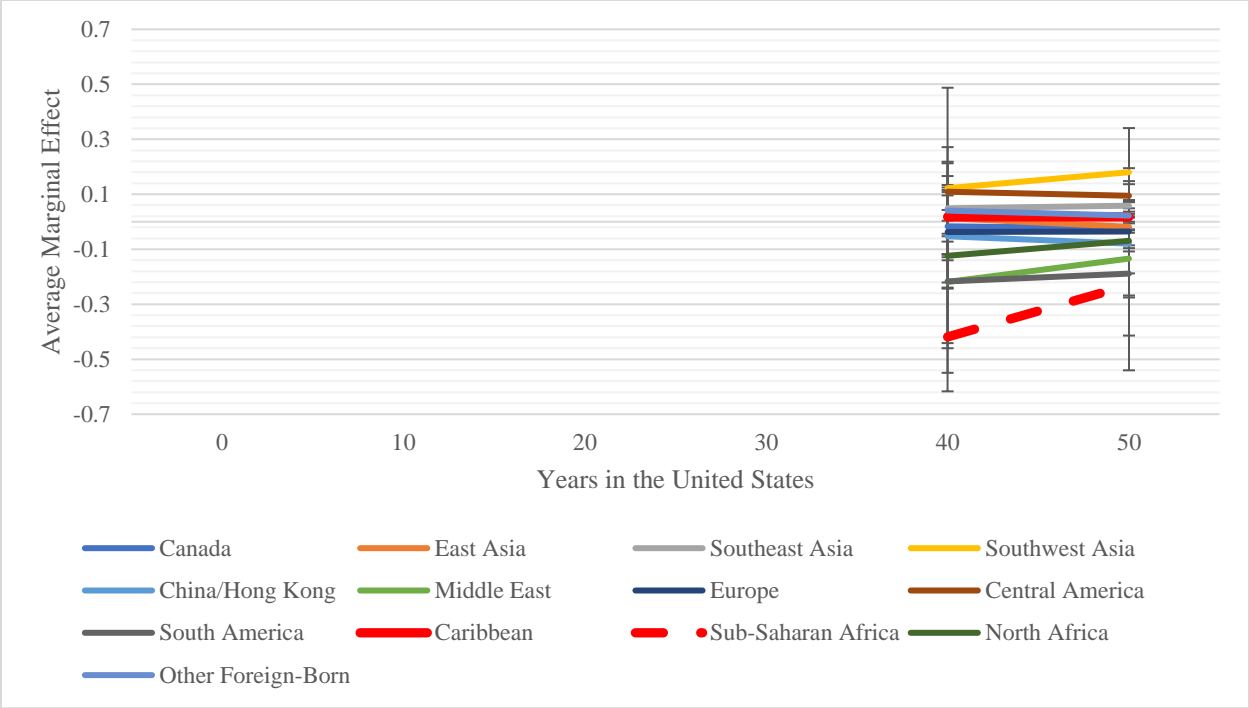
Comparing Caribbeans and Sub-Saharan Africans to Other Immigrant Groups

Figure 5.7 presents the AMEs for reporting hypertension for all foreign-born groups examined across the four arrival cohorts. In Panel A, I provide the results for the pre-1965 arrival cohort. Here, Caribbean immigrants fall well within the pack and do not show signs of accelerated health declines relative to these other groups. Sub-Saharan African immigrants fall significantly below the pack at the 40-year marker and converge with the pack at the 50-year. The increase between these two duration markers does appear to have a steeper slope than any of the other foreign-born groups, however, one cannot meaningfully interpret this slope for cross-sectional point estimates as they do not reflect change.

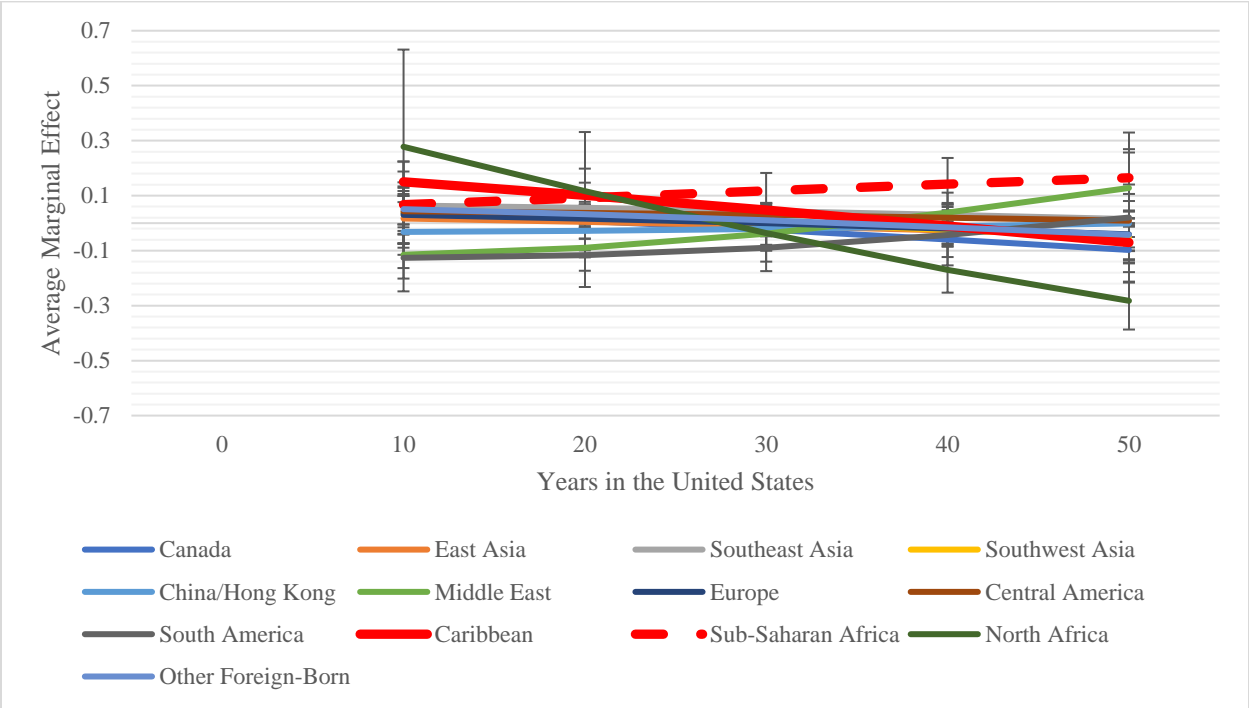
In more recent cohorts, a more consistent trend emerges. For the 1965-1984 arrival cohort (Panel B), Sub-Saharan Africans rest at the top of the pack and significantly so for the 30-year through 50-year markers. Each subsequent decade of time in the United States is associated with an increased predicted probability. This suggests that time in the United States is increasing the probability of reporting hypertension in this group. In this cohort, Caribbean immigrants continue to rest within the pack. In the last two arrival cohort, both Caribbean and Sub-Saharan African immigrants fall within the pack and show some evidence of accelerated health declines. Though these differences are nonsignificant at this point, these groups may diverge more notably as duration continues to increase.

**Figure 5.7** Average Marginal Effects at Means for Reporting Hypertension by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018

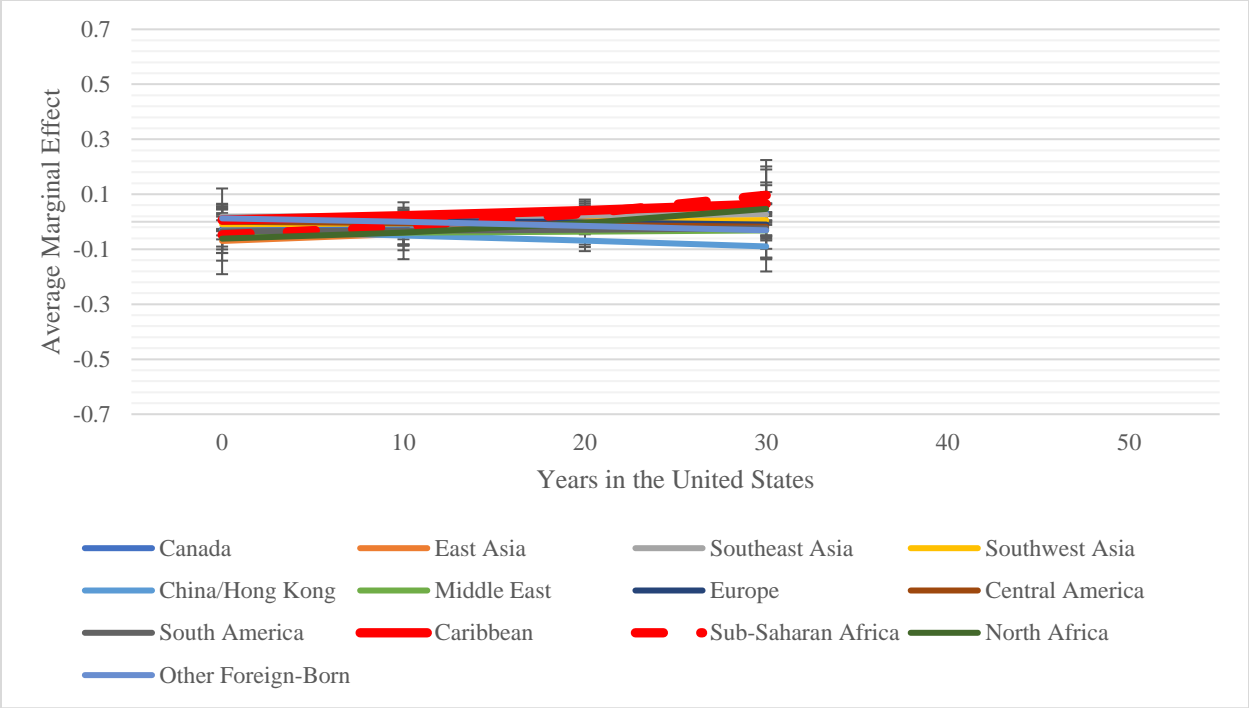
**Panel A. Pre-1965**



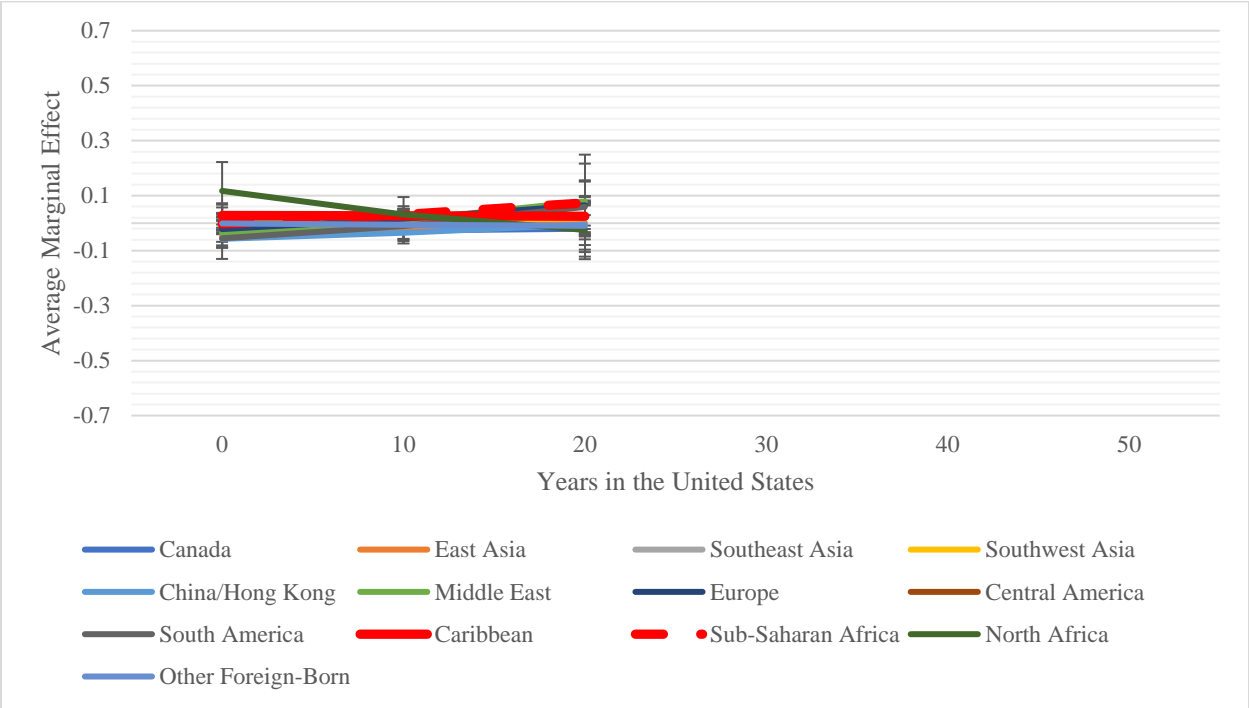
**Panel B. 1965-1984**



**Panel C. 1985-1999**



**Panel D. 2000-2018**





## *Body Mass Index – Overweight and Obese BMI*

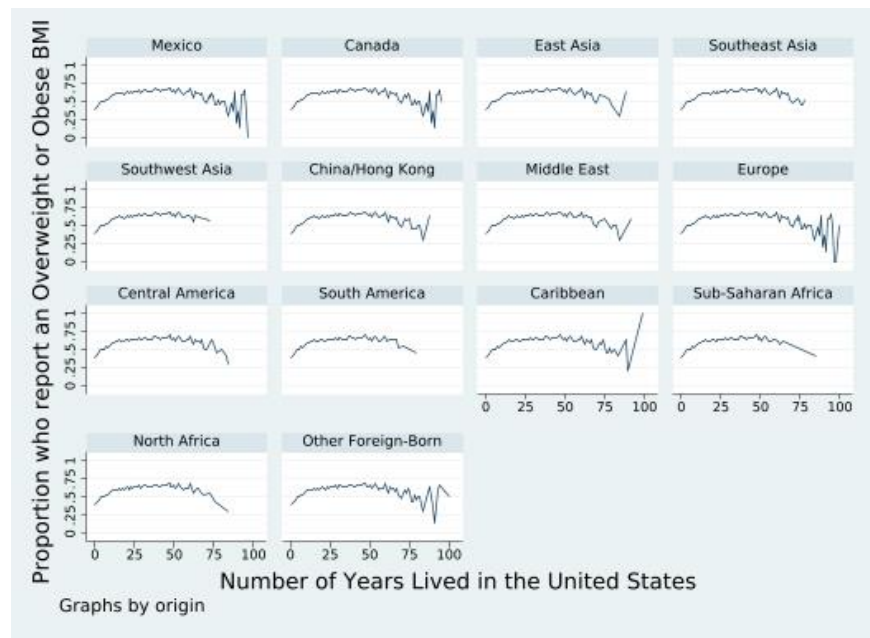
### Descriptive Findings

In Figure 5.6, I present the proportion of respondents within each national/regional origin who report having a BMI in the overweight (25.0-29.9) or obese ( $\geq 30.0$ ) range across duration in the United States. For each group, those who most recently entered the country have relatively lower proportions of respondents in this BMI range. As duration increases, most groups experience a slight increase in those with overweight or obese BMIs and then relative stability until the greatest durations, often at or above 50 years. After this point, nearly every group sees increased variation combined with a general decline in the proportion of respondents in these BMI ranges<sup>14</sup>. Caribbean and Sub-Saharan African immigrants do not stand apart from the group in any meaningful way, based on this figure. The main difference between these groups is that the most tenured Caribbean immigrants exhibit greater variation than Sub-Saharan Africans.

**Figure 5.8** Proportion Respondents Who Self-Report Having a BMI in the Overweight or Obese Range by National/Regional Origin Across Duration in the United States, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

---

<sup>14</sup> These findings reflect the utility of a quadratic functional form for duration in multivariate models. I opt to retain a linear estimation of duration in my models. The central reason for this is model parsimony and ease of interpretation. The existing stratified binomial models are quite complex, particularly those including an interaction term for origin and duration. Adding a quadratic form for duration necessitates an additional interaction term, effectively creating a four-way interaction. To ease interpretation, I retain the linear form but acknowledge that a quadratic term may improve model fit.



Like the findings for both self-rated health and hypertension, the most tenured cohorts tend to have the highest percent of respondents who report an overweight or obese BMI than more recently arrived cohort. Caribbean and Sub-Saharan African immigrants stand a bit apart. Caribbean immigrants in the 1965-1984 arrival cohort maintain the highest percentage of participants in this BMI range. Among Sub-Saharan Africans, the pre-1965 cohort has the second lowest percentage. Those who arrived between 1965-1984 have the highest percentage, followed by the 1985-1999 cohort. These findings may reflect the increased migration rates in these years and lowered migration selection. This is because African migration prior to 1965 was extremely low and primarily dominated by students. One can reasonably assume this group to be highly selected on measures of health and socioeconomic status. Those who arrived after 1965 likely still experienced health selection, but the wide immigration reforms opened the doors to both a higher volume of African migrants and eased entry based on these socioeconomic variables.

**Table 5.7** Percent of Respondents Who Self-Report Having a BMI in the Overweight or Obese Range by National/Regional Origin and Arrival Cohort, Foreign-Born Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Total Sample		Arrival Cohort							
			Pre-1965		1965-1984		1985-1999		2000-2018	
	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error	%	Std. Error
Total			64.76	0.61	64.11	0.45	59.98	0.38	52.61	0.50
Origin										
Mexico	71.77	0.37	77.65	1.24	78.60	0.66	71.72	0.55	64.31	0.82
Canada	56.66	1.37	64.60	2.24	57.73	2.89	53.73	2.82	43.71	3.62
East Asia	34.58	1.15	46.29	3.52	40.19	1.93	31.72	2.09	21.96	1.80
Southeast Asia	39.81	0.77	52.71	3.97	42.80	1.16	37.90	1.18	36.04	1.70
Southwest Asia	48.47	0.92	64.50	9.35	52.45	2.18	47.72	1.67	47.43	1.31
China/Hong Kong	22.39	1.04	26.50	3.83	30.65	2.95	20.97	1.54	21.20	1.66
Middle East	58.61	1.50	64.08	6.47	68.70	3.34	57.97	2.26	49.71	2.63
Europe	57.48	0.61	62.56	1.01	63.81	1.11	54.97	1.20	44.31	1.77
Central America	68.40	0.71	70.94	3.70	72.79	1.29	70.85	1.02	60.71	1.54
South America	59.12	3.39	59.27	10.68	60.34	6.30	60.88	6.25	57.60	6.15
Caribbean	66.29	0.60	66.33	2.17	69.09	0.88	66.25	1.00	62.57	1.65
Sub-Saharan Africa	59.48	1.27	59.59	10.29	69.71	2.81	62.75	1.84	54.00	1.94
North Africa	61.91	2.80	77.28	6.60	51.15	6.46	65.57	5.02	59.36	4.64
Other Foreign-Born	61.35	0.60	68.65	1.35	68.12	0.97	60.56	1.05	54.06	1.23

## Multivariate Findings

Among those who arrived before 1965, I find that Caribbean immigrants (0.67,  $p < 0.01$ ) maintain significantly lower odds of reporting an overweight or obese BMI relative to Mexican immigrants. Sub-Saharan African immigrants show no significant difference. The AMEs for this model are statistically significant for Caribbean (-0.08,  $p < 0.01$ ) immigrants. In model 2, there is no change for Caribbean immigrants, but Sub-Saharan African immigrants experience a change in statistical significance (0.40,  $p < 0.05$ ). AMEs remain statistically significant and negative for Caribbean migrants and remain non-significant for Sub-Saharan African immigrants. In the final model, neither group shows a significant difference in their odds of reporting an overweight or obese BMI. At the 50-year duration marker, both groups show significantly lower predicted

probabilities for reporting an overweight or obese BMI relative to Mexican immigrants. Across all three models, the odds of reporting an overweight or obese BMI decreases with increasing age (0.97,  $p < 0.001$ ). Duration in the United States is a non-significant predictor for this outcome in this arrival cohort.

In Panel B, I find that both Caribbean (0.65,  $p < 0.001$ ) and Sub-Saharan African (0.72,  $p < 0.05$ ) immigrants maintain significantly lower odds of reporting this outcome relative to Mexicans. In this first model, age is a non-significant predictor of an overweight or obese BMI. In model 2, Caribbean immigrants show significantly lower odds for reporting an overweight or obese BMI while Sub-Saharan Africans are nonsignificant. Age is a significant, negative predictor of an overweight or obese BMI (0.99,  $p < 0.001$ ), while duration in the United States is a significant, positive predictor (1.03,  $p < 0.001$ ). AMEs for Caribbean immigrants in the first two models are statistically significant and negative predictors (-0.08 and -0.07, respectively;  $p < 0.001$ ). In the final model, neither Caribbeans or Sub-Saharan Africans exhibit significantly different odds of reporting overweight or obese BMIs than the Mexican reference category. Age (0.99,  $p < 0.001$ ) and duration (1.03,  $p < 0.001$ ) remain statistically significant predictors. At the 20-year duration marker, Caribbean immigrants show no difference from their Mexican peers but diverge on a negative slope for the 30- (-0.07,  $p < 0.001$ ), 40- (-0.09,  $p < 0.001$ ), and 50-year (-0.10,  $p < 0.001$ ) duration markers. Sub-Saharan Africans do not show significant differences from the reference across all duration markers.

In models 1 and 2 of Panel C, I find that both Caribbean and Sub-Saharan African immigrants display significantly lower odds of reporting overweight or obese BMIs than the referent. The AMEs for these two groups are significant and negative predictors, as well. For the first time in this set of models, age is a significant, positive predictor of an overweight or obese

BMI (1.02,  $p < 0.001$ ). In model 3, the main effect for Caribbean and Sub-Saharan African immigrants is non-significant. Both age and duration in the United States are significantly and positively associated with the odds of reporting an overweight or obese BMI (1.02 and 1.04, respectively;  $p < 0.001$ ). At the 0-year marker, both Caribbean and Sub-Saharan Africans show no significant difference from the referent category. For Caribbean immigrants, this remains true at the 10-year marker and diverges significantly at the 20- (-0.09,  $p < 0.001$ ) and 30-year (-0.11,  $p < 0.001$ ) markers. For Sub-Saharan Africans, the predicted probability becomes briefly significant and negative at the 10-year marker (-0.05,  $p < 0.05$ ) but returns to no significance at the 20- and 30-year markers.

In the first model of the final panel, I observe statistically lower odds of reporting an overweight or obese BMI for both Caribbean (0.76,  $p < 0.001$ ) and Sub-Saharan African (0.57,  $p < 0.001$ ) immigrants. Their corresponding AMEs are also statistically significant and negatively associated (-0.06 and -0.13, respectively;  $p < 0.001$ ). In model 2, Caribbean (0.83,  $p < 0.05$ ) and Sub-Saharan African (0.63,  $p < 0.001$ ) immigrants show significantly lower odds for overweight or obese BMIs. The AMEs for these two groups rest at -0.04 ( $p < 0.05$ ) for Caribbeans and -0.11 ( $p < 0.001$ ) for Sub-Saharan Africans. In the final model, Caribbean immigrants show no significant difference from Mexicans while Sub-Saharan Africans have significant lower odds (0.56,  $p < 0.001$ ). At the 0-, 10-, and 20-year markers, Caribbean immigrants do not differ significantly from Mexicans. The predicted probabilities for Sub-Saharan Africans differ significantly from this referent at the 0- (-0.14,  $p < 0.001$ ) and 10-year (-0.09,  $p < 0.001$ ) markers and become non-significant at the 20-year marker. This reflects an upward trend in the predicted probability for this migrant group. Across all 3 models, age is a statistically significant predictor

of overweight or obese BMIs (1.03,  $p < 0.001$ ). In models 2 and 3, duration is a significant predictor of this outcome (1.04,  $p < 0.001$ ).

**Table 5.8** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for BMI in the Overweight or Obese Range by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.69	0.11	*	0.69	0.11	*	1.39	1.19	
East Asia	0.33	0.06	***	0.33	0.06	***	1.00	1.09	
Southeast Asia	0.36	0.08	***	0.36	0.08	***	0.35	0.46	
Southwest Asia	0.51	0.23		0.50	0.22		5.62	18.50	
China/Hong Kong	0.11	0.03	***	0.11	0.03	***	0.03	0.05	*
Middle East	0.63	0.22		0.63	0.22		0.33	0.74	
Europe	0.62	0.07	***	0.62	0.07	***	1.38	0.98	
Central America	1.07	0.25		1.06	0.25		2.30	3.73	
South America	0.79	0.40		0.79	0.40		13.86	36.03	
Caribbean	0.67	0.09	**	0.66	0.09	**	2.40	2.20	
Sub-Saharan Africa	0.40	0.19		0.40	0.19	*	0.04	0.15	
North Africa	1.07	0.47		1.07	0.47		1.73	5.51	
Other Foreign-Born	0.73	0.09	**	0.73	0.09	**	2.45	1.96	
Age (Centered at 18)	0.97	0.00	***	0.97	0.00	***	0.97	0.00	***
Time in the United States (Centered at 0 years)				1.00	0.00		1.01	0.01	
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	29.05	7.23	***	31.46	8.83	***	14.90	9.55	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	-0.08	0.03	**	-0.08	0.03	**	-	-	-
0	-	-	-	-	-	-	0.17	0.18	
10	-	-	-	-	-	-	0.12	0.14	
20	-	-	-	-	-	-	0.07	0.11	
30	-	-	-	-	-	-	0.03	0.08	

40	-	-	-	-	-	-	-0.02	0.05	
50	-	-	-	-	-	-	-0.07	0.03	**
Sub-Saharan Africa	-0.19	0.11		-0.20	0.11		-	-	-
0	-	-	-	-	-	-	-0.55	0.27	*
10	-	-	-	-	-	-	-0.53	0.31	
20	-	-	-	-	-	-	-0.49	0.34	
30	-	-	-	-	-	-	-0.42	0.31	
40	-	-	-	-	-	-	-0.32	0.21	
50	-	-	-	-	-	-	-0.21	0.11	*

$N = 16,032$

## Panel B. 1965-1984

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.45	0.06	***	0.45	0.06	***	0.46	0.26	
East Asia	0.23	0.02	***	0.23	0.02	***	0.20	0.08	***
Southeast Asia	0.23	0.02	***	0.25	0.02	***	0.26	0.07	***
Southwest Asia	0.35	0.04	***	0.38	0.05	***	0.50	0.24	
China/Hong Kong	0.14	0.02	***	0.15	0.02	***	0.22	0.16	*
Middle East	0.71	0.12	*	0.77	0.13		0.54	0.29	
Europe	0.57	0.04	***	0.57	0.04	***	0.48	0.14	**
Central America	0.80	0.07	**	0.87	0.08		0.72	0.26	
South America	0.45	0.13	**	0.48	0.14	**	0.04	0.05	*
Caribbean	0.65	0.04	***	0.68	0.04	***	1.16	0.32	
Sub-Saharan Africa	0.72	0.11	*	0.81	0.13		0.98	0.66	
North Africa	0.31	0.09	***	0.34	0.10	***	3.76	4.37	
Other Foreign-Born	0.66	0.05	***	0.68	0.05	***	0.76	0.21	
Age (Centered at 18)	1.00	0.00		0.99	0.00	***	0.99	0.00	***
Time in the United States (Centered at 0 years)				1.03	0.00	***	1.03	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	6.28	0.67	***	3.73	0.45	***	3.54	0.66	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	-0.08	0.01	***	-0.07	0.01	***	-	-	-
0	-	-	-	-	-	-	0.04	0.06	
10	-	-	-	-	-	-	0.00	0.04	
20	-	-	-	-	-	-	-0.04	0.02	
30	-	-	-	-	-	-	-0.07	0.01	***
40	-	-	-	-	-	-	-0.09	0.02	***
50	-	-	-	-	-	-	-0.10	0.03	***
Sub-Saharan Africa	-0.06	0.03	*	-0.04	0.03		-	-	-

0	-	-	-	-	-	-	0.00	0.16
10	-	-	-	-	-	-	-0.02	0.11
20	-	-	-	-	-	-	-0.03	0.06
30	-	-	-	-	-	-	-0.04	0.03
40	-	-	-	-	-	-	-0.04	0.05
50	-	-	-	-	-	-	-0.05	0.07

$N = 61,028$

### Panel C. 1985-1999

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.47	0.06	***	0.52	0.07	***	1.06	0.33	
East Asia	0.20	0.02	***	0.21	0.02	***	0.13	0.04	***
Southeast Asia	0.22	0.02	***	0.23	0.02	***	0.36	0.07	***
Southwest Asia	0.38	0.04	***	0.41	0.04	***	0.46	0.09	***
China/Hong Kong	0.10	0.01	***	0.10	0.01	***	0.21	0.06	***
Middle East	0.50	0.06	***	0.53	0.06	***	0.57	0.14	*
Europe	0.49	0.03	***	0.53	0.04	***	0.72	0.11	*
Central America	0.89	0.06		0.90	0.06		0.98	0.17	
South America	0.53	0.14	**	0.59	0.16	*	0.59	0.32	
Caribbean	0.73	0.04	***	0.76	0.05	***	1.08	0.18	
Sub-Saharan Africa	0.71	0.06	***	0.79	0.07	**	0.80	0.18	
North Africa	0.80	0.19		0.88	0.21		0.82	0.50	
Other Foreign-Born	0.60	0.04	***	0.63	0.04	***	0.86	0.12	
Age (Centered at 18)	1.02	0.00	***	1.02	0.00	***	1.02	0.00	***
Time in the United States (Centered at 0 years)				1.03	0.00	***	1.04	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	2.43	0.16	***	1.79	0.12	***	1.51	0.13	***
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	-0.07	0.01	***	-0.06	0.01	***	-	-	-
0	-	-	-	-	-	-	0.02	0.04	
10	-	-	-	-	-	-	-0.03	0.02	
20	-	-	-	-	-	-	-0.07	0.01	***
30	-	-	-	-	-	-	-0.09	0.03	***
40	-	-	-	-	-	-	-0.11	0.04	***
50	-	-	-	-	-	-	-0.11	0.05	**
Sub-Saharan Africa	-0.07	0.02	***	-0.05	0.02	**	-	-	-
0	-	-	-	-	-	-	-0.05	0.06	
10	-	-	-	-	-	-	-0.05	0.03	*
20	-	-	-	-	-	-	-0.04	0.02	



30	-	-	-	-	-	-	-0.04	0.04
40	-	-	-	-	-	-	-0.03	0.05
50	-	-	-	-	-	-	-0.02	0.05

$N = 96,264$

## Panel D. 2000-2018

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.38	0.06	***	0.44	0.07	***	0.61	0.15	*
East Asia	0.13	0.02	***	0.14	0.02	***	0.14	0.03	***
Southeast Asia	0.25	0.03	***	0.27	0.03	***	0.26	0.04	***
Southwest Asia	0.47	0.04	***	0.53	0.05	***	0.61	0.08	***
China/Hong Kong	0.13	0.02	***	0.14	0.02	***	0.19	0.04	***
Middle East	0.48	0.06	***	0.55	0.07	***	0.51	0.10	***
Europe	0.39	0.04	***	0.43	0.04	***	0.37	0.06	***
Central America	0.83	0.07	*	0.84	0.07	*	0.80	0.12	
South America	0.51	0.15	*	0.52	0.16	*	1.30	0.58	
Caribbean	0.76	0.07	***	0.83	0.07	*	0.79	0.13	
Sub-Saharan Africa	0.57	0.06	***	0.63	0.06	***	0.56	0.10	***
North Africa	0.77	0.17		0.85	0.19		0.86	0.33	
Other Foreign-Born	0.54	0.04	***	0.59	0.04	***	0.63	0.08	***
Age (Centered at 18)	1.03	0.00	***	1.03	0.00	***	1.03	0.00	***
Time in the United States (Centered at 0 years)				1.04	0.01	***	1.04	0.01	***
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
Intercept	1.42	0.11	***	1.19	0.09	*	1.18	0.11	
	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t	dy/dx	Std. Error	P >  t
Caribbean	-0.06	0.02	***	-0.04	0.02	*	-	-	-
0	-	-	-	-	-	-	-0.06	0.04	
10	-	-	-	-	-	-	-0.04	0.02	
20	-	-	-	-	-	-	-0.02	0.05	
30	-	-	-	-	-	-	0.00	0.08	
40	-	-	-	-	-	-	0.01	0.08	
50	-	-	-	-	-	-	0.01	0.08	
Sub-Saharan Africa	-0.13	0.02	***	-0.11	0.02	***	-	-	-
0	-	-	-	-	-	-	-0.14	0.04	***
10	-	-	-	-	-	-	-0.09	0.03	***
20	-	-	-	-	-	-	-0.05	0.07	
30	-	-	-	-	-	-	-0.01	0.09	
40	-	-	-	-	-	-	0.01	0.09	
50	-	-	-	-	-	-	0.02	0.08	

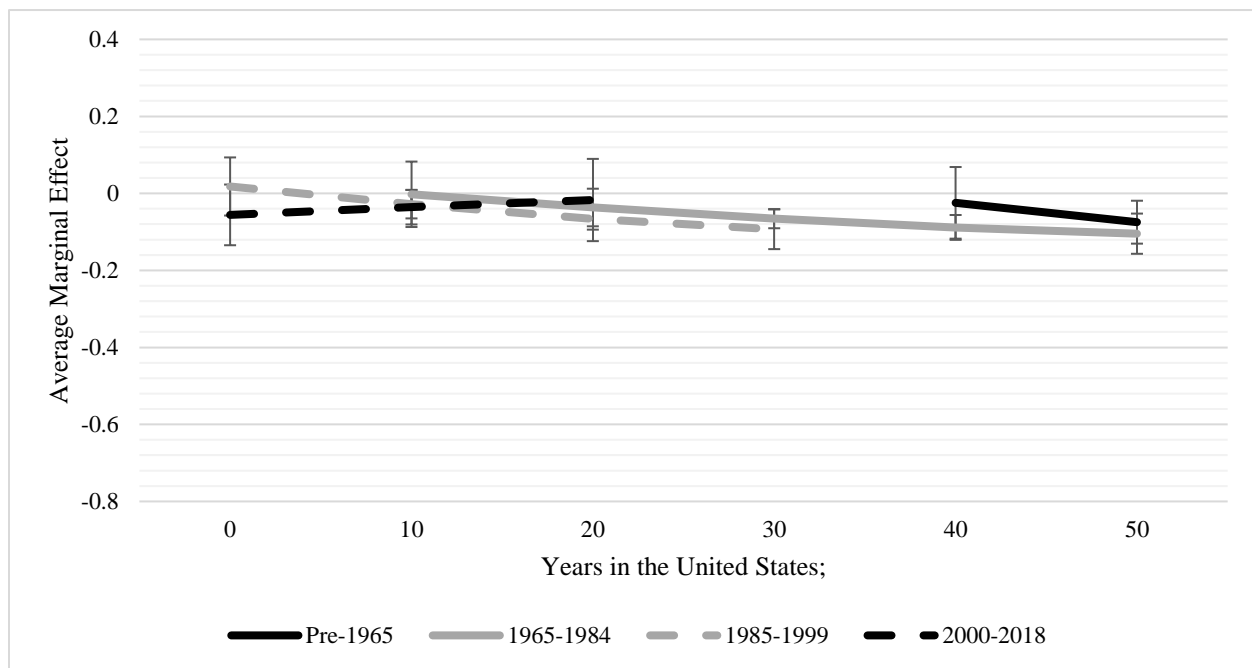
$N = 66,150$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

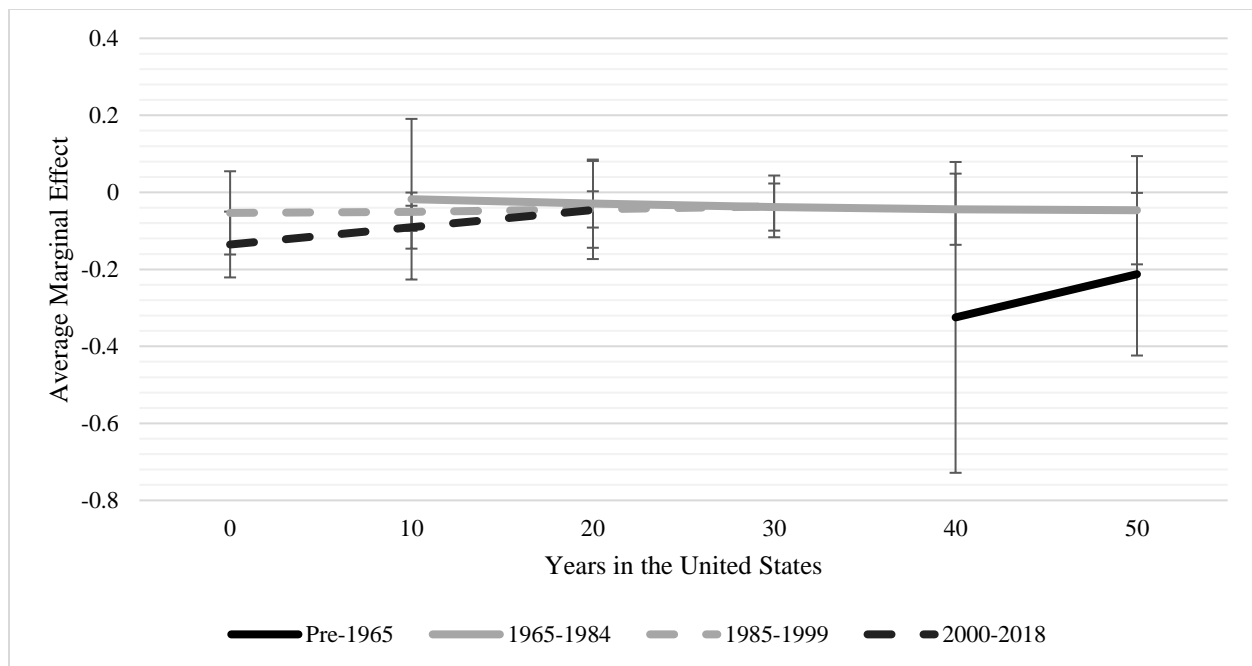
\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Figure 5.9** Average Marginal Effects for Reporting Having a BMI in the Overweight or Obese Range for Caribbean (Panel A) and Sub-Saharan African (Panel B) Immigrants by Arrival Cohort, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Caribbean Immigrants**



**Panel B. Sub-Saharan African Immigrants**

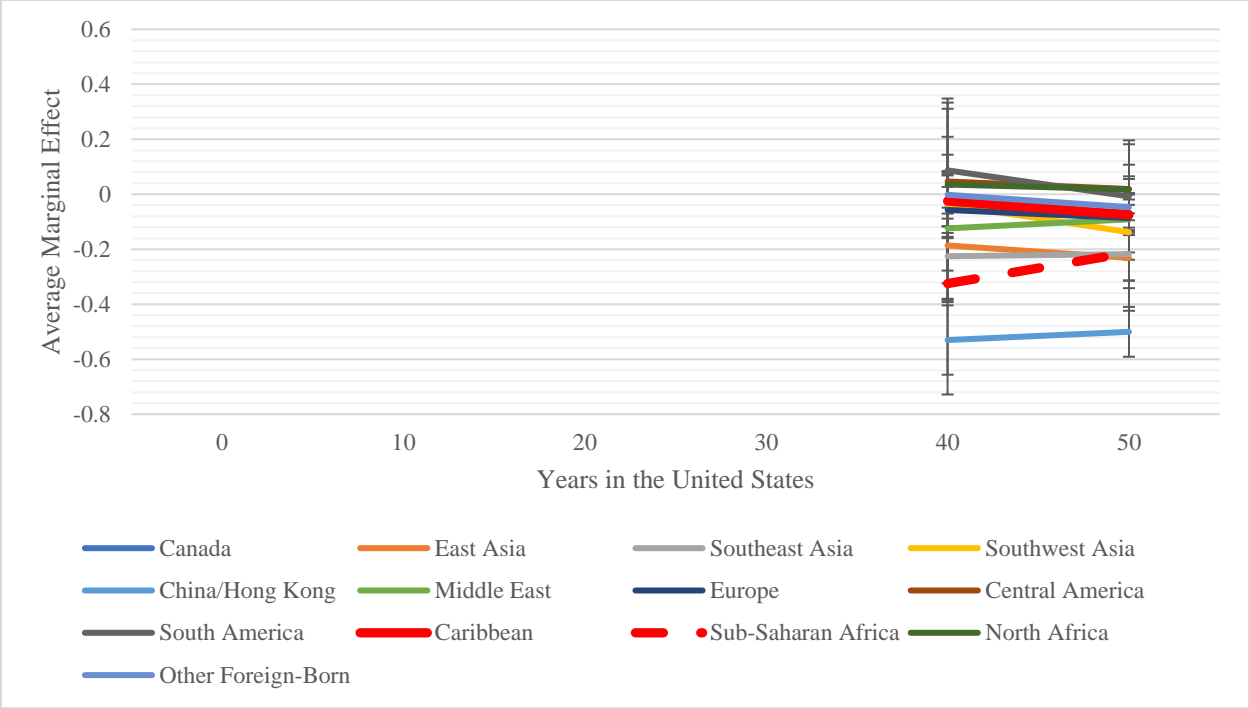


### Comparing Caribbeans and Sub-Saharan Africans to Other Immigrant Groups

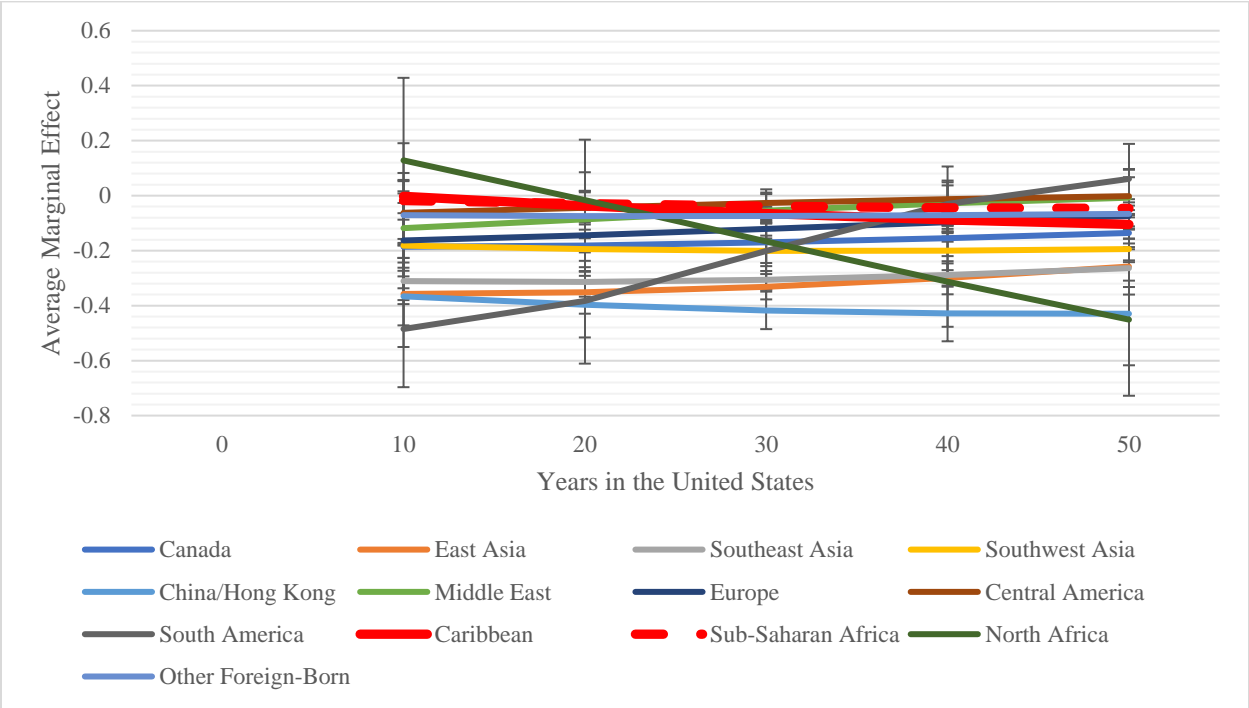
In the pre-1965 cohort, Sub-Saharan African immigrants show signs of convergence with the pack and with the Mexican immigrant referent. At the 40-year duration marker, their predicted probability is nonsignificant but lower than that of the reference. At the 50-year marker, it remains lower and is statistically significant. Caribbean immigrants fall well within the pack. Across the remaining three cohorts, these trends continue. Caribbean and Sub-Saharan African immigrants fall within the larger pack and do not show noteworthy signs of accelerated declines.

**Figure 5.10** Average Marginal Effects at Means for Reporting Having a BMI in the Overweight or Obese Range by National Origin, Adults Ages 18-65+, National Health Interview Survey 2000-2018

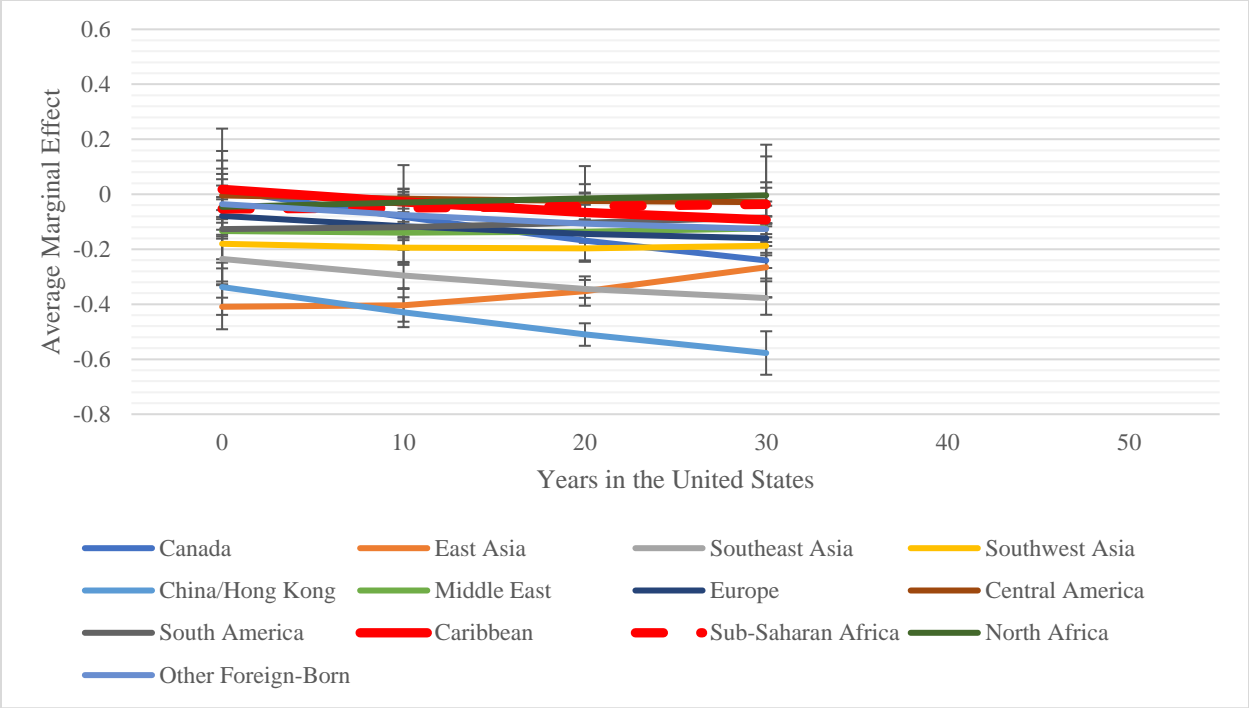
#### Panel A. Pre-1965



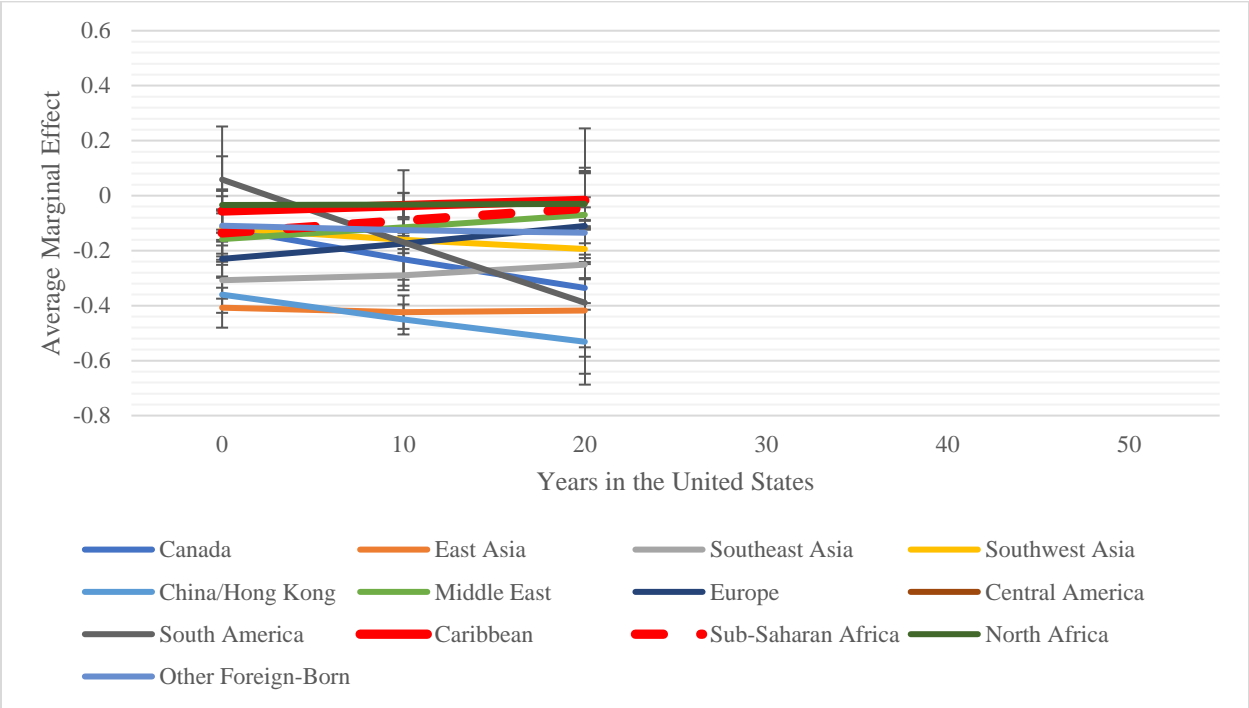
**Panel B. 1965-1984**



**Panel C. 1985-1999**



**Panel D. 2000-2018**



# **Discussion**

In this chapter, I examine the importance of time in understanding the health of Caribbean and Sub-Saharan African immigrants residing in the United States. To do this, I created four synthetic arrival cohorts and conducted stratified binomial logistic regression models to assess the importance of time since arrival for each of these foreign-born groups in each cohort. Prior to my analyses, I set forth two hypotheses. In the first, I posit that time since arrival will impact the health of Caribbean and Sub-Saharan African immigrants differently than their peer migrants from primarily non-Black sending regions. More specifically, I believe that the health of these Black immigrants will deteriorate quickly when compared to these groups. In my second hypothesis, I state that arrival cohort will play a clear role in understanding the duration-health relationship. Namely, those who arrived in the United States most recently will display exacerbated health declines relative to those who arrived in more distant cohort. In what follows, I discuss the results of my analyses as they relate to each of these hypotheses.

*Hypothesis 1: Exacerbated Declines Relative to Largely Non-Black Immigrant Groups*

Largely in contrast to my first hypothesis, I find consistent evidence of exacerbated health declines for Caribbean or Sub-Saharan African immigrants when compared to their immigrant peers. Indeed, the predicted probabilities for reporting any of the three health conditions for Caribbean immigrants fall quite close to “0” for all arrival cohorts. Further, the predicted probabilities also fall well within the general “pack” of foreign-born respondents. While there may be some instances of statistically significant differences, the substantive outcome remains consistent. Caribbean immigrants lie comfortably in line with nearly every other foreign-born group and show no clear sign of divergence.

Sub-Saharan Africans display a similar trend. Across all three health outcomes, Sub-Saharan Africans fall within or quite close to the larger pack of foreign-born respondents. There are some exceptions to this. One such exception is in the results of poor/fair self-rated health for the 1965-1984 arrival cohort (Panel B of Figure 5.4). Here, Sub-Saharan Africans are largely in line with the predicted probabilities for the other foreign-born groups. The main differences are at the 40-year and 50-year duration markers, where Sub-Saharan Africans rest significantly higher than nearly every other group. Based on these two values, one can reasonably assume that this cohort of Sub-Saharan African immigrants will display worsening health with increasing duration in the United States and, if the degree of change remains the same, this group may diverge from the pack. This would reflect the exacerbated health declines hypothesized. I observe a similar trend for this same cohort in my results for hypertension. These migrants maintain significantly higher predicted probabilities for reporting hypertension than their Mexican-origin and many of their other-origin peers. While these predicted probabilities do not show clear signs of diverging, the consistently higher probabilities do imply worsened health outcomes.

These findings have implications for immigrant health research. Before discussing these in detail, it is important to discuss a key factor in their interpretation. Recall that all results are in reference to the Mexican-origin sample. Like each of these groups, the health of Mexican immigrants changes with increasing duration, often deteriorating and converging with that of the U.S.-born population. If a group maintains predicted probabilities at “0”, then that group is experiencing the same change over duration that Mexican immigrants are. A value above 0 means that the group is deteriorating faster, while a negative value means slower declines or perhaps unchanging probabilities. In most instances, Caribbean and Sub-Saharan African

immigrants experience similar, if not statistically indistinguishable, predicted probabilities for each health outcome. This means that these groups are experiences similar or identical changes as the Mexican sample in their probabilities for each health outcome. This trend is also evident for many other groups, including Canadians, East Asians, and Europeans.

Taken together, these findings suggest that many immigrant groups experience the same or similar changes in their health as their time in the United States increases. This has important implications for our understanding of immigrant health in the United States. First, these findings continue to provide support for components of the immigrant health advantage perspective. Specifically, that the health of immigrants changes with increasing duration in the United States and that, in most cases, the change is worsening health outcomes. Second, it may be the case that there is a largely shared immigrant experience with regards to health in the United States. Returning to Figure 5.4, 5.7, and 5.10, one can clearly see that these foreign-born groups cluster quite tightly around the 0 point, particularly for self-rated health and hypertension. This finding is also particularly strong in the most recent two arrival cohorts (1985-1999 and 2000-2018). These two points provide some evidence of this shared experience, despite each group having their own distinct national, cultural, and racial/ethnic identities and practices. What's more, these findings suggest that these Black immigrant groups do not necessarily have a distinct experience when compared to non-Black immigrants, contradicting the postulation of Elo et al. (2008) but echoing recent research on this question (Palarino, 2021). Third, my findings for overweight or obese BMIs maintain the highest degree of variation. I still observe clustering around the 0 point for most groups; however, there are clear outliers. Migrants hailing from China or Hong Kong, Southeast Asia, and, to a lesser extent, East Asia all maintain lower, sometimes significantly so,



predicted probabilities for reporting a BMI in this range. This divergence from the pack is quite interesting and may warrant further investigation in future research.

### *Hypothesis 2: Differences Across Arrival Cohorts*

Alluded to in the previous section, I find some support for my second hypothesis. Caribbean immigrants experience quite similar predicted probabilities for poor/fair health, hypertension, and overweight/obese BMIs across duration and arrival cohort. Indeed, the 1985-1999 and 2000-2018 cohorts consistently display similar predicted probabilities and predicted slopes as one another. Further, those in the most tenured arrival cohort show signs of stability around the 0-point. One stand-out is the 1965-1984 arrival cohort. For poor/fair health, this arrival cohort experiences the steepest declines at each duration point. The same steep declines are evident for hypertension. It may be the case that this arrival cohort has a distinct experience that impacts their health in a positive or, at the least, less detrimental way than their peers who arrived in different cohorts.

For overweight and obesity, I do not find the same trends. Rather, the 1965-1984 and 1985-1999 cohorts are similar to one another in their predicted probabilities. Further, the pre-1965, 1965-1984, and 1985-1999 cohorts all show signs of decreasing probabilities with increasing duration. The 2000-2018 cohort is the stand-out case that shows signs of increasing probabilities for reporting an overweight or obese BMI. At the surface, these findings may seem a bit contradictory given extant research. The predicted probabilities for an overweight or obese BMI are decreasing with greater tenure in the United States for most arrival cohorts. This may be the case but may also reflect Mexican immigrants' changing probabilities for the outcome. Said differently, both Caribbean and Mexican immigrants are experiencing increasing probabilities

for an overweight or obese BMI. Mexican immigrants are simply increasing more quickly than their Caribbean peers, save the 2000-2018 cohort. In either case, these findings echo earlier evidence of little exacerbated health declines for this sample of Black immigrants.

Results for the Sub-Saharan African sample are far more consistent. The pre-1965 arrival cohort shows the lowest predicted probabilities for reporting hypertension and an overweight or obese BMI. This cohort does report slightly higher predicted probabilities for reporting poor/fair health, but these differences are not statistically significant compared to their peers in different cohorts. The remaining three cohorts are consistently clustered together and display similar predicted slopes. For this sample, I find some support for my second hypothesis but only for the most tenured arrival cohort. It may be the case that these better cardiovascular and metabolic outcomes reflect changes in the obesogenic environment in the United States. These migrants arrived before the United States experienced the wide-sweeping shift towards higher BMIs and worse cardiovascular health as a result of worsening diets and the growing prevalence of a sedentary lifestyle. Regardless of the explanation, both Caribbean and Sub-Saharan African immigrants maintain similar experiences across most arrival cohorts, particularly the most recent.

## **Conclusion**

In this chapter, I investigate the importance of arrival cohort and time in the United States on the health of Caribbean and Sub-Saharan African immigrants. Results show little support for my first hypothesis, placing the health of these two Black immigrant samples well within the general pack of other immigrant groups. I find limited support for my second hypothesis and report little differences between arrival cohorts for these two groups. These findings suggest that there may

be a shared “immigrant” experience, potentially regardless of origin nation or region. This is not at all to say that each of these groups have the same experiences, cultures, or behaviors. Rather, it is to say many of these immigrant groups appear to have similar health trajectories and outcomes when one considers arrival cohort and duration in the United States. True differences may be more clearly observed in subsequent generations of immigrants and their children. Based on the results presented in this chapter, time is a key consideration in our collective understanding of immigrant health. These measures of time may not be limited to time in the United States or age but should include arrival cohort or a similar measure, when possible. The findings presented in this chapter contribute to the growing body of literature on Black immigrant health in several ways.

First, I provide a detailed investigation of time as it relates to the health of Black immigrants from the Caribbean and Sub-Saharan Africa. I extend the conversation from mostly duration-based investigations to consider the importance of age, arrival cohort, and duration together. This allows for greater precision in our collective understanding of how time impacts the health of immigrants, especially those from the Caribbean and Sub-Saharan Africa. It also emphasizes that, while duration is an important consideration in our investigation of immigrant health, arrival cohort is also a key factor in the relationship. Second, my findings engage with the larger immigrant health advantage literature. Here, I opt to focus entirely on the notion of health deterioration with advancing tenure and the potential for race playing a modifying role in the relationship. My findings contribute to the extant conversations by highlighting differences between these Black immigrant groups and other largely non-Black immigrant groups. They also emphasize that there are differences between Caribbean and Sub-Saharan African immigrants. Third, I engage indirectly with conversations surrounding cumulative disadvantage theory. The

seemingly shared trends in health for Caribbean immigrants and their peer immigrants from very different national, cultural, and social backgrounds may reflect a shared immigrant experience. Each group likely experiences their own, unique challenges throughout the immigration and incorporation process; however, it appears that there is a general, shared health experience for these first-generation migrants.

These findings build on the existing knowledge of Black migrant health and my findings from Chapter 4. With this gained information on the role of time in the United States, one can begin to see a more comprehensive portrait of Afro-Caribbean and African-origin immigrant health, so to speak. To continue, I examine the moderating effect of sex in the next set of analyses in Chapter 6.

## **Chapter 6**

### **Sex Differences in the Health of Black Immigrants in the United States**

Sex and gender are significant predictors of health and illness in the United States (Erving, 2011; Gorman & Read, 2006; Hummer & Hamilton, 2019; Read & Gorman, 2010; Rogers et al., 2019). Indeed, women in the United States experience lower mortality rates than men and can expect to live an additional 5.4 years, on average (Arias et al., 2021). In 2008, Crimmins and colleagues found that women are significantly less likely to have heart attacks than men (Crimmins et al., 2008). These examples represent a fraction of research on the relationship between sex/gender and health in the United States.

Throughout the 2000s and early 2010s, scholars studying the health of immigrants began to call for greater attention to studies of both gender and national origin differences in immigrant health (Antecol and Bedard 2006; Curran et al. 2006; Lopez-Gonzalez, Aravena, and Hummer 2005; Read & Reynolds, 2012; Read & Smith, 2017). The basis of these calls to action rests in the rapid growth of migrants from diverse regions of the world and the variation in men's and women's experiences regarding migration, reception, and settlement (Read & Smith, 2017). For example, Read and Reynolds (2012) emphasize that immigrant men appear more selected on health than their female counterparts (Read & Reynolds, 2012). While there have certainly been answers to this call, much of the extant research on the topic of sex, migration, and health focuses on Hispanic (Antecol & Bedard, 2006; Read & Reynolds, 2012), Chinese (Miltiades & Wu, 2008; Read & Smith, 2017), or Middle Eastern populations (Amin, 2014; Read & Reynolds, 2012). As such, there is little discussion regarding sex-based differences in various health outcomes among Black immigrants in the United States, let alone discussions based on regional or national origin. In this chapter, I address this gap in the literature by explicitly examining sex-

based differences in the health outcomes of male and female Afro-Caribbean and Sub-Saharan African immigrants. I do this by examining health within national-origin groups and when compared to U.S.-born non-Hispanic Black Americans.

### **Sex Differences in Immigrant Health**

As with any population, there exists important variation in health and mortality outcomes between men and women within the immigrant population (Bingham, 2016; Corra & Kimuna, 2009; Erving, 2011; Hammond et al., 2011; Read & Reynolds, 2012). Existing research suggests that these differences arise from disparate experiences and exposures both in their respective country of origin as well as in the United States.

In 2012, Read and Reynolds published a study examining gender differences in the health of Mexican and Middle Eastern immigrants (Read & Reynolds, 2012). While the authors do maintain interest in health outcome variation between immigrant men and women, their focus is more explicitly turned toward the application of immigrant health theories to both immigrant men and women. Throughout their discussion of gender variation in health, they emphasize that earlier research on the topic suggests that notions of immigrant selection and cultural buffering may be more useful in understanding the health and health trajectories of immigrant men than women (Read & Reynolds, 2012). Additionally, they suggest that immigrant women, regardless of health advantages upon arrival, experience faster health deterioration than do immigrant men (Antecol & Bedard, 2006; Curran et al., 2006; Lopez-Gonzalez, Aravena, & Hummer, 2005; Read & Reynolds, 2012). They find that immigrants, regardless of gender, are healthier than U.S.-born White Americans but that this trend is largely driven by the health of immigrant men (Read & Reynolds, 2012). Indeed, Mexican and Middle Eastern immigrant women reported better

health than U.S.-born White women but significantly worse health than their male immigrant counterparts. What is more interesting is that this gender gap is greater among immigrants than what is observed for U.S.-born groups (Read & Reynolds, 2012). Their investigation of theoretical applications to both men and women are intriguing. They find that there is a male immigrant health advantage for both hypertension and self-rated health for both Mexican and Middle Eastern immigrants. After introducing controls of health care utilization, a process more frequently undertaken by women, the gender gap closes notably. The authors suggest that this reduction of the male advantage is strongly tied to differential access, utilization, and interaction with the health care system (Read & Reynolds, 2012).

In a subsequent study of Middle Eastern immigrants, Amin (2014) finds that recently arrived Middle Eastern men report significantly better self-reported health than U.S.-born White counterparts (Amin, 2014). Middle Eastern women, however, maintain similar odds of reporting poor self-rated health relative to U.S.-born White counterparts (Amin, 2014). In more objective measures of health, Amin finds noteworthy differences between Middle Eastern men and women. Middle Eastern men are significantly less likely to report any chronic health condition when compared to Middle Eastern women. This remains true regardless of duration in the United States.

In 2017, Read and Smith conducted an analysis of gender and national origin. In this study, they examine variation in health care utilization among Mexican, Chinese, and Indian immigrants living in the United States (Read & Smith, 2017). They argue that nativity influences health care utilization in the form of unique challenges obtaining health insurance, maintaining stable sources of income, and English proficiency and that these barriers are further complicated by gender. For instance, immigrant women are more likely to arrive on family reunification

visas, less likely to be gainfully employed, and are more welcome to the notion of visiting a doctor due to cultural norms and gender roles regarding health-seeking behaviors (Read & Smith, 2017). Their findings show that Chinese immigrants are significantly less likely to seek care relative to Mexican and Indian immigrants (Read & Smith, 2017). Turning to gender, they find that female immigrants are significantly more likely to have seen a doctor in the last year relative to men (Read & Smith, 2017). That said, the authors acknowledge that these differences are largely driven by Mexican immigrants. There is less evidence of gendered differences when looking within the Chinese and Indian immigrant sample. These findings provide important insight into this question as they highlight differences both within and between immigrant groups regarding gender.

Two studies published in 2019 and 2020 examine gender variation in disability and mortality among older adult Mexican immigrants in the United States, respectively (Garcia, Reyes, & Rote, 2019; Reyes & Garcia, 2020). The findings of the 2019 study suggest that the timing of migration (i.e., period and age) is a significant predictor of disability in older adulthood among Mexican-born immigrant men and women. Interestingly, they find that Mexican-born women do not enjoy the immigrant health advantage regarding disability. Specifically, they find that Mexican-born women experience an instrumental activity of daily living (IADL) (e.g., using a telephone, preparing food) disadvantage (Garcia et al., 2019). In the 2020 examination of mortality, the authors find evidence of differential mortality advantages between Mexican immigrant men and women. In mid-life, Mexican-born men enjoy a mortality advantage when compared to U.S.-born co-ethnics, but this is not observed for women. The authors suggest that this might reflect differential patterns of migrant selection for men and women (Reyes & Garcia, 2020). In late life, the story flips. Mexican-born women experience significantly lower mortality



risk when compared to U.S.-born peers; this advantage does not extend to men (Reyes & Garcia, 2020).

### **The Relationship Between Sex and Health for Black Immigrants in the United States**

Relative to American-born women, Afro-Caribbean women tend to experience less access to socioeconomic resources, less autonomy over their own reproductive rights, and higher rates of gender-based violence (Erving, 2011). Further, Afro-Caribbean women encounter heightened expectations for their participation in unpaid labor in the form of domestic roles (e.g., childrearing) (Erving, 2011). Without question, many of these experiences are common to the lives of American-born women; however, these components of gender-based inequity and gender roles are more heavily entrenched in many Caribbean cultures. In their analysis of Caribbean-born women, Erving finds that Caribbean-born women have significantly higher likelihoods of reporting poor self-rated health relative to Caribbean-born men (Erving, 2011). Alongside this investigation of self-rated health, Erving examines gendered differences in the rate of chronic illness and functional limitation. In this analysis, they find no clear differences between Caribbean-born women and men.

Corra and Kimuna's 2009 article bridges the gap between Caribbean and African Black immigrants in the United States (Corra & Kimuna, 2009). Here, they find that African and English-speaking Caribbean women tend to earn significantly more money, on average, than American-born Black women (Corra & Kimuna, 2009). While not explicitly focused on the health of these two groups, Corra and Kimuna's findings provide important context to the current conversation. In the United States, socioeconomic status is tightly associated to health. Specifically, there is a strong positive correlation between the two variables. Knowing that

African and Caribbean-born women tend to earn more than American-born Black women may mean that these two immigrant groups are more likely to report better health and display better health outcomes than their American-born counterparts. An earlier article by Hammond and colleagues may provide support for such a claim. In their 2011 study, they find that Caribbean-born men are healthier, in general, than American-born Black men (Hammond et al., 2011). This exists despite the trend that Caribbean men are significantly less likely to attend regular preventive medical visits (Hammond et al., 2011).

In a recent study on biological variation between African-born Black men and women, Bingham and colleagues seek to understand allostatic load scores, a physiological measure of stress (Bingham et al., 2016). They find no significant differences in these allostatic load scores between the two gender groups. Taken together, this small body of research suggests that sex is an important, albeit understudied, characteristic in understanding the mosaic that is Black immigrant health. Now, it is key to better understand the moderating relationship of sex in the relationship between Black immigrants and health outcomes.

### **Research Question and Hypotheses**

Existing research provides clear, consistent evidence that sex and gender play an essential role in our understanding of immigrant health in the United States. Despite this, there are very few studies examining this variation among Afro-Caribbean or Sub-Saharan African immigrants in the United States. To address this gap in the literature, I pose the following question.

*Does sex moderate the immigrant health advantage evident among Afro-Caribbean and Black Sub-Saharan African immigrants living in the United States?*

I offer the following hypotheses.

*Hypothesis 1: When compared to same-sex U.S.-born non-Hispanic Black Americans, Afro-Caribbean and Sub-Saharan African immigrant men and women will display significantly better self-reported health and chronic health outcomes.*

*Hypothesis 2: When compared to like-origin immigrant men, immigrant women will display significantly higher odds of reporting worse self-reported health and chronic health conditions. Further, immigrant women will display significantly faster health deterioration than immigrant men of the same national origin.*

## **Methods and Sample**

### *Dependent Variables*

To investigate sex-based differences in the health of Afro-Caribbean and African-origin immigrants, I use the following dependent variables: self-rated health, hypertension, diabetes status, lifetime history of asthma, body mass index, and depressive symptoms.

### *Independent Variable*

The independent variable in this set of analyses is race/ethnicity combined with nativity. This categorical variable contains 5 U.S.-born groups and 8 foreign-born groups. Among the U.S.-born respondents, I identify non-Hispanic Black (referent), non-Hispanic White, non-Hispanic Other, and Puerto Rican. Among foreign-born respondents, I identify those who report a national and/or regional origin of Haiti, Jamaica, Trinidad & Tobago, Guyana, Central/South Sub-

Saharan Africa<sup>15</sup>, East Sub-Saharan Africa<sup>16</sup>, West Sub-Saharan Africa<sup>17</sup>, and those who are foreign-born but do not report a national origin in any of the specified nations or regions. All 13 groups are mutually exclusive.

In addition to this measure of racial/ethnic identity combined by nativity, I am explicitly interested in investigating the moderating effect of sex in the relationship between race/ethnicity, nativity, and health. As such, sex is an additional independent measure in my analyses. This variable is measured dichotomously as male (0) or female (1). In my analyses, I opt to use “men” and “women” in lieu of “male” and “female.” Table 6.1 provides a description of this sample by national/regional origin separated out for men and women. Save West Sub-Saharan African respondents, there are consistently more women than men for every racial/ethnic and national/regional origin group. In most cases, the difference in sample is relatively small and does not impact the distribution of the sample of men and women.

**Table 6.1** Sample Distribution by National/Regional Origin for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Men		Women	
	Total Sample		Total Sample	
	N	%	N	%
<b>U.S.-born Sample</b>				
Non-Hispanic Black	97,707	10.40	118,679	11.57
Non-Hispanic White	461,773	62.51	483,787	62.27
Non-Hispanic Other	36,571	3.87	36,804	3.75

<sup>15</sup> Central and South African nations include Angola, Cameroon, Central African Republic, Chad, Democratic Republic of the Congo, Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe, Botswana, Eswatini (Swaziland), Lesotho, Namibia, and South Africa.

<sup>16</sup> East Africa consists of Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Uganda, United Republic of Tanzania, Zambia, and Zimbabwe.

<sup>17</sup> West African nations include Benin, Burkina Faso, Cape Verde (Cabo Verde), Côte d'Ivoire (Ivory Coast), Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, and Togo.

Hispanic	111,192	9.29	114,075	8.79
Puerto Rican	4,877	0.48	6,285	0.54
<b>Foreign-born Sample</b>				
Haitian Black	1,641	0.18	2,024	0.18
Jamaican Black	1,746	0.20	2,388	0.23
Trinidadian & Tobagoan Black	433	0.05	582	0.06
Guyanese Black	417	0.05	536	0.05
Central/South African Black	237	0.03	255	0.03
East African Black	1,146	0.13	1,204	0.13
West African Black	1,970	0.23	1,824	0.18
Other	132,839	12.58	141,667	12.21

Source: National Health Interview Survey, 2000-2018

## Analytic Approach

In line with my analyses in Chapter 4, I employ sample-weighted binomial and multinomial logistic regression models to investigate my research question and evaluate my associated hypotheses. In this set of analyses, I am explicitly interested in understanding the moderating role of sex in the relationship between national origin and health. To do this, I use sex-stratified binomial and multinomial logistic regression models.

In addition to these stratified models, I will conduct all of my models using multiple imputations for educational attainment, INR, smoking status, and alcohol use. These imputations will be conducted using the “mi” function in Stata. The variables used to impute these missing values will be calendar year of interview, sex, age, racial/ethnic identity, and each respective outcome using 15 imputed datasets. Note that I will not conduct any imputations on my outcome measures. As with previous analyses, I will continue to employ a nested modeling approach. Model 2 contains the dependent variable, race/ethnicity and nativity with duration, calendar year of interview, the language of the interview, and socioeconomic measures. Model 2 introduces health behavior controls. Note that Model 1 contains only sociodemographic and socioeconomic

measures while Model 2 contains only health behaviors. In Model 3, the unrestricted model, I maintain all model covariates.

## **Descriptive Findings**

Table 6.2 provides sample-weighted descriptive statistics for adults aged 18 to 65 years or older from the National Health Interview Survey by national origin separated by sex. In what follows, I discuss differences between men and women. Among foreign-born respondents, men and women maintain nearly identical averages ages at interview. The sole exception is for West African women who are significantly younger than West African men.

There are few differences in educational attainment between men and women hailing from regions of the Caribbean. The sole stand-out is Jamaican migrants. In this instance, a higher percentage of women maintain a college education or greater relative to Jamaican men. The trend among African immigrants is far more consistent. In all instances, a greater proportion of Central/South (51.9%), East (35%), and West (50.9%) African men have a college degree or greater relative to African women (30.3%, 17.2%, and 30.1%, respectively). A higher percentage of women, regardless of regional or national origin, live below the federal poverty line relative to like-origin men. These differences are statistically significant when comparing Jamaican, Central/South African, and West African men and women. There are no noteworthy differences in measures of nativity when comparing like-origin men and women.

**Table 6.2** Sample-Weighted Bivariate Descriptive Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018

	USB NH Black	USB NH White	USB NH Other	USB Hispanic	Puerto Rican	Haitian Black	Jamaican Black	Trinidadian & Tobogian Black	Guyanese Black	Central/South African Black	East African Black	West African Black	FB Other
<b>Panel A. Men</b>													
Sample Size	97,707	461,773	36,371	111,192	4,877	1,641	1,746	433	417	237	1,146	1,970	132,839
Sample Weighted Percent of Total Sample	10.40	62.51	3.87	9.29	0.48	0.18	0.20	0.05	0.05	0.03	0.13	0.23	12.58
Sample Weighted Percent of Sample Adult	9.29	64.99	2.72	5.77	0.59	0.22	0.24	0.07	0.07	0.04	0.16	0.29	15.56
<b>Demographics</b>													
Average Age at Interview	31.46	38.62	25.00	21.11	45.85	40.94	43.87	45.92	43.74	33.73	33.08	38.40	40.61
	0.157	0.083	0.248	0.157	0.580	1.050	0.764	1.620	1.452	1.318	0.847	0.600	0.132
<b>Socioeconomic Status</b>													
College Degree or Greater (Less than College) (%)	11.58	25.79	16.28	8.20	14.76	19.56	17.55	22.71	21.03	51.89	34.97	50.89	27.50
	0.259	0.209	0.533	0.243	1.333	2.106	1.852	4.221	3.365	5.774	2.709	2.888	0.401
<b>Family Income-to-Needs Ratio (%)</b>													
<1.00	23.69	8.02	16.04	22.80	22.48	25.40	11.22	8.23	8.24	16.96	21.38	15.27	17.93
	0.384	0.141	0.586	0.354	1.261	3.990	1.324	2.587	2.473	4.239	2.607	1.792	0.307
1.00 - 1.99	23.37	14.01	19.85	27.36	25.28	21.99	19.87	14.71	22.54	20.22	22.97	21.33	25.62
	0.327	0.142	0.531	0.343	1.540	2.583	2.038	3.277	4.915	5.268	2.810	2.020	0.306
2.00≤	52.95	77.96	64.11	49.84	52.23	52.62	68.91	77.06	69.22	62.82	55.65	63.40	56.45
	0.468	0.220	0.763	0.479	1.686	3.683	2.110	3.937	4.967	5.887	3.387	2.419	0.440
<b>Nativity</b>													
English Interview (Non-English Interview) (%)	99.35	99.41	97.72	75.64	70.07	94.00	99.29	99.08	100.00	95.61	96.60	99.48	65.46
	0.044	0.021	0.217	0.410	1.602	1.181	0.418	0.662	0.000	2.826	1.089	0.197	0.470
<b>Panel B. Women</b>													
Sample Size	118,679	483,787	36,804	114,075	6,285	2,024	2,388	582	536	255	1,204	1,824	141,667
Sample Weighted Percent of Total Sample	11.57	62.27	3.75	8.79	0.54	0.18	0.23	0.06	0.05	0.03	0.13	0.18	12.21
Sample Weighted Percent of Sample Adult	10.90	64.53	2.70	5.50	0.65	0.22	0.29	0.08	0.06	0.03	0.15	0.21	14.70
<b>Demographics</b>													
Average Age at Interview	34.414	40.565	26.466	22.200	47.147	42.565	44.825	45.266	45.121	31.692	32.856	36.213	42.522
	0.159	0.093	0.280	0.165	0.558	0.790	0.658	1.247	1.400	2.287	0.877	0.728	0.134
<b>Socioeconomic Status</b>													
College Degree or Greater (Less than College) (%)	14.12	25.02	18.31	9.06	14.17	15.55	23.33	23.05	21.87	30.28	17.20	30.08	26.43
	0.272	0.192	0.522	0.240	0.986	1.793	1.861	3.711	2.680	6.355	2.205	2.478	0.365
<b>Family Income-to-Needs Ratio (%)</b>													
<1.00	29.74	9.46	17.48	25.37	32.56	26.53	16.82	14.82	10.86	38.77	26.65	20.90	20.72
	0.434	0.146	0.597	0.378	1.443	2.324	1.706	2.820	2.548	7.382	2.791	2.099	0.322
1.00 - 1.99	24.85	16.11	19.98	28.38	27.47	26.40	22.29	21.40	21.31	18.36	28.10	23.27	24.65
	0.296	0.148	0.499	0.338	1.238	2.214	1.709	5.545	3.507	5.263	3.065	2.448	0.313
2.00≤	45.41	74.43	62.54	46.25	39.98	47.07	60.88	63.78	67.83	42.87	45.25	55.83	54.63
	0.488	0.227	0.796	0.458	1.512	2.935	2.210	4.868	4.128	7.460	3.463	2.782	0.455
<b>Nativity</b>													
Citizen (Non-Citizen) (%)	100.00	100.00	100.00	100.00	100.00	57.03	65.57	61.49	72.16	38.92	48.29	47.95	49.92
	-	-	-	-	-	2.832	1.828	4.371	3.654	7.370	3.232	2.621	0.372
Average Year of Arrival in the United States	-	-	-	-	1981	1991	1988	1987	1989	2004	2002	1999	1989
	-	-	-	-	0.606	0.576	0.550	1.176	1.022	1.249	0.576	0.520	0.119
Average Age at Arrival in the United States	-	-	-	-	28.85	18.72	21.07	22.11	20.69	8.07	9.91	11.99	20.53
	-	-	-	-	0.563	0.656	0.565	1.233	1.005	0.928	0.473	0.535	0.112
English Interview (Non-English Interview) (%)	99.45	99.49	97.80	76.05	69.23	89.64	99.64	99.66	99.34	93.35	94.64	98.14	66.37
	0.035	0.018	0.147	0.425	1.244	1.501	0.238	0.336	0.382	4.371	1.251	0.670	0.459

Source: National Health Interview Survey, 2000-2018  
Note: Robust standard errors presented in italics

Table 6.3 presents descriptive statistics for access to health care and health behavior variable for men and women. There are no significant differences in health insurance status between foreign-born men and women. A higher percentage of women have had a health care visit within the last calendar year relative to men, regardless of race/ethnicity and national/regional origin. There are two instances that display this trend but do not maintain statistical significance: Guyanese and Central/South Africans. Taken together, foreign-born women are more likely to utilize healthcare despite no clear differences in health insurance, a major predictive factor in healthcare utilization.

Foreign-born women maintain significantly lower percentages of respondents who are current cigarette smokers and alcohol users. Inversely, significantly fewer women participate in vigorous activity at the 75 minutes or more per week level relative to men. These findings contribute to a larger depiction of immigrant women participating in fewer health-threatening behaviors. Indeed, women utilize healthcare, abstain from smoking, and abstain from alcohol consumption at higher levels than like-origin and like-ethnic men.

**Table 6.3** Sample-Weighted Bivariate Access to Care and Health Behavior Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018

**Panel A. Men**



Panel A. Men													
Access to Care													
Health Insurance Status	USB NH	USB NH	USB NH	USB	Puerto Rican	Haitian Black	Jamaican	Trinidadian &	Guyanese	Central/South	East African	West African	FB Other
	Black	White	Other	Hispanic			Black	Tobogian	Black	African Black	Black	Black	
Insured	84.82	90.39	90.33	84.48	84.17	67.23	82.36	78.88	81.37	82.15	73.88	76.85	67.77
	0.25	0.11	0.32	0.27	1.21	3.55	2.03	4.08	4.22	4.07	2.73	1.96	0.41
Last Health Care Visit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 1 Year	81.50	83.09	82.86	79.95	78.88	74.33	78.94	74.87	81.70	72.58	67.35	72.99	65.02
	0.27	0.12	0.43	0.27	1.22	2.82	1.84	4.85	3.94	5.26	3.15	2.18	0.36
1 or More Years	18.50	16.91	17.14	20.05	21.12	25.67	21.06	25.13	18.30	27.42	32.65	27.01	34.98
	0.27	0.12	0.43	0.27	1.22	2.82	1.84	4.85	3.94	5.26	3.15	2.18	0.36
Health Behaviors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cigarette Smoking Status	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abstainer	57.29	49.34	54.39	62.10	53.08	84.77	74.12	60.22	73.51	76.80	72.39	80.28	62.38
	0.42	0.20	0.78	0.54	1.68	1.81	1.94	4.77	4.91	5.44	2.89	2.05	0.33
Former Smoker	17.35	28.53	21.51	18.04	25.65	8.35	14.07	18.10	11.72	14.54	17.94	10.63	21.21
	0.28	0.16	0.60	0.39	1.35	1.43	1.43	3.63	3.08	4.41	2.49	1.38	0.27
Current Smoker	25.36	22.13	24.09	19.86	21.27	6.88	11.81	21.68	14.78	8.66	9.67	9.09	16.41
	0.38	0.18	0.69	0.43	1.20	1.17	1.62	4.27	3.98	3.94	1.61	1.32	0.24
Alcohol Use	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abstainer	22.42	11.96	17.61	17.92	21.35	47.74	21.51	20.82	26.03	29.13	46.56	40.17	23.08
	0.36	0.17	0.66	0.47	1.37	3.53	1.96	4.22	4.57	5.79	3.42	2.19	0.29
Former Alcohol User	15.24	11.55	13.31	10.00	18.07	15.35	15.25	11.14	12.53	7.98	9.42	11.88	11.37
	0.28	0.12	0.53	0.31	1.32	2.52	1.78	2.39	5.21	3.78	1.90	1.58	0.21
Current Alcohol User	62.34	76.49	69.08	72.08	60.59	36.91	63.24	68.03	61.44	62.89	44.02	47.95	65.54
	0.42	0.20	0.75	0.50	1.75	3.02	2.78	4.58	5.43	6.32	3.31	2.36	0.33
Vigorous Exercise Participation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Vigorous Exercise Reported	55.25	51.51	46.02	48.90	68.38	55.03	60.57	52.56	55.39	44.85	42.80	44.34	59.47
	0.51	0.26	0.89	0.58	1.56	3.43	2.60	5.32	6.18	6.48	3.36	2.51	0.35
< 75 Minutes/Week	8.74	10.84	10.67	9.35	5.99	6.14	7.98	8.57	12.54	10.86	14.97	17.06	9.91
	0.25	0.11	0.51	0.33	0.77	1.29	1.10	2.85	3.89	4.12	2.11	2.46	0.22
75+ Minutes/Week	36.00	37.64	43.32	41.75	25.63	38.83	31.45	38.87	32.07	44.29	42.23	38.60	30.61

Source: National Health Interview Survey, 2000-2018

Note: Robust standard errors presented in italics

## Panel B. Women

	US& NH Black	US& NH White	US& NH Other	US& NH Hispanic	Puerto Rican	Haitian Black	Jamaican Black	Trinidadian & Tobogian Black	Guyanese Black	Central South African Black	East African Black	West African Black	FB Other
<b>Panel B. Women</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Access to Care</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Health Insurance Status</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Insured	87.62	92.16	91.91	86.22	89.14	74.66	81.58	83.23	88.59	79.77	76.08	79.30	74.30
Uninsured	0.20	0.10	0.31	0.25	0.71	2.16	1.67	3.04	1.88	5.10	2.51	1.90	0.34
<b>Last Health Care Visit</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
< 1 Year	90.34	91.59	89.31	87.10	89.24	86.57	88.93	90.84	87.89	77.55	82.17	85.94	81.09
1 or More Years	9.66	8.41	10.69	12.90	10.76	13.43	11.07	9.16	12.11	22.45	17.83	14.06	18.91
<b>Health Behaviors</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Cigarette Smoking Status</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abstainer	69.76	58.11	62.82	74.86	72.94	95.99	92.92	90.25	94.14	94.50	97.05	97.16	83.39
Former Smoker	0.30	0.18	0.78	0.39	1.06	0.93	0.85	2.43	1.67	2.90	0.78	0.89	0.22
Current Smoker	12.59	22.64	15.98	12.32	14.10	2.11	4.04	4.52	2.36	4.31	1.34	1.68	10.07
Alcohol Use	0.22	0.14	0.49	0.29	0.79	0.64	0.72	1.17	1.11	2.76	0.50	0.66	0.18
Abstainer	0.27	0.15	0.61	0.29	0.76	0.67	0.51	2.21	1.35	0.88	0.62	0.56	0.14
Former Alcohol User	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Current Alcohol User	35.54	20.08	25.66	29.44	45.26	70.65	44.29	27.03	43.86	60.10	72.04	65.45	48.81
Vigorous Exercise Participation	0.40	0.20	0.81	0.50	1.26	2.37	1.99	3.63	4.37	6.52	3.01	2.44	0.34
No Vigorous Exercise Reported	21.65	18.86	19.09	17.86	20.20	11.17	24.18	24.16	19.63	11.54	10.44	12.86	16.12
< 75 Minutes/Week	0.26	0.14	0.56	0.37	1.03	1.47	1.93	3.51	3.98	4.64	1.97	1.70	0.22
75+ Minutes/Week	42.81	61.07	55.24	52.70	34.54	18.19	31.53	48.81	36.51	28.36	17.52	21.69	35.07
Alcohol Use	0.40	0.23	0.84	0.52	1.19	1.85	1.85	4.68	3.62	6.23	2.33	2.02	0.31
Vigorous Exercise Participation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
No Vigorous Exercise Reported	70.82	60.55	58.57	62.88	79.38	74.94	73.31	66.77	70.98	68.44	61.82	66.55	70.59
< 75 Minutes/Week	0.37	0.22	0.75	0.48	1.04	2.52	2.11	3.73	3.99	7.42	3.40	2.44	0.31
75+ Minutes/Week	8.69	10.21	11.11	8.47	5.68	8.95	7.22	8.24	8.61	8.58	12.45	13.22	7.45
Alcohol Use	0.20	0.11	0.46	0.27	0.58	1.53	1.00	2.32	2.64	3.15	2.61	1.95	0.16
Vigorous Exercise Participation	20.49	29.24	30.32	28.64	14.94	16.11	19.48	24.99	20.41	22.97	25.74	20.23	21.95
No Vigorous Exercise Reported	0.31	0.19	0.73	0.45	0.93	2.21	1.82	3.83	3.74	7.29	2.93	1.94	0.28

Source: National Health Interview Survey, 2000-2018  
Note: Robust standard errors presented in italics

Table 6.4 shows sample-weighted health outcome descriptive statistics for adults aged 18 to 65 years or older from the National Health Interview Survey by national origin stratified by sex. Relative to like-origin men, foreign-born women maintain higher percentages of respondents with poor self-rated health. Similarly, a lesser percentage of women report excellent self-rated health; this difference is statistically significant for Haitian and Trinidadian & Tobagoan respondents.

In most instances, foreign-born women display a higher percentage of respondents who self-report having hypertension. For instance, 33.4% of Jamaican women report having hypertension compared to 27.5% of men. This is the only instance of significant sex-based differences for hypertension. Afro-Caribbean women display a higher percentage of respondents with diabetes relative to like-origin men. These differences are statistically significant for Haitian and Trinidadian & Tobagoan respondents. African women, regardless of region, display lower percentages of respondents with diabetes; however, these differences are non-significant.

Across most groups, women maintain a higher percentage of respondents with clinically relevant depressive symptoms. These differences are statistically significant for Haitian and West African respondents. Women maintain consistently and significantly higher percentages of respondents in the overweight BMI range; the exceptions to this are for Haitian and Guyanese respondents. Haitian, Trinidadian & Tobagoan, Guyanese, East African, and West African women maintain higher percentages of respondents in the obese BMI range relative to like-origin men.

Taken together, these descriptive findings paint a picture of worse health for foreign-born women. Women maintain higher levels of poor self-rated health, respondents who report cardiovascular conditions, respondents who report depressive symptoms, and respondents with a

BMI in the obese range. While some of these differences are non-significant, the trends remain consistent and merit further investigation using multivariate analyses.

**Table 6.4** Sample-Weighted Bivariate Health Outcome Statistics by Racial/Ethnic and Nationality Group for Men (Panel A) and Women (Panel B), Adults Aged 18-65+, National Health Interview Survey 2000-2018

**Panel A. Men**

Panel A. Men													
	USB NH Black	USB NH White	USB NH Other	USB Hispanic	Puerto Rican	Haitian Black	Jamaican Black	Trinidadian & Tobogian Black	Guyanese Black	Central/South African Black	East African Black	West African Black	FB Other
Health Outcomes													
Self-Rated Health	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poor	2.88	2.31	2.03	1.43	5.46	1.90	2.52	0.89	0.97	0.63	0.62	0.77	1.94
Fair	0.10	0.05	0.15	0.08	0.65	0.70	0.70	0.52	0.52	0.60	0.27	0.33	0.08
Good	9.79	6.74	6.17	5.55	15.98	6.73	8.56	7.46	9.23	2.74	2.97	4.44	7.85
Very Good	0.19	0.08	0.30	0.16	1.01	1.10	1.27	1.97	3.36	1.86	0.89	1.51	0.18
Excellent	26.16	21.48	21.84	23.36	26.67	30.12	26.40	21.84	28.51	19.35	13.13	19.83	26.52
Hypertension (No Hypertension)	0.31	0.13	0.54	0.31	1.26	2.73	2.19	3.63	4.65	4.69	2.13	1.72	0.28
Diabetes Status	26.97	32.25	28.25	29.12	23.85	23.40	26.63	27.49	29.04	30.77	24.90	27.32	30.12
Non-Diabetic	0.30	0.14	0.49	0.30	1.20	2.47	2.17	4.19	4.73	5.69	2.55	2.08	0.29
Prediabetic	34.20	37.22	41.71	40.54	28.03	37.86	35.90	42.31	32.24	46.51	58.37	47.64	33.57
Diabetic	0.35	0.17	0.64	0.35	1.37	3.24	2.43	4.68	4.62	5.95	2.97	2.48	0.30
Asthma (No Asthma)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hypertension	33.90	30.41	28.64	20.63	35.45	23.76	27.50	24.61	28.60	18.87	12.67	20.97	19.90
Diabetes	0.40	0.18	0.71	0.45	1.41	2.10	2.00	3.90	4.52	5.51	2.10	1.89	0.27
Prediabetic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diabetic	91.74	92.39	94.18	95.31	80.36	89.70	89.25	91.12	86.82	97.84	95.61	92.38	91.40
Asthma	0.16	0.07	0.28	0.16	1.21	1.39	1.42	1.98	3.56	1.12	0.95	1.07	0.18
Non-Diabetic	0.96	1.05	0.93	0.76	2.40	1.25	1.32	1.69	0.24	0.88	0.16	1.80	1.35
Prediabetic	0.06	0.03	0.11	0.07	0.66	0.54	0.51	0.78	0.24	0.87	0.14	0.68	0.08
Diabetic	7.30	6.56	4.89	3.93	17.24	9.05	9.43	7.19	12.94	1.29	4.23	5.83	7.25
Asthma	0.15	0.07	0.25	0.14	1.04	1.27	1.31	1.66	3.56	0.70	0.94	0.89	0.16
Non-Asthma	15.44	11.37	16.31	13.73	17.00	5.18	8.93	6.98	4.99	3.42	3.25	3.92	5.45
Average BMI	0.24	0.09	0.40	0.24	1.10	1.19	1.35	2.50	1.92	2.61	0.92	0.77	0.15
BMI Categories	28.41	27.87	27.81	28.86	28.15	26.34	26.97	26.50	26.59	26.26	25.20	26.39	26.92
Underweight (<18.5)	0.05	0.02	0.11	0.07	0.16	0.32	0.20	0.40	0.43	0.44	0.19	0.19	0.04
Normal Weight (18.5 - 24.9)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Overweight (25.0 - 29.9)	1.17	0.91	2.09	1.10	0.73	0.52	1.22	2.14	0.00	0.44	0.42	0.73	0.99
Obese (30.0≤)	0.10	0.04	0.28	0.12	0.28	0.35	0.61	1.65	0.00	0.44	0.33	0.34	0.06
Depressive Symptoms (No Depressive Symptoms)	28.91	29.28	32.52	24.72	26.70	41.71	31.81	30.57	36.21	36.06	49.77	36.29	34.14
Underweight	0.38	0.16	0.75	0.45	1.36	3.42	2.55	4.80	5.42	6.11	3.17	2.63	0.35
Overweight	37.00	42.18	36.60	38.81	42.42	41.20	47.19	52.82	45.20	50.23	42.77	49.05	44.92
Obese	0.38	0.16	0.73	0.50	1.51	2.85	2.36	5.68	5.20	6.49	3.22	2.63	0.31
Depressive Symptoms	32.92	27.62	28.79	35.36	30.15	16.56	19.77	14.46	18.60	13.27	7.04	13.93	19.95
No Depressive Symptoms	0.39	0.16	0.79	0.55	1.40	2.11	1.64	4.06	4.74	4.15	1.60	1.45	0.27
Average	9.45	8.02	11.64	9.58	14.49	6.45	5.86	2.06	4.40	8.93	5.17	5.16	6.59
Depressive Symptoms	0.25	0.10	0.55	0.32	1.20	1.12	1.07	1.32	2.13	3.07	1.36	0.93	0.16

Source: National Health Interview Survey, 2000-2018  
Note: Robust standard errors presented in italics

## Panel B. Women

	USB NH Black	USB NH White	USB NH Other	USB Hispanic	Puerto Rican	Haitian Black	Jamaican Black	Trinidadian & Tobogian Black	Guyanese Black	Central South African Black	East African Black	West African Black	FB Other
<b>Panel B. Women</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Health Outcomes</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Self-Rated Health</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Poor	3.54	2.43	2.14	1.53	7.37	2.23	1.94	3.35	1.56	0.78	0.51	1.19	2.71
Fair	0.10	0.05	0.15	0.08	0.53	0.61	0.34	1.15	0.82	0.57	0.27	0.42	0.09
	12.11	7.39	6.39	6.36	18.89	12.00	10.76	13.51	12.91	9.01	3.91	4.86	9.74
Good	0.19	0.08	0.26	0.15	0.80	1.36	1.22	4.82	2.88	3.90	1.09	0.89	0.18
	28.25	22.15	21.88	24.19	28.71	29.70	25.62	24.69	28.60	21.70	19.38	23.44	28.44
Very Good	0.26	0.12	0.58	0.29	0.99	2.11	1.73	3.55	3.22	4.95	2.32	2.14	0.27
	26.95	32.49	29.34	28.43	22.63	27.40	31.01	29.24	31.82	26.49	26.11	24.80	29.03
Excellent	0.26	0.13	0.48	0.30	0.92	1.97	1.89	3.65	3.52	5.52	2.69	2.03	0.27
	29.15	35.53	40.25	39.49	22.40	28.67	30.67	29.21	25.10	42.02	50.09	45.71	30.08
	0.29	0.17	0.65	0.35	1.02	2.09	2.06	3.87	3.21	7.17	3.33	2.55	0.29
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hypertension (No Hypertension)	39.45	28.41	25.41	19.58	38.08	26.52	33.39	31.50	33.43	11.07	8.76	22.91	22.26
	0.38	0.15	0.66	0.42	1.19	2.26	1.72	5.15	3.68	3.72	1.74	2.08	0.26
Diabetes Status	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Non-Diabetic	90.09	93.20	93.52	95.14	83.33	85.77	88.33	81.29	85.73	98.82	95.56	94.44	91.60
	0.16	0.07	0.32	0.15	0.86	1.70	1.03	4.79	3.05	0.76	1.05	1.00	0.17
Prediabetic	1.22	0.99	1.17	0.72	2.07	1.29	1.40	1.88	3.80	0.37	0.70	1.36	1.36
Diabetic	0.05	0.02	0.12	0.05	0.30	0.46	0.41	0.94	1.76	0.37	0.45	0.57	0.08
	8.69	5.81	5.31	4.15	14.59	12.95	10.27	16.83	10.46	0.81	3.74	4.20	7.04
Asthma (No Asthma)	0.15	0.06	0.30	0.14	0.78	1.80	1.01	4.78	2.23	0.66	0.97	0.84	0.14
	15.76	13.25	15.50	12.88	25.70	6.36	10.12	5.46	10.58	0.90	3.32	5.28	7.19
	0.21	0.10	0.39	0.23	0.97	1.33	0.99	1.53	2.25	0.66	0.76	1.06	0.16
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average BMI	30.04	26.83	27.16	28.36	28.45	28.13	27.97	27.93	28.18	26.09	26.12	27.68	25.99
	0.06	0.02	0.15	0.08	0.16	0.27	0.24	0.52	0.48	0.66	0.36	0.32	0.04
BMI Categories	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Underweight (<18.5)	1.63	2.80	3.70	1.88	1.75	0.46	0.51	0.27	0.19	6.64	4.62	2.80	3.29
	0.10	0.05	0.30	0.14	0.35	0.26	0.16	0.27	0.19	3.88	1.76	0.87	0.11
Normal Weight (18.5 - 24.9)	26.14	44.77	44.39	34.86	31.14	29.86	32.96	38.21	29.48	40.73	43.25	30.65	46.44
	0.32	0.17	0.88	0.50	1.17	2.19	2.01	4.35	4.42	7.91	3.80	2.52	0.33
Overweight (25.0 - 29.9)	29.07	27.46	23.55	29.20	32.21	41.09	38.61	24.64	35.08	31.11	29.41	35.45	30.41
	0.29	0.13	0.58	0.45	1.13	2.35	1.96	3.19	3.63	5.81	2.97	2.55	0.28
Obese (30.0≤)	43.16	24.97	28.36	34.06	34.89	28.58	27.91	36.87	35.26	21.52	22.72	31.10	19.87
	0.35	0.16	0.82	0.50	1.09	1.95	2.04	4.74	4.46	6.70	2.82	2.47	0.26
Depressive Symptoms (No Depressive Symptoms)	13.23	11.19	15.24	13.53	20.73	11.48	6.80	5.36	4.23	9.65	7.68	9.04	10.43
	0.23	0.11	0.52	0.34	1.01	1.50	0.84	1.48	1.80	4.09	1.84	1.52	0.18

Source: National Health Interview Survey, 2000-2018

Note: Robust standard errors presented in italics

## Multivariate Findings

In the following section, I discuss several sets of multivariate models. Like those found in Chapter 4, I present results across four nested models and in two panels. The top panel contains results from logistic regression models in the form of odds ratios (OR), linearized standard errors (Std. Error), and statistical significance relative to the U.S.-born non-Hispanic Black sample ( $P > |t|$ ). The bottom panel contains marginal predicted probabilities for reporting the health condition under investigation. These are presented as predicted probabilities (Margin), delta-method standard errors (Std. Error), and statistical significance relative to a value of 0 ( $P > |t|$ ). In addition to this, I stratify my results by sex. Men are presented in Panel A and women in Panel B.

To ease interpretation, I separate these discussions by health outcome. I then examine within-sex findings by comparing Afro-Caribbean and African-origin respondents with like-sex U.S.-born non-Hispanic Black respondents. This is followed by a discussion of between-sex findings, which examine men and women within the same origin and duration categories. In each table, I separate findings by men (Panel A) and women (Panel B). Within each panel, I use an identical format to that seen in previous models where odds ratios are presented in the top half of the table and predicted probabilities in the bottom.

### *Self-Rated Health*

Table 6.5 presents the findings of sex-stratified binomial logistic regression models for self-rated poor/fair health relative to good, very good, or excellent self-rated health. In Panel A, relative to U.S.-born non-Hispanic Black men (predicted probability of 10.5%), Haitian, Jamaican, and Trinidadian & Tobagoan migrant men report significantly lower predicted probabilities for poor

or fair self-rated health. Take Haitian men as an example. Those who have more recently arrived in the United States report probabilities of 3.7% ( $p < 0.001$ ) for reporting poor or fair health, while their more tenured peers rest at 4.9% ( $p < 0.001$ ). In these three instances, more recently arrived men report lower probabilities of poor or fair health compared to more tenured, like-origin counterparts. This trend aligns nicely with the immigrant health advantage and its discussion of duration and health. The exception to this trend is seen for Trinidadian & Tobogean men who most recently arrived in the United States (9.9%,  $p > 0.05$ ).

Among African migrants, I observe statistically lower probabilities for both East and West Africans, regardless of duration. Central/South African men do not show a significant difference in their reporting of poor or fair self-rated health as compared to the referent group. This is only true for more tenured Central/South Africans because all recently arrived Central/South Africans report having good, very good, or excellent self-rated health. This is a rather interesting finding, as it reflects an inverse relationship between time in the United States and health.

In Model 3, the predicted probability of reporting poor/fair self-rated health increases for Haitians who most recently arrived, becoming nonsignificant. Tenured Jamaican men also experience a loss of statistical significance, despite declines in their predicted probability. Recently arrived Trinidadian & Tobogean, tenured Guyanese, and tenured Central/South Africans all maintain statistically indistinguishable probabilities for poor/fair self-rated health relative to U.S.-born non-Hispanic Black respondents. Between Models 1 and 3, East and West Africans each experience consistent attenuation in their predicted probabilities for both duration groups. These differences remain statistically significant when compared to the reference.



Turning to Panel B, I present the results of sample-weighted, binomial logistic regression models for self-rated poor/fair health for women. When compared to U.S.-born non-Hispanic Black women (12.8%), tenured Guyanese and Central/South African women exhibit nonsignificant predicted probabilities. Among those with significant findings, all groups experience significantly lower probabilities for reporting poor or fair self-rated health. In almost every instance, more recent arrivals report better self-rated health than their more tenured peers. In Model 3, the unconditional model, several groups lose statistical significance. Indeed, tenured Jamaican and Trinidadian & Tobagoan women, all Guyanese women, and all Central/South African women display nonsignificant differences between their reported predicted probabilities and that of the U.S.-born reference.

An exception to the general trends in these findings is Central/South African women. In Model 1, more recent arrivals display higher levels of reporting poor or fair health (17.4%) than their more tenured peers (6.7%). By Model 3, this difference widens to 18.5% and 5.8% for more recent arrivals and tenured Trinidadian & Tobagoan women, respectively. While this difference is not statistically significant, I believe that it points toward a general trend in self-rated health over time among Central and South African individuals.

Outside of the within-sex comparisons, there is the question of significant differences when comparing between sexes. Only one sample, Haitian women (8.4%) and men (4.2%) with greater tenure, experience significantly different predicted probabilities.

**Table 6.5** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by

Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey  
2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.690	0.019	***	0.533	0.016	***	0.684	0.020	***
USB NH Other	0.994	0.056		0.919	0.053		1.015	0.058	
USB Hispanic	0.846	0.040	***	0.828	0.039	***	0.907	0.044	*
Puerto Rican	0.936	0.087		0.827	0.078	*	0.870	0.084	
Haitian Black < 10 Years	0.328	0.205	+	0.482	0.319		0.448	0.286	
Haitian Black ≥ 10 Years	0.438	0.096	***	0.427	0.087	***	0.457	0.099	***
Jamaican Black < 10 Years	0.101	0.073	**	0.106	0.077	**	0.101	0.074	**
Jamaican Black ≥ 10 Years	0.707	0.141	+	0.702	0.134	+	0.760	0.154	
Trinidadian & Tobagoan Black < 10 Years	0.941	0.939		1.111	0.847		1.184	1.101	
Trinidadian & Tobagoan Black ≥ 10 Years	0.346	0.156	*	0.283	0.115	**	0.355	0.146	*
Guyanese Black < 10 Years	0.090	0.090	*	0.079	0.083	*	0.075	0.076	*
Guyanese Black ≥ 10 Years	0.552	0.197	+	0.583	0.206		0.669	0.256	
Central/South African < 10 Years	1.000			1.000			1.000		
Central/South African ≥ 10 Years	1.015	0.784		0.614	0.512		1.106	0.899	
East African < 10 Years	0.130	0.067	***	0.139	0.070	***	0.144	0.072	***
East African ≥ 10 Years	0.443	0.146	*	0.406	0.148	*	0.449	0.154	*
West African < 10 Years	0.096	0.054	***	0.096	0.054	***	0.110	0.062	***
West African ≥ 10 Years	0.509	0.151	*	0.399	0.116	**	0.538	0.157	*
Other Foreign-Born < 10 Years	0.338	0.025	***	0.303	0.022	***	0.363	0.027	***
Other Foreign-Born ≥ 10 Years	0.599	0.026	***	0.515	0.022	***	0.638	0.029	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.105	0.002	***	0.114	0.003	***	0.087	0.002	***
Haitian Black < 10 Years	0.037	0.022	+	0.059	0.037		0.041	0.025	
Haitian Black ≥ 10 Years	0.049	0.010	***	0.052	0.010	***	0.042	0.009	***
Jamaican Black < 10 Years	0.012	0.008		0.014	0.010		0.010	0.007	
Jamaican Black ≥ 10 Years	0.076	0.014	***	0.083	0.014	***	0.067	0.013	***
Trinidadian & Tobagoan Black < 10 Years	0.099	0.089		0.126	0.084		0.101	0.085	
Trinidadian & Tobagoan Black ≥ 10 Years	0.039	0.017	*	0.035	0.014	*	0.033	0.013	*
Guyanese Black < 10 Years	0.010	0.010		0.010	0.010		0.007	0.007	
Guyanese Black ≥ 10 Years	0.061	0.020	**	0.070	0.023	**	0.060	0.021	**
Central/South African < 10 Years	-	-	-	-	-	-	-	-	-
Central/South African ≥ 10 Years	0.106	0.073		0.073	0.057		0.095	0.070	
East African < 10 Years	0.015	0.008	*	0.018	0.009	*	0.014	0.007	*

East African $\geq 10$ Years	0.049	0.015	***	0.050	0.017	**	0.041	0.013	**
West African < 10 Years	0.011	0.006	+	0.012	0.007	+	0.010	0.006	+
West African $\geq 10$ Years	0.056	0.016	***	0.049	0.013	***	0.049	0.013	***
Other Foreign-Born < 10 Years	0.038	0.003	***	0.038	0.002	***	0.033	0.002	***
Other Foreign-Born $\geq 10$ Years	0.066	0.002	***	0.062	0.002	***	0.057	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(25,1221)	473.840		F(30,1216)	388.120		F(33,1213)	429.880	
Prob > F		0.000			0.000			0.000	

$N = 209,995$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.626	0.014	***	0.481	0.011	***	0.629	0.014	***
USB NH Other	0.836	0.041	***	0.724	0.037	***	0.839	0.042	***
USB Hispanic	0.818	0.028	***	0.818	0.028	***	0.912	0.031	**
Puerto Rican	1.050	0.067		1.013	0.064		1.049	0.068	
Haitian Black < 10 Years	0.435	0.146	*	0.501	0.174	*	0.473	0.162	*
Haitian Black $\geq 10$ Years	0.692	0.110	*	0.649	0.100	**	0.743	0.115	+
Jamaican Black < 10 Years	0.478	0.160	*	0.469	0.154	*	0.518	0.170	*
Jamaican Black $\geq 10$ Years	0.715	0.117	*	0.670	0.104	*	0.790	0.127	
Trinidadian & Tobagoan Black < 10 Years	0.066	0.065	**	0.079	0.075	**	0.091	0.088	*
Trinidadian & Tobagoan Black $\geq 10$ Years	0.573	0.155	*	0.553	0.153	*	0.664	0.177	
Guyanese Black < 10 Years	0.334	0.265		0.313	0.241		0.411	0.315	
Guyanese Black $\geq 10$ Years	1.028	0.292		0.962	0.239		1.182	0.318	
Central/South African < 10 Years	1.437	0.730		1.893	0.948		1.826	0.870	
Central/South African $\geq 10$ Years	0.485	0.340		0.399	0.262		0.501	0.346	
East African < 10 Years	0.253	0.142	*	0.257	0.134	**	0.273	0.151	*
East African $\geq 10$ Years	0.299	0.099	***	0.301	0.106	***	0.339	0.118	**
West African < 10 Years	0.235	0.069	***	0.215	0.063	***	0.242	0.070	***
West African $\geq 10$ Years	0.502	0.120	**	0.410	0.099	***	0.520	0.126	**
Other Foreign-Born < 10 Years	0.389	0.023	***	0.318	0.019	***	0.412	0.025	***
Other Foreign-Born $\geq 10$ Years	0.644	0.022	***	0.537	0.018	***	0.700	0.024	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.128	0.002	***	0.146	0.003	***	0.110	0.002	***
Haitian Black < 10 Years	0.060	0.019	**	0.079	0.025	**	0.055	0.018	**
Haitian Black $\geq 10$ Years	0.092	0.013	***	0.100	0.014	***	0.084	0.012	***
Jamaican Black < 10 Years	0.066	0.020	***	0.074	0.023	***	0.060	0.019	***
Jamaican Black $\geq 10$ Years	0.095	0.014	***	0.103	0.014	***	0.089	0.013	***

Trinidadian & Tobagoan Black < 10 Years	0.010	0.009		0.013	0.012		0.011	0.011	
Trinidadian & Tobagoan Black ≥ 10 Years	0.078	0.019	***	0.086	0.022	***	0.076	0.019	***
Guyanese Black < 10 Years	0.047	0.035		0.051	0.037		0.049	0.035	
Guyanese Black ≥ 10 Years	0.131	0.032	***	0.141	0.030	***	0.128	0.030	***
Central/South African < 10 Years	0.174	0.073		0.244	0.093	**	0.185	0.072	**
Central/South African ≥ 10 Years	0.067	0.044		0.064	0.039		0.058	0.038	
East African < 10 Years	0.036	0.019	+	0.042	0.021	*	0.033	0.017	+
East African ≥ 10 Years	0.042	0.013	**	0.049	0.016	**	0.040	0.014	**
West African < 10 Years	0.033	0.009	***	0.035	0.010	***	0.029	0.008	***
West African ≥ 10 Years	0.069	0.015	***	0.066	0.015	***	0.061	0.014	***
Other Foreign-Born < 10 Years	0.054	0.003	***	0.052	0.003	***	0.049	0.003	***
Other Foreign-Born ≥ 10 Years	0.086	0.002	***	0.084	0.002	***	0.080	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,122 1)	588.52		F(31,121 6)	437.17		F(34,121 3)	501.97	
Prob > F		0			0			0	

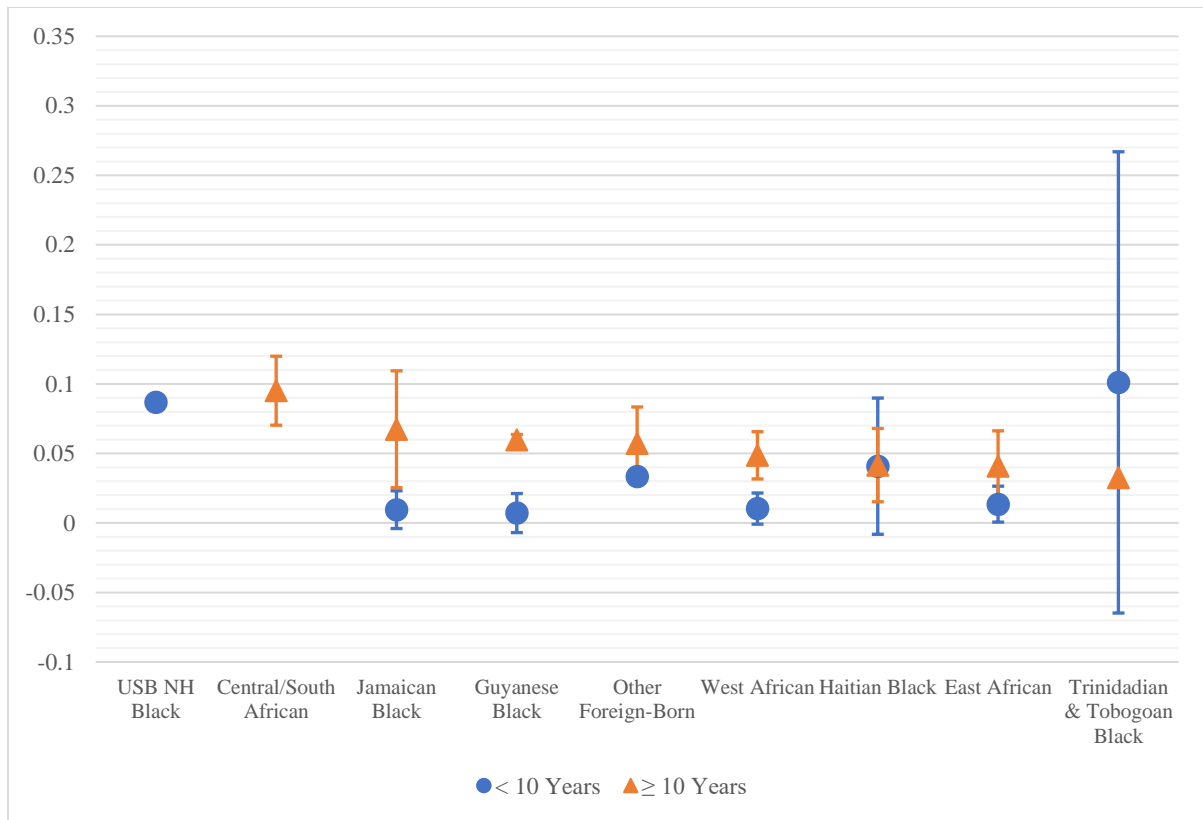
*N* = 257,980

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

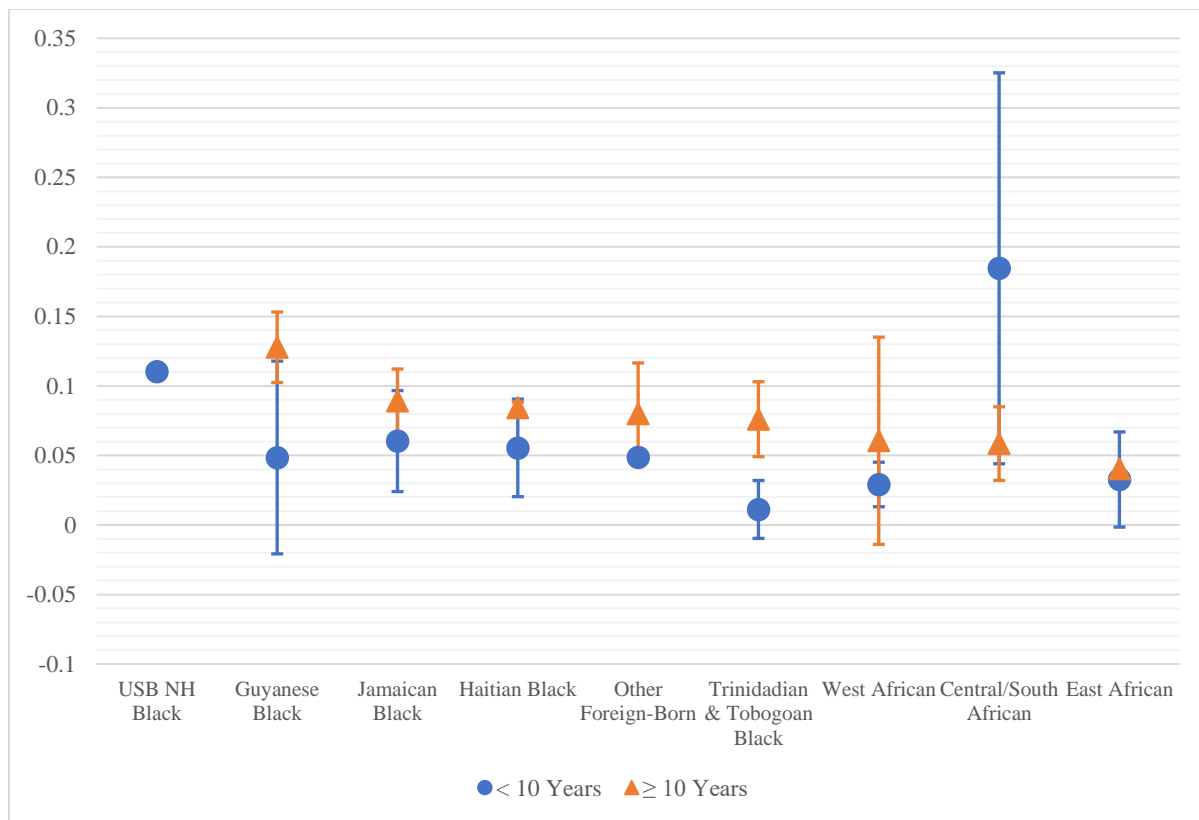
+ *p* < 0.10; \**p* < .05; \*\**p* < .01; \*\*\**p* < .001

**Figure 6.1** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**



**Panel B. Women**



### *Hypertension*

In Panel A, Model 1 of Table 6.6, I find that U.S.-born non-Hispanic Black men maintain a predicted probability of 32.5% for reporting hypertension while holding all other model covariates at their means. Among Afro-Caribbean migrants, Haitian, Jamaican, and Trinidadian & Tobagoan men all report significantly lower predicted probabilities for hypertension than this reference group. For instance, Haitian men who recently arrived in the United States maintain a predicted probability of 15.5%, while those with greater tenure rest at 21.6%. This is over 10 percentage points below that of U.S.-born non-Hispanic Black men. For Guyanese men, only those with greater tenure experience significantly different, in this case, lower, predicted probabilities for hypertension. Among Africans, East Africans of any duration and more recently arrived West Africans display significantly lower predicted probabilities for hypertension than

their U.S.-born Black peers. Central/South Africans and more tenured West Africans show no significant differences.

The results for Model 3 are fairly consistent with those in Model 1. There is no change in statistical significance when comparing the predicted probabilities of Afro-Caribbean and African men to the U.S.-born reference group. Something of note are the predicted probabilities for Central/South Africans. Here, more recently arrived men maintain higher predicted probabilities for hypertension (27.5%) than their more tenured peers (26.2%), much like those for self-rated health among Central/South African women.

In Model 1, U.S.-born non-Hispanic Black women maintain predicted probabilities for hypertension at 37.8%, significantly higher than their male peers. All foreign-born groups, save Guyanese, tenured Central/South Africans, and tenured West Africans, enjoy significantly lower probabilities of reporting this condition. Across Models 1 and 3, I find that Haitian, Jamaican, more tenured Trinidadian & Tobogean, tenured Guyanese, Central/South African, and West African women all experience an attenuation of their predicted probabilities for hypertension as compared to U.S.-born non-Hispanic Black women. In this final model, all Haitian, Jamaican, and Trinidadian & Tobogean women display significantly lower predicted probabilities for hypertension than the U.S.-born reference. The same is true for all East Africans and more recently arrived Central/South and West Africans.

When comparing men to women in this first model, I observe statistically significant differences between tenured Trinidadian & Tobogean and East African migrants ( $p < 0.05$ ). Additionally, tenured Jamaicans and more recently arrived Central/South Africans are approaching statistical significance ( $p < 0.1$ ). In Model 3, I find some slight changes in statistically significant differences relative to those in model 1. In the unconditional model, it is

now Jamaican and Trinidadian & Tobagoan migrants with greater tenure that display significant sex-based differences in their predicted probabilities for reporting hypertension ( $p < 0.05$ ).

Tenured East Africans still display signs of a sex-based difference; however, this is no longer significant at the 0.05 alpha level ( $p < 0.10$ ). Another intriguing finding is that several groups of women maintain higher predicted probabilities for hypertension than their male counterparts.

While these differences are not all statistically significant, they remain interesting because general prevalence of hypertension is higher among men than women in the United States (Ramirez & Sullivan, 2018).

**Table 6.6** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.666	0.015	***	0.610	0.014	***	0.644	0.015	***
USB NH Other	0.848	0.039	***	0.819	0.038	***	0.843	0.039	***
USB Hispanic	0.686	0.025	***	0.675	0.025	***	0.684	0.026	***
Puerto Rican	0.782	0.060	***	0.733	0.058	***	0.745	0.059	***
Haitian Black < 10 Years	0.380	0.173	*	0.465	0.213	+	0.448	0.205	+
Haitian Black ≥ 10 Years	0.572	0.080	***	0.609	0.091	***	0.623	0.092	***
Jamaican Black < 10 Years	0.313	0.160	*	0.299	0.162	*	0.297	0.162	*
Jamaican Black ≥ 10 Years	0.648	0.080	***	0.632	0.080	***	0.636	0.081	***
Trinidadian & Tobagoan Black < 10 Years	0.117	0.092	**	0.119	0.096	**	0.113	0.088	**
Trinidadian & Tobagoan Black ≥ 10 Years	0.317	0.085	***	0.324	0.086	***	0.334	0.090	***
Guyanese Black < 10 Years	0.589	0.380		0.499	0.319		0.494	0.314	
Guyanese Black ≥ 10 Years	0.576	0.142	*	0.595	0.145	*	0.608	0.145	*
Central/South African < 10 Years	0.847	0.435		0.767	0.391		0.828	0.417	
Central/South African ≥ 10 Years	0.736	0.435		0.679	0.410		0.776	0.463	
East African < 10 Years	0.311	0.105	***	0.368	0.123	**	0.385	0.129	**
East African ≥ 10 Years	0.507	0.114	**	0.508	0.114	**	0.537	0.123	**
West African < 10 Years	0.393	0.095	***	0.435	0.104	***	0.465	0.111	***



West African $\geq 10$ Years	0.819	0.121		0.745	0.113	+	0.830	0.125	
Other Foreign-Born < 10 Years	0.356	0.019	***	0.366	0.020	***	0.395	0.022	***
Other Foreign-Born $\geq 10$ Years	0.510	0.016	***	0.490	0.016	***	0.522	0.017	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.325	0.005	***	0.324	0.005	***	0.314	0.005	***
Haitian Black < 10 Years	0.155	0.060	**	0.182	0.068	**	0.170	0.065	**
Haitian Black $\geq 10$ Years	0.216	0.023	***	0.226	0.026	***	0.222	0.025	***
Jamaican Black < 10 Years	0.131	0.058	*	0.125	0.059	*	0.119	0.057	*
Jamaican Black $\geq 10$ Years	0.238	0.022	***	0.232	0.022	***	0.225	0.022	***
Trinidadian & Tobagoan Black < 10 Years	0.054	0.040		0.054	0.041		0.049	0.036	
Trinidadian & Tobagoan Black $\geq 10$ Years	0.132	0.031	***	0.134	0.031	***	0.132	0.031	***
Guyanese Black < 10 Years	0.221	0.111	*	0.193	0.099	+	0.184	0.095	+
Guyanese Black $\geq 10$ Years	0.217	0.042	***	0.222	0.042	***	0.217	0.040	***
Central/South African < 10 Years	0.290	0.106	**	0.269	0.100	**	0.275	0.100	**
Central/South African $\geq 10$ Years	0.262	0.114	*	0.245	0.111	*	0.262	0.115	*
East African < 10 Years	0.130	0.038	***	0.150	0.042	***	0.150	0.043	***
East African $\geq 10$ Years	0.196	0.035	***	0.196	0.035	***	0.197	0.036	***
West African < 10 Years	0.159	0.032	***	0.172	0.034	***	0.175	0.035	***
West African $\geq 10$ Years	0.283	0.030	***	0.263	0.029	***	0.275	0.030	***
Other Foreign-Born < 10 Years	0.146	0.006	***	0.149	0.006	***	0.153	0.007	***
Other Foreign-Born $\geq 10$ Years	0.197	0.004	***	0.190	0.004	***	0.193	0.004	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,122 1)	884.470		F(31,121 6)	750.860		F(34,121 3)	696.850	
Prob > F		0.000			0.000			0.000	

$N = 209,908$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.437	0.008	***	0.404	0.008	***	0.443	0.009	***
USB NH Other	0.535	0.022	***	0.514	0.022	***	0.545	0.023	***
USB Hispanic	0.455	0.016	***	0.468	0.017	***	0.476	0.017	***
Puerto Rican	0.544	0.035	***	0.534	0.034	***	0.539	0.035	***
Haitian Black < 10 Years	0.341	0.124	**	0.369	0.140	**	0.359	0.134	**
Haitian Black $\geq 10$ Years	0.486	0.079	***	0.477	0.077	***	0.492	0.080	***
Jamaican Black < 10 Years	0.392	0.090	***	0.395	0.087	***	0.393	0.089	***
Jamaican Black $\geq 10$ Years	0.696	0.077	***	0.662	0.075	***	0.705	0.081	**

Trinidadian & Tobagoan Black < 10 Years	0.054	0.041	***	0.061	0.047	***	0.062	0.047	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.549	0.133	*	0.517	0.122	**	0.554	0.133	*
Guyanese Black < 10 Years	0.551	0.287		0.579	0.287		0.614	0.304	
Guyanese Black ≥ 10 Years	0.747	0.159		0.718	0.150		0.760	0.163	
Central/South African < 10 Years	0.165	0.108	**	0.181	0.119	**	0.174	0.116	**
Central/South African ≥ 10 Years	0.675	0.373		0.612	0.372		0.698	0.391	
East African < 10 Years	0.165	0.051	***	0.172	0.052	***	0.173	0.053	***
East African ≥ 10 Years	0.187	0.064	***	0.196	0.067	***	0.204	0.070	***
West African < 10 Years	0.348	0.070	***	0.335	0.068	***	0.355	0.073	***
West African ≥ 10 Years	0.821	0.137		0.735	0.124	+	0.822	0.141	
Other Foreign-Born < 10 Years	0.273	0.014	***	0.260	0.013	***	0.293	0.015	***
Other Foreign-Born ≥ 10 Years	0.366	0.010	***	0.346	0.010	***	0.382	0.011	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.378	0.004	***	0.383	0.004	***	0.365	0.004	***
Haitian Black < 10 Years	0.172	0.052	***	0.186	0.058	***	0.171	0.053	***
Haitian Black ≥ 10 Years	0.228	0.028	***	0.229	0.028	***	0.221	0.028	***
Jamaican Black < 10 Years	0.192	0.035	***	0.197	0.034	***	0.184	0.034	***
Jamaican Black ≥ 10 Years	0.297	0.023	***	0.291	0.023	***	0.288	0.023	***
Trinidadian & Tobagoan Black < 10 Years	0.032	0.023		0.036	0.027		0.034	0.025	
Trinidadian & Tobagoan Black ≥ 10 Years	0.250	0.045	***	0.243	0.043	***	0.242	0.044	***
Guyanese Black < 10 Years	0.251	0.098	**	0.265	0.096	**	0.261	0.096	**
Guyanese Black ≥ 10 Years	0.312	0.045	***	0.308	0.044	***	0.304	0.045	***
Central/South African < 10 Years	0.091	0.054	+	0.101	0.060	+	0.091	0.055	+
Central/South African ≥ 10 Years	0.291	0.114	*	0.276	0.121	*	0.286	0.114	*
East African < 10 Years	0.091	0.026	***	0.096	0.026	***	0.090	0.025	***
East African ≥ 10 Years	0.102	0.031	***	0.109	0.033	***	0.105	0.032	***
West African < 10 Years	0.175	0.029	***	0.172	0.029	***	0.169	0.029	***
West African ≥ 10 Years	0.333	0.037	***	0.314	0.036	***	0.321	0.037	***
Other Foreign-Born < 10 Years	0.142	0.006	***	0.139	0.006	***	0.144	0.006	***
Other Foreign-Born ≥ 10 Years	0.182	0.003	***	0.177	0.003	***	0.180	0.003	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,1221)	1159.6		F(31,1216)	912.34		F(34,1213)	892.64	
Prob > F	0			0			0		

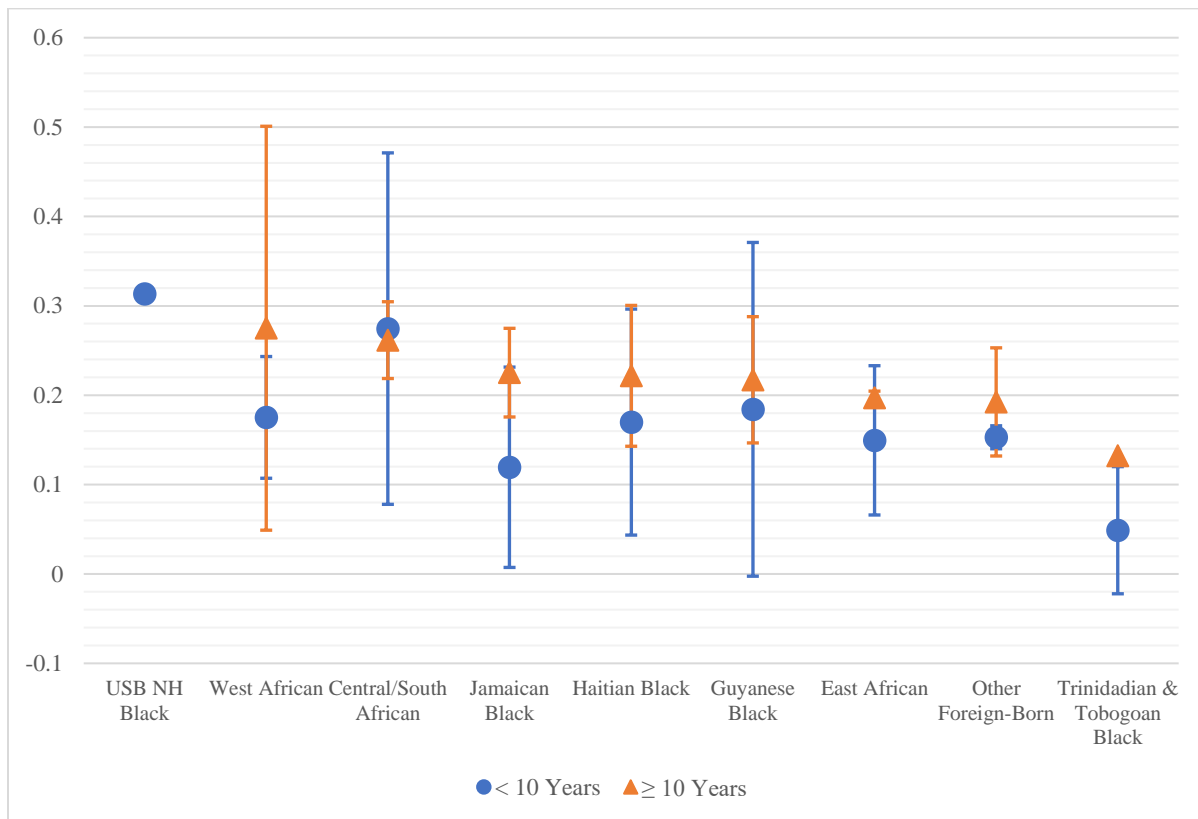
N = 257,896

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

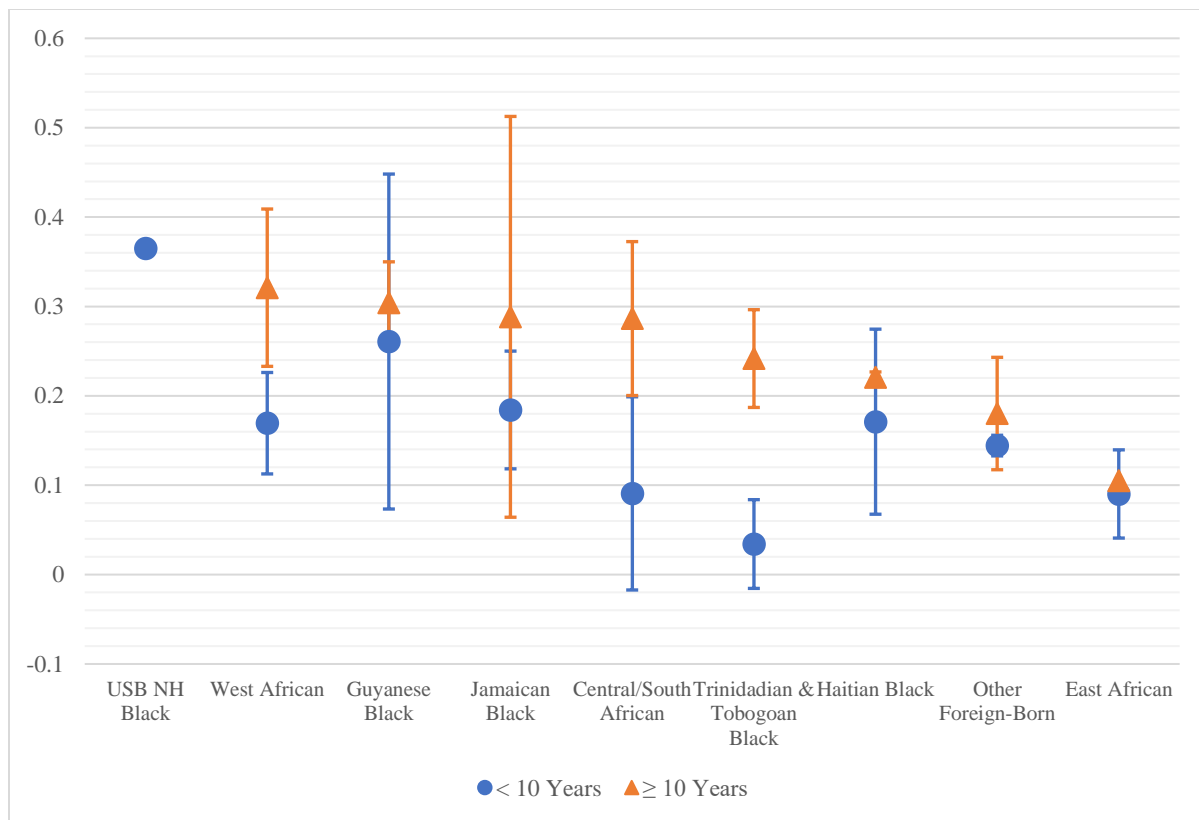
+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Figure 6.2** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**



**Panel B. Women**



### *Pre-Diabetes/Diabetes*

Table 6.7 provides the results of sex-stratified, binomial logistic regression models for self-reporting as being pre-diabetes or diabetes as compared to a self-report of being non-diabetic. In the first model of Panel A, the predicted probability of reporting pre-diabetes or diabetes for U.S.-born non-Hispanic Black men is 9.2%. When compared to this reference group, recently arrived Haitian (2.9%,  $p < 0.05$ ), Jamaican (2.4%,  $p < 0.001$ ), Central/South African (0.9%,  $p < 0.001$ ), and West African (4.7%,  $p < 0.01$ ) men show significantly lower predicted probabilities of reporting pre-diabetes or diabetes. More tenured East Africans (5.7%,  $p < 0.05$ ) also display a significantly lower probability for this outcome. All other groups show no significant difference from the U.S.-born referent.

In the unconditional model, I observe a nearly unanimous attenuation in predicted probabilities for foreign-born groups. Three groups maintain statistically lower predicted

probabilities for pre-diabetes or diabetes relative to the U.S.-born reference: recently arrived Jamaicans (1.8%,  $p < 0.001$ ), recently arrived Central/South Africans (0.7%,  $p < 0.001$ ), and tenured East Africans (4.6%,  $p < 0.001$ ). The anticipated trend of lower probabilities for pre-diabetes and diabetes among more recent arrivals is present except for East Africans. Here, men who arrived within the last 10 years (7.6%) maintain higher probabilities than their more tenured peers (4.6%).

Among women, U.S.-born non-Hispanic Black respondents report a probability of 10.4% for reporting pre-diabetes or diabetes (Model 1, Panel B). More recently arrived women originating from Haiti (3.6%,  $p < 0.001$ ), Trinidad & Tobago (1.3%,  $p < 0.001$ ), Central/South Africa (1.1%,  $p < 0.001$ ), East Africa (2.6%,  $p < 0.001$ ), and West Africa (3.2%,  $p < 0.001$ ) experience significantly lower predicted probabilities for this outcome. All other groups show no significant difference.

In Model 3, I find that the predicted probabilities for all women decline relative to Model 1. For instance, the U.S.-born non-Hispanic Black sample experience a decline from 10.4% in Model 1 to 9.2% in Model 3. Unlike men, there are no losses of statistical significance between these two models. Women who more recently arrived in the United States from Haiti (3.1%,  $p < 0.001$ ), Trinidad & Tobago (1.4%,  $p < 0.001$ ), Central/South Africa (1.0%,  $p < 0.001$ ), East Africa (2.2%,  $p < 0.001$ ), and West Africa (2.7%,  $p < 0.001$ ) continue to display significantly lower predicted probabilities for pre-diabetes or diabetes than the referent. Each of the other Afro-Caribbean and African-origin groups show no significant difference from the reference category. In this final model, I find that Jamaican women are the only group to diverge from the anticipated duration-health relationship. In this case, it is less of an inversion and more a lack of

change. Jamaican women who more recently arrived report a predicted probability of 8.8% for reporting pre-diabetes or diabetes. Their more tenured peers report a probability of 8.3%.

**Table 6.7** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes or Diabetes by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.641	0.018	***	0.604	0.017	***	0.652	0.019	***
USB NH Other	0.974	0.060		0.955	0.061		0.994	0.063	
USB Hispanic	1.147	0.056	**	1.188	0.060	***	1.208	0.061	***
Puerto Rican	1.407	0.126	***	1.317	0.124	**	1.349	0.126	***
Haitian Black < 10 Years	0.299	0.317		0.318	0.355		0.313	0.345	
Haitian Black ≥ 10 Years	1.171	0.200		1.115	0.201		1.162	0.208	
Jamaican Black < 10 Years	0.241	0.169		0.228	0.155	*	0.223	0.152	*
Jamaican Black ≥ 10 Years	1.053	0.203		1.038	0.194		1.048	0.200	
Trinidadian & Tobagoan Black < 10 Years	0.625	0.722		0.773	0.901		0.733	0.879	
Trinidadian & Tobagoan Black ≥ 10 Years	0.687	0.268		0.717	0.281		0.746	0.297	
Guyanese Black < 10 Years	0.589	0.388		0.488	0.316		0.483	0.315	
Guyanese Black ≥ 10 Years	1.402	0.532		1.553	0.620		1.606	0.613	
Central/South African < 10 Years	0.090	0.090	*	0.077	0.079	*	0.086	0.088	*
Central/South African ≥ 10 Years	0.650	0.371		0.536	0.310		0.685	0.393	
East African < 10 Years	0.788	0.336		0.926	0.400		0.983	0.428	
East African ≥ 10 Years	0.604	0.182	+	0.537	0.178	+	0.580	0.190	+
West African < 10 Years	0.492	0.192	+	0.506	0.200	+	0.559	0.222	
West African ≥ 10 Years	1.311	0.249		1.073	0.209		1.254	0.243	
Other Foreign-Born < 10 Years	0.442	0.040	***	0.453	0.042	***	0.506	0.047	***
Other Foreign-Born ≥ 10 Years	0.842	0.035	***	0.816	0.034	***	0.894	0.038	**
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.092	0.002	***	0.082	0.002	***	0.077	0.002	***
Haitian Black < 10 Years	0.029	0.030		0.028	0.030		0.025	0.027	
Haitian Black ≥ 10 Years	0.106	0.016	***	0.091	0.015	***	0.088	0.014	***
Jamaican Black < 10 Years	0.024	0.016		0.020	0.013		0.018	0.012	
Jamaican Black ≥ 10 Years	0.096	0.017	***	0.085	0.014	***	0.080	0.014	***

Trinidadian & Tobagoan Black < 10 Years	0.059	0.064		0.065	0.070		0.057	0.065	
Trinidadian & Tobagoan Black ≥10 Years	0.065	0.024	**	0.060	0.022	**	0.058	0.022	**
Guyanese Black < 10 Years	0.056	0.035		0.042	0.026		0.039	0.024	
Guyanese Black ≥ 10 Years	0.124	0.041	**	0.122	0.043	**	0.118	0.040	**
Central/South African < 10 Years	0.009	0.009		0.007	0.007		0.007	0.007	
Central/South African ≥ 10 Years	0.061	0.033	+	0.046	0.025	+	0.054	0.029	+
East African < 10 Years	0.074	0.029	*	0.076	0.030	*	0.076	0.030	*
East African ≥ 10 Years	0.057	0.016	***	0.046	0.014	**	0.046	0.014	***
West African < 10 Years	0.047	0.018	**	0.043	0.016	**	0.044	0.017	**
West African ≥ 10 Years	0.117	0.019	***	0.088	0.015	***	0.094	0.016	***
Other Foreign-Born < 10 Years	0.043	0.003	***	0.039	0.003	***	0.040	0.003	***
Other Foreign-Born ≥ 10 Years	0.078	0.002	***	0.068	0.002	***	0.069	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,1220)	469.77		F(30,1216)	442.24		F(33,1213)	421.78	
Prob > F		0			0			0	

N = 210,028

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.537	0.013	***	0.512	0.012	***	0.566	0.014	***
USB NH Other	0.969	0.056		0.950	0.057		1.013	0.059	
USB Hispanic	0.949	0.040		1.005	0.042		1.029	0.043	
Puerto Rican	1.042	0.078		1.029	0.078		1.044	0.078	
Haitian Black < 10 Years	0.321	0.146	*	0.323	0.147	*	0.311	0.139	**
Haitian Black ≥ 10 Years	1.241	0.243		1.174	0.233		1.234	0.244	
Jamaican Black < 10 Years	0.980	0.318		0.941	0.303		0.955	0.305	
Jamaican Black ≥ 10 Years	0.901	0.109		0.838	0.100		0.895	0.107	
Trinidadian & Tobagoan Black < 10 Years	0.113	0.114	*	0.136	0.133	*	0.143	0.140	*
Trinidadian & Tobagoan Black ≥10 Years	1.208	0.298		1.168	0.283		1.263	0.304	
Guyanese Black < 10 Years	0.388	0.294		0.403	0.290		0.435	0.318	
Guyanese Black ≥ 10 Years	1.316	0.337		1.271	0.321		1.351	0.348	
Central/South African < 10 Years	0.095	0.099	*	0.108	0.112	*	0.103	0.108	*
Central/South African ≥ 10 Years	0.381	0.317		0.329	0.279		0.375	0.318	
East African < 10 Years	0.229	0.138	*	0.220	0.137	*	0.224	0.136	*
East African ≥ 10 Years	0.632	0.218		0.632	0.222		0.661	0.229	
West African < 10 Years	0.285	0.093	***	0.257	0.083	***	0.272	0.088	***

West African $\geq 10$ Years	0.820	0.203		0.705	0.173		0.786	0.195	
Other Foreign-Born < 10 Years	0.391	0.031	***	0.363	0.029	***	0.412	0.033	***
Other Foreign-Born $\geq 10$ Years	0.660	0.024	***	0.622	0.022	***	0.695	0.025	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.104	0.002	***	0.101	0.002	***	0.092	0.002	***
Haitian Black < 10 Years	0.036	0.016	*	0.035	0.015	*	0.031	0.013	*
Haitian Black $\geq 10$ Years	0.126	0.021	***	0.116	0.020	***	0.111	0.019	***
Jamaican Black < 10 Years	0.102	0.030	***	0.095	0.028	***	0.088	0.026	***
Jamaican Black $\geq 10$ Years	0.095	0.010	***	0.086	0.009	***	0.083	0.009	***
Trinidadian & Tobagoan Black < 10 Years	0.013	0.013		0.015	0.014		0.014	0.014	
Trinidadian & Tobagoan Black $\geq 10$ Years	0.123	0.026	***	0.116	0.025	***	0.114	0.024	***
Guyanese Black < 10 Years	0.043	0.031		0.043	0.030		0.042	0.030	
Guyanese Black $\geq 10$ Years	0.132	0.029	***	0.125	0.027	***	0.121	0.027	***
Central/South African < 10 Years	0.011	0.011		0.012	0.012		0.010	0.011	
Central/South African $\geq 10$ Years	0.042	0.034		0.036	0.029		0.037	0.030	
East African < 10 Years	0.026	0.015	+	0.024	0.015	+	0.022	0.013	+
East African $\geq 10$ Years	0.068	0.022	**	0.066	0.022	**	0.063	0.020	**
West African < 10 Years	0.032	0.010	**	0.028	0.009	***	0.027	0.008	***
West African $\geq 10$ Years	0.087	0.020	***	0.073	0.017	***	0.074	0.017	***
Other Foreign-Born < 10 Years	0.043	0.003	***	0.039	0.003	***	0.040	0.003	***
Other Foreign-Born $\geq 10$ Years	0.071	0.002	***	0.065	0.002	***	0.066	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,122 1)	446.99		F(31,121 6)	370.98		F(34,121 3)	360.58	
Prob > F		0			0			0	

*N* = 257,960

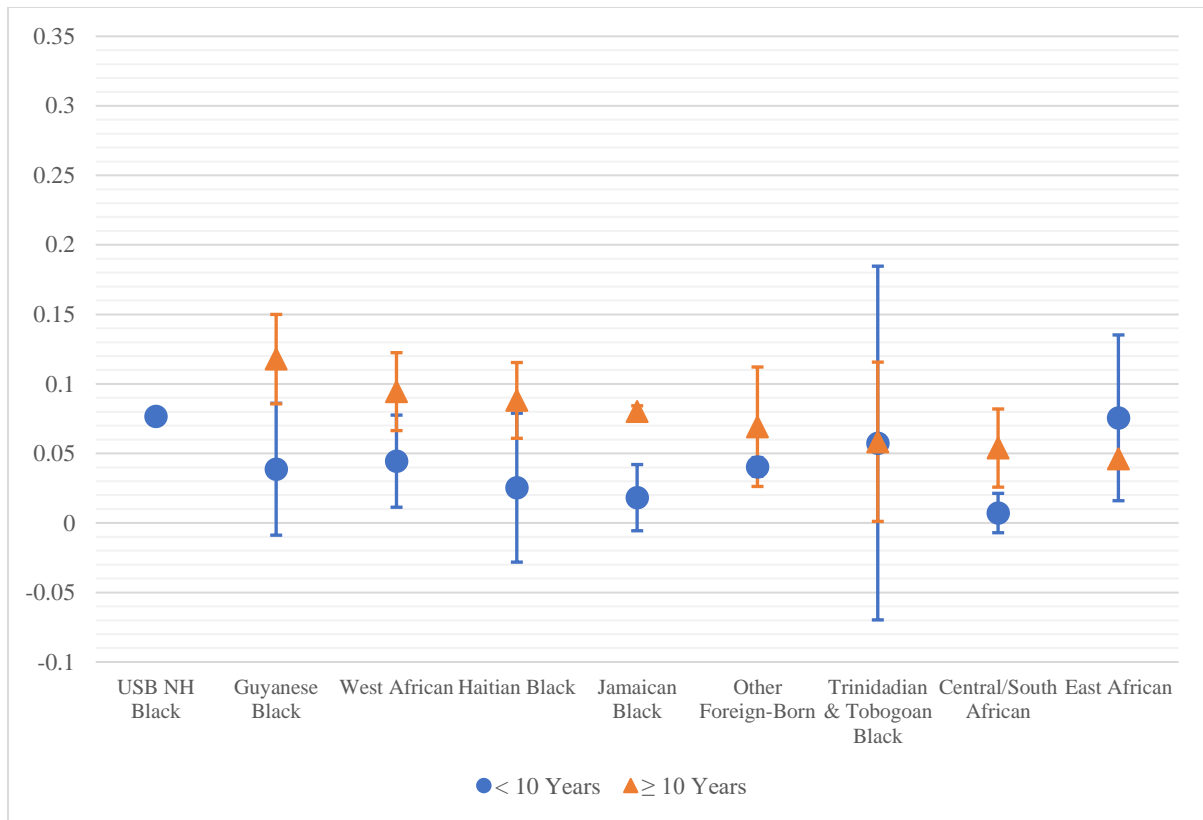
Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

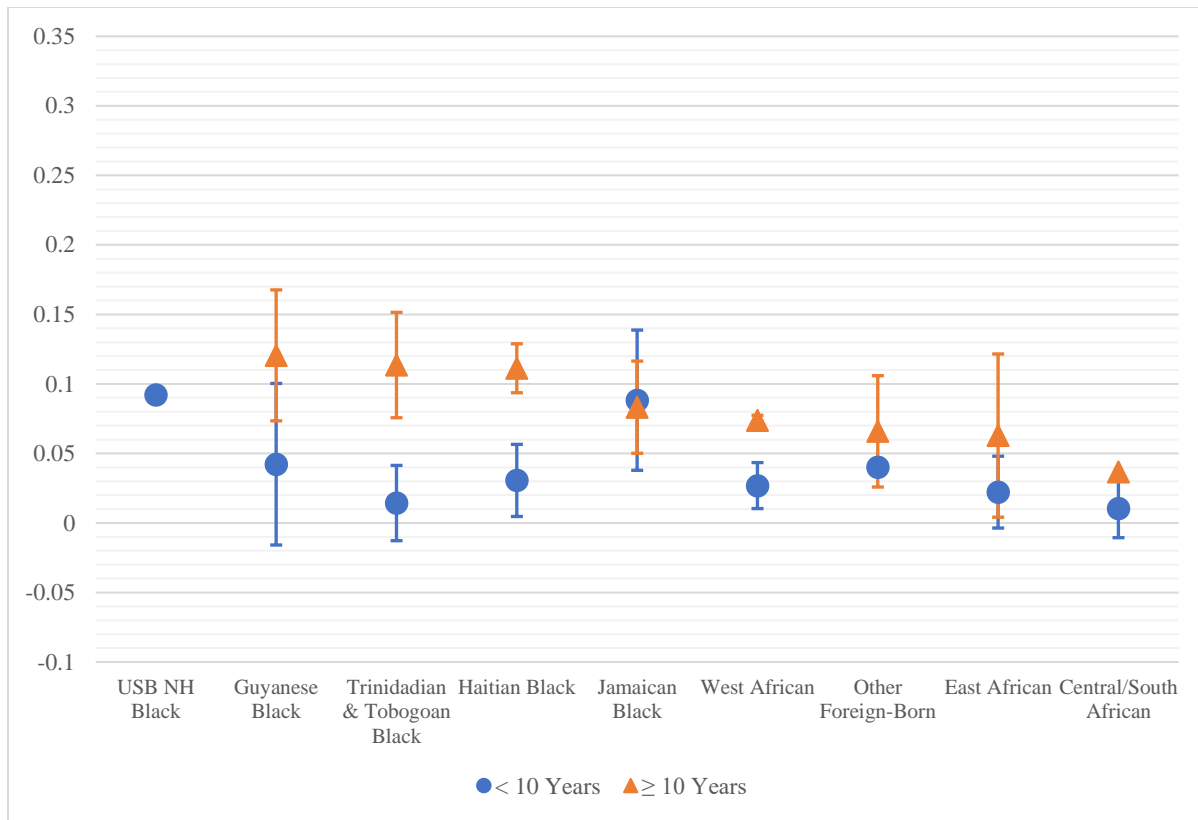
**Figure 6.3** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes or Diabetes by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**





**Panel B. Women**



### *Asthma*

In the first panel of Table 6.8, I find that U.S.-born non-Hispanic Black men have a predicted probability of 11.6% for reporting asthma. Among Afro-Caribbeans, Haitian men are the only ones to maintain significantly lower predicted probabilities for asthma in both duration categories. The only other two Afro-Caribbean groups to maintain significantly lower probabilities for asthma are more tenured Trinidadian & Tobogooan (5.7%,  $p < 0.05$ ) and Guyanese (4.5%,  $p < 0.001$ ) men. Among African-origin migrants, more recently arrived Central/South Africans, as well as East and West Africans of any duration, maintain significantly lower predicted probabilities for asthma than the reference category ( $p < 0.001$ ). Between Models 1 and 3, there are few changes to the predicted probabilities for all men, including the U.S.-born reference. Further, there is no change in the groups who maintain statistically significant differences to this referent.

In Panel B, non-Hispanic Black women report a predicted probability of 14.2% for reporting asthma. Haitian women report significantly lower probabilities for asthma relative to the U.S.-born reference, regardless of duration in the United States ( $p < 0.001$ ). Additionally, tenured Jamaican (8.8%,  $p < 0.001$ ), Trinidadian & Tobagoan (5.3%,  $p < 0.001$ ), and Guyanese (8.7%,  $p < 0.001$ ) women experience significantly lower predicted probabilities for asthma. For each of these three Afro-Caribbean groups, I observe that more recently arrived migrants maintain higher predicted probabilities than their more tenured peers for reporting asthma. Further, these differences are statistically indistinguishable from that of the U.S.-born non-Hispanic Black sample. Central/South African women who arrived more recently are not estimable in this set of models as there are no respondents who self-report having ever had asthma. More tenured Central/South Africans, and all East and West African women, have significantly lower predicted probabilities for reporting asthma relative to the reference category. Much like the trend noted for most Afro-Caribbean migrants, more recently arrived West Africans report higher predicted probabilities for asthma than their more tenured peers.

Between Models 1 and 3, there are more distinguishable changes in predicted probabilities than those seen for men. For instance, Jamaican women with fewer than 10 years in the United States experience an increase from 10.3% in Model 1 to 11.3% in Model 3. Tenured Guyanese and more recently arrived West African women experience a reduction of statistical significance in Model 3 and are now indistinguishable from their U.S.-born reference. When comparing men and women from the same national- or regional-origin group, I find that only one group is statistically different from one another: recently arrived West Africans. Here, women (8.6%) are at a significantly higher predicted probability of reporting asthma than men (2.4%).

**Table 6.8** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.920	0.028	**	0.866	0.026	***	0.893	0.028	***
USB NH Other	1.235	0.069	***	1.208	0.067	***	1.216	0.068	***
USB Hispanic	0.969	0.044		0.941	0.042		0.964	0.044	
Puerto Rican	1.530	0.159	***	1.503	0.155	***	1.502	0.156	***
Haitian Black < 10 Years	0.285	0.242		0.343	0.291		0.318	0.274	
Haitian Black ≥ 10 Years	0.447	0.149	*	0.476	0.159	*	0.478	0.159	*
Jamaican Black < 10 Years	0.566	0.290		0.565	0.298		0.574	0.303	
Jamaican Black ≥ 10 Years	0.801	0.170		0.779	0.167		0.802	0.172	
Trinidadian & Tobagoan Black < 10 Years	0.689	0.717		0.646	0.678		0.686	0.724	
Trinidadian & Tobagoan Black ≥ 10 Years	0.465	0.225		0.468	0.232		0.481	0.238	
Guyanese Black < 10 Years	0.779	0.626		0.716	0.577		0.725	0.583	
Guyanese Black ≥ 10 Years	0.360	0.176	*	0.357	0.176	*	0.371	0.183	*
Central/South African < 10 Years	0.106	0.078	**	0.110	0.081	**	0.104	0.076	**
Central/South African ≥ 10 Years	0.490	0.502		0.497	0.505		0.489	0.501	
East African < 10 Years	0.226	0.114	**	0.261	0.132	**	0.253	0.128	**
East African ≥ 10 Years	0.248	0.100	***	0.257	0.104	***	0.255	0.103	***
West African < 10 Years	0.168	0.077	***	0.193	0.088	***	0.185	0.085	***
West African ≥ 10 Years	0.316	0.092	***	0.321	0.095	***	0.319	0.094	***
Other Foreign-Born < 10 Years	0.333	0.026	***	0.361	0.028	***	0.353	0.028	***
Other Foreign-Born ≥ 10 Years	0.496	0.024	***	0.497	0.024	***	0.504	0.025	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.116	0.003	***	0.118	0.003	***	0.115	0.003	***
Haitian Black < 10 Years	0.036	0.029		0.044	0.036		0.040	0.033	
Haitian Black ≥ 10 Years	0.055	0.017	***	0.060	0.019	***	0.059	0.018	***
Jamaican Black < 10 Years	0.069	0.033	*	0.070	0.034	*	0.070	0.034	*
Jamaican Black ≥ 10 Years	0.095	0.018	***	0.094	0.018	***	0.095	0.018	***
Trinidadian & Tobagoan Black < 10 Years	0.083	0.079		0.080	0.077		0.082	0.080	
Trinidadian & Tobagoan Black ≥ 10 Years	0.057	0.026	*	0.059	0.028	*	0.059	0.027	*
Guyanese Black < 10 Years	0.092	0.067		0.088	0.064		0.086	0.063	

Guyanese Black $\geq$ 10 Years	0.045	0.021	*	0.046	0.021	*	0.046	0.022	*
Central/South African < 10 Years	0.014	0.010		0.014	0.010		0.013	0.010	
Central/South African $\geq$ 10 Years	0.060	0.058		0.062	0.059		0.060	0.058	
East African < 10 Years	0.029	0.014	*	0.034	0.016	*	0.032	0.016	*
East African $\geq$ 10 Years	0.031	0.012	*	0.033	0.013	*	0.032	0.012	*
West African < 10 Years	0.021	0.010	*	0.025	0.011	*	0.024	0.010	*
West African $\geq$ 10 Years	0.040	0.011	***	0.041	0.012	***	0.040	0.011	***
Other Foreign-Born < 10 Years	0.042	0.003	***	0.046	0.003	***	0.044	0.003	***
Other Foreign-Born $\geq$ 10 Years	0.061	0.002	***	0.062	0.002	***	0.062	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(25,122 1)	54.170		F(30,121 6)	58.080		F(33,121 3)	56.600	
Prob > F		0.000			0.000			0.000	

$N = 209,996$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.020	0.024		0.910	0.021	***	0.984	0.023	
USB NH Other	1.314	0.055	***	1.243	0.051	***	1.301	0.054	***
USB Hispanic	1.030	0.038		1.010	0.037		1.057	0.039	
Puerto Rican	2.058	0.140	***	2.053	0.141	***	2.058	0.139	***
Haitian Black < 10 Years	0.205	0.113	**	0.242	0.135	*	0.237	0.132	**
Haitian Black $\geq$ 10 Years	0.536	0.134	*	0.563	0.138	*	0.586	0.145	*
Jamaican Black < 10 Years	0.694	0.224		0.731	0.234		0.775	0.249	
Jamaican Black $\geq$ 10 Years	0.578	0.084	***	0.586	0.088	***	0.615	0.091	***
Trinidadian & Tobagoan Black < 10 Years	0.404	0.324		0.406	0.333		0.440	0.355	
Trinidadian & Tobagoan Black $\geq$ 10 Years	0.335	0.118	**	0.331	0.116	**	0.350	0.123	**
Guyanese Black < 10 Years	0.754	0.495		0.801	0.554		0.893	0.608	
Guyanese Black $\geq$ 10 Years	0.573	0.184	+	0.577	0.187	+	0.615	0.198	
Central/South African < 10 Years	1.000			1.000			1.000		
Central/South African $\geq$ 10 Years	0.078	0.080	*	0.082	0.084	*	0.084	0.086	*
East African < 10 Years	0.088	0.037	***	0.102	0.043	***	0.103	0.044	***
East African $\geq$ 10 Years	0.334	0.103	***	0.366	0.114	***	0.379	0.118	**
West African < 10 Years	0.504	0.181	+	0.563	0.198		0.574	0.205	
West African $\geq$ 10 Years	0.267	0.077	***	0.267	0.077	***	0.287	0.083	***
Other Foreign-Born < 10 Years	0.300	0.021	***	0.313	0.022	***	0.332	0.023	***
Other Foreign-Born $\geq$ 10 Years	0.537	0.021	***	0.529	0.021	***	0.567	0.022	***

	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.142	0.003	***	0.150	0.003	***	0.141	0.003	***
Haitian Black < 10 Years	0.033	0.018	+	0.041	0.022	+	0.038	0.020	+
Haitian Black ≥ 10 Years	0.082	0.019	***	0.090	0.020	***	0.088	0.020	***
Jamaican Black < 10 Years	0.103	0.030	***	0.114	0.032	***	0.113	0.032	***
Jamaican Black ≥ 10 Years	0.088	0.012	***	0.094	0.013	***	0.092	0.012	***
Trinidadian & Tobagoan Black < 10 Years	0.063	0.047		0.067	0.051		0.068	0.051	
Trinidadian & Tobagoan Black ≥ 10 Years	0.053	0.017	**	0.055	0.018	**	0.054	0.018	**
Guyanese Black < 10 Years	0.111	0.065	+	0.124	0.075	+	0.128	0.076	+
Guyanese Black ≥ 10 Years	0.087	0.025	***	0.092	0.027	***	0.092	0.027	***
Central/South African < 10 Years	-	-	-	-	-	-	-	-	-
Central/South African ≥ 10 Years	0.013	0.013		0.014	0.014		0.014	0.014	
East African < 10 Years	0.014	0.006	*	0.018	0.007	*	0.017	0.007	*
East African ≥ 10 Years	0.052	0.015	***	0.061	0.018	***	0.059	0.017	***
West African < 10 Years	0.077	0.025	**	0.090	0.029	**	0.086	0.028	**
West African ≥ 10 Years	0.042	0.012	***	0.045	0.012	***	0.045	0.012	***
Other Foreign-Born < 10 Years	0.047	0.003	***	0.052	0.003	***	0.052	0.003	***
Other Foreign-Born ≥ 10 Years	0.082	0.002	***	0.086	0.003	***	0.085	0.003	***
Hosmer-Lemeshow Goodness of Fit Test	F(25,122 2)	98.9		F(30,121 6)	91.26		F(33,121 3)	103.7	
Prob > F	0			0			0		

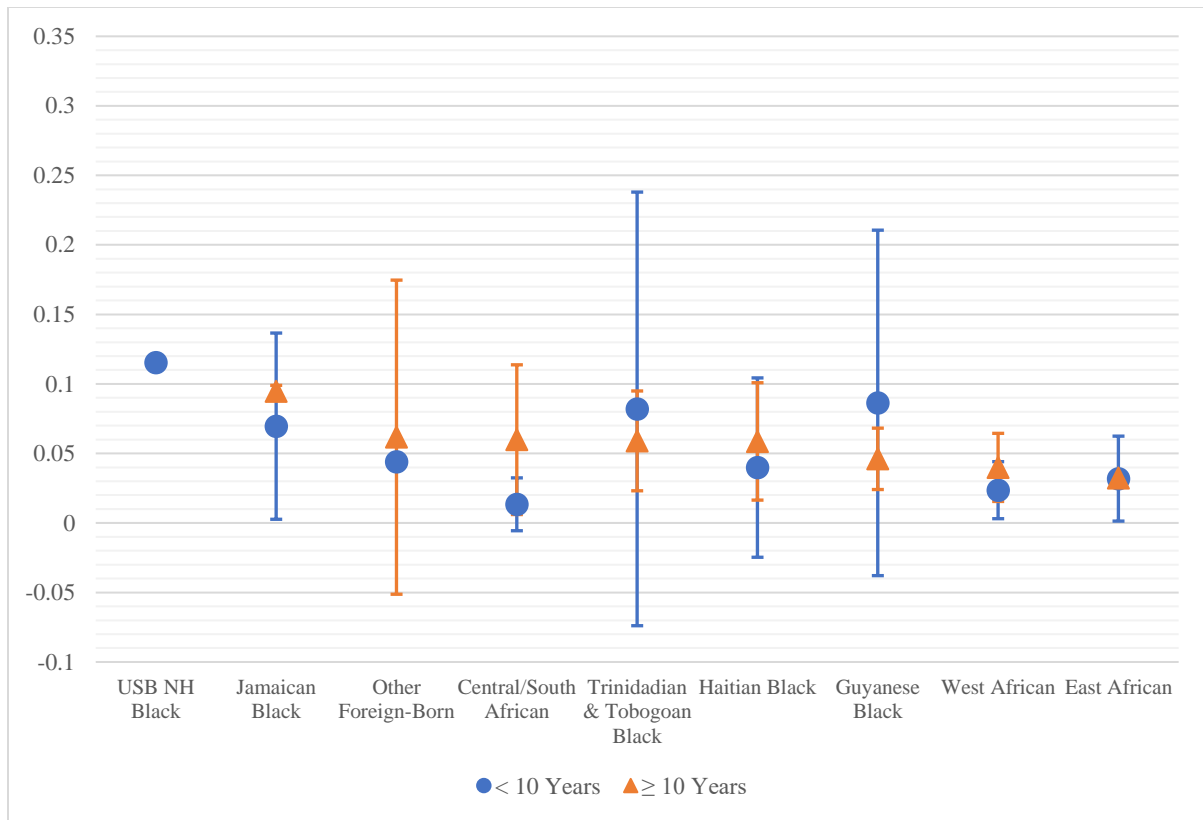
N = 257,881

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

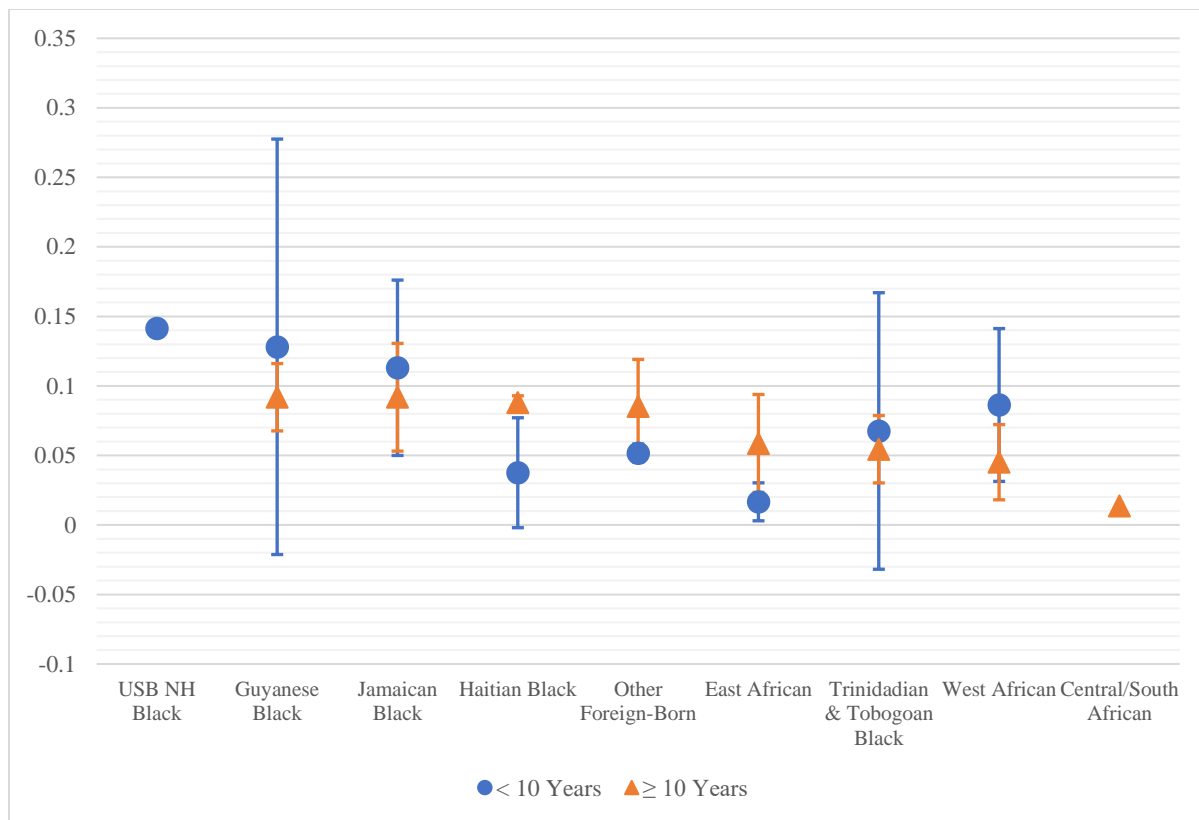
+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Figure 6.4** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**



**Panel B. Women**



### *Overweight/Obese BMI*

In baseline models, U.S.-born non-Hispanic Black men maintain a predicted probability of 73.4% for reporting an overweight or obese BMI (Table 6.9). Relative to this reference group, Haitian (46.1%,  $p < 0.001$ ) and Jamaican (58.0%,  $p < 0.05$ ) men who more recently arrived maintain significantly lower predicted probabilities for an overweight or obese BMI. Among African-origin men, East Africans in both duration categories and more recently arrived West Africans maintain significantly lower predicted probabilities for overweight or obese BMI than the U.S.-born reference. In all other cases, there is no significant difference in predicted probabilities. When comparing Models 1 and 3, I find no changes in statistical significance between the foreign-born samples and the referent.

For women, I find that the predicted probability of reporting overweight or obese BMI is 73.8% for U.S.-born non-Hispanic Black respondents. Among Afro-Caribbean women, tenured



Haitian (68.4%,  $p < 0.001$ ) and Trinidadian & Tobagoan respondents in both duration groups (34% and 63.2%) experience significantly lower predicted probabilities relative to the referent. East Africans in both duration groups (48.2% and 61.8%), alongside recently arrived Central/South (41.7%) and West African (61.0%) women, experience significantly lower predicted probabilities for overweight or obese BMI. Between Models 1 and 3, the predicted probabilities for more tenured Haitian women (68.3%,  $p > 0.05$ ) lose statistical significance while Jamaicans at both duration category gain statistical significance. In nearly every case, and for both men and women, I observe the anticipated relationship between time spent in the United States and the predicted probability for reporting overweight or obese BMI. The only exception to this trend can be seen in Haitian women whose predicted probabilities are nearly identical by duration.

**Table 6.9** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Self-Reported Overweight/Obese BMI Relative to Normal Weight by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.881	0.019	***	0.868	0.019	***	0.852	0.019	***
USB NH Other	0.835	0.034	***	0.817	0.033	***	0.823	0.033	***
USB Hispanic	1.276	0.044	***	1.261	0.043	***	1.231	0.043	***
Puerto Rican	0.931	0.077		0.904	0.073		0.916	0.075	
Haitian Black < 10 Years	0.309	0.113	***	0.304	0.111	***	0.320	0.115	**
Haitian Black ≥ 10 Years	0.762	0.102	*	0.789	0.103	+	0.793	0.106	+
Jamaican Black < 10 Years	0.499	0.137	*	0.469	0.129	**	0.456	0.126	**
Jamaican Black ≥ 10 Years	0.930	0.141		0.935	0.141		0.900	0.136	
Trinidadian & Tobagoan Black < 10 Years	0.630	0.429		0.597	0.382		0.560	0.355	
Trinidadian & Tobagoan Black ≥ 10 Years	0.728	0.182		0.766	0.192		0.743	0.189	

Guyanese Black < 10 Years	0.437	0.188	*	0.409	0.184	*	0.401	0.175	*
Guyanese Black ≥ 10 Years	0.697	0.189		0.706	0.196		0.681	0.189	
Central/South African < 10 Years	0.654	0.246		0.582	0.221		0.642	0.238	
Central/South African ≥ 10 Years	0.849	0.401		0.751	0.347		0.803	0.383	
East African < 10 Years	0.343	0.066	***	0.322	0.063	***	0.344	0.067	***
East African ≥ 10 Years	0.514	0.098	***	0.513	0.095	***	0.535	0.102	***
West African < 10 Years	0.518	0.085	***	0.492	0.081	***	0.533	0.088	***
West African ≥ 10 Years	1.195	0.181		1.140	0.174		1.214	0.187	
Other Foreign-Born < 10 Years	0.533	0.020	***	0.494	0.019	***	0.528	0.020	***
Other Foreign-Born ≥ 10 Years	0.769	0.024	***	0.739	0.023	***	0.747	0.023	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.734	0.004	***	0.739	0.004	***	0.741	0.004	***
Haitian Black < 10 Years	0.461	0.091	***	0.462	0.091	***	0.478	0.090	***
Haitian Black ≥ 10 Years	0.678	0.029	***	0.690	0.028	***	0.694	0.028	***
Jamaican Black < 10 Years	0.580	0.067	***	0.570	0.068	***	0.566	0.068	***
Jamaican Black ≥ 10 Years	0.720	0.031	***	0.725	0.030	***	0.720	0.031	***
Trinidadian & Tobagoan Black < 10 Years	0.635	0.158	***	0.628	0.150	***	0.616	0.150	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.668	0.055	***	0.684	0.054	***	0.680	0.055	***
Guyanese Black < 10 Years	0.547	0.106	***	0.536	0.112	***	0.534	0.108	***
Guyanese Black ≥ 10 Years	0.658	0.061	***	0.666	0.061	***	0.661	0.062	***
Central/South African < 10 Years	0.644	0.086	***	0.622	0.089	***	0.648	0.084	***
Central/South African ≥ 10 Years	0.701	0.099	***	0.680	0.101	***	0.697	0.101	***
East African < 10 Years	0.486	0.048	***	0.476	0.049	***	0.496	0.048	***
East African ≥ 10 Years	0.587	0.046	***	0.591	0.045	***	0.605	0.046	***
West African < 10 Years	0.589	0.040	***	0.581	0.040	***	0.604	0.040	***
West African ≥ 10 Years	0.767	0.027	***	0.763	0.027	***	0.777	0.026	***
Other Foreign-Born < 10 Years	0.595	0.008	***	0.582	0.008	***	0.602	0.008	***
Other Foreign-Born ≥ 10 Years	0.680	0.005	***	0.676	0.005	***	0.681	0.005	***
Hosmer-Lemeshow Goodness of Fit Test	F(25,1221)	115.870		F(30,1216)	107.800		F(33,1213)	111.890	
Prob > F	0.000			0.000			0.000		

N = 206,721

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.438	0.009	***	0.426	0.008	***	0.451	0.009	***

USB NH Other	0.439	0.017	***	0.433	0.018	***	0.451	0.018	***
USB Hispanic	0.667	0.020	***	0.692	0.021	***	0.684	0.020	***
Puerto Rican	0.607	0.039	***	0.601	0.039	***	0.610	0.039	***
Haitian Black < 10 Years	0.812	0.243		0.789	0.242		0.782	0.239	
Haitian Black ≥ 10 Years	0.768	0.098	*	0.762	0.096	*	0.778	0.098	*
Jamaican Black < 10 Years	0.583	0.148	*	0.536	0.137	*	0.538	0.137	*
Jamaican Black ≥ 10 Years	0.801	0.087	*	0.759	0.082	*	0.795	0.086	*
Trinidadian & Tobagoan Black < 10 Years	0.183	0.056	***	0.182	0.058	***	0.184	0.054	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.609	0.135	*	0.574	0.127	*	0.597	0.130	*
Guyanese Black < 10 Years	0.674	0.329		0.651	0.349		0.656	0.342	
Guyanese Black ≥ 10 Years	0.870	0.206		0.839	0.191		0.871	0.205	
Central/South African < 10 Years	0.253	0.121	**	0.246	0.107	***	0.253	0.117	**
Central/South African ≥ 10 Years	1.065	0.538		0.818	0.402		0.966	0.484	
East African < 10 Years	0.330	0.075	***	0.327	0.078	***	0.324	0.077	***
East African ≥ 10 Years	0.574	0.130	*	0.581	0.124	*	0.601	0.132	*
West African < 10 Years	0.554	0.094	***	0.497	0.085	***	0.535	0.092	***
West African ≥ 10 Years	1.053	0.180		0.950	0.167		1.051	0.183	
Other Foreign-Born < 10 Years	0.250	0.010	***	0.216	0.008	***	0.244	0.009	***
Other Foreign-Born ≥ 10 Years	0.371	0.010	***	0.350	0.009	***	0.376	0.010	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.738	0.004	***	0.744	0.003	***	0.735	0.004	***
Haitian Black < 10 Years	0.696	0.063	***	0.696	0.065	***	0.684	0.066	***
Haitian Black ≥ 10 Years	0.684	0.027	***	0.689	0.027	***	0.683	0.027	***
Jamaican Black < 10 Years	0.622	0.060	***	0.609	0.060	***	0.599	0.061	***
Jamaican Black ≥ 10 Years	0.693	0.023	***	0.688	0.023	***	0.688	0.023	***
Trinidadian & Tobagoan Black < 10 Years	0.340	0.068	***	0.346	0.072	***	0.338	0.066	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.632	0.051	***	0.625	0.052	***	0.623	0.051	***
Guyanese Black < 10 Years	0.656	0.110	***	0.654	0.122	***	0.645	0.120	***
Guyanese Black ≥ 10 Years	0.711	0.049	***	0.709	0.047	***	0.707	0.049	***
Central/South African < 10 Years	0.417	0.117	***	0.417	0.106	***	0.412	0.112	***
Central/South African ≥ 10 Years	0.750	0.095	***	0.704	0.102	***	0.728	0.099	***
East African < 10 Years	0.482	0.057	***	0.488	0.059	***	0.473	0.059	***
East African ≥ 10 Years	0.618	0.053	***	0.628	0.050	***	0.625	0.052	***
West African < 10 Years	0.610	0.040	***	0.591	0.041	***	0.597	0.041	***
West African ≥ 10 Years	0.748	0.032	***	0.734	0.034	***	0.744	0.033	***
Other Foreign-Born < 10 Years	0.414	0.008	***	0.386	0.008	***	0.403	0.008	***
Other Foreign-Born ≥ 10 Years	0.511	0.004	***	0.504	0.005	***	0.510	0.004	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,1221)	296.57		F(31,1216)	242.23		F(34,1213)	281.36	
Prob > F		0			0			0	

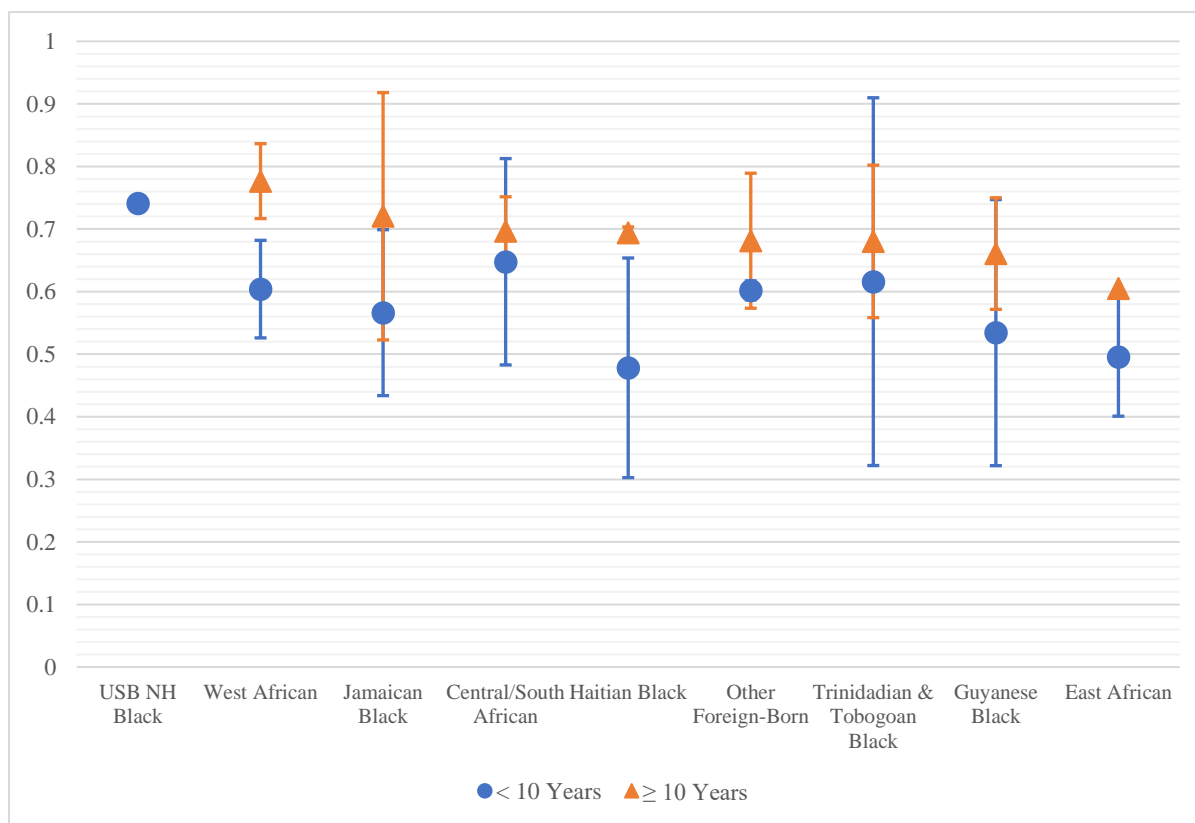
N = 242,703

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

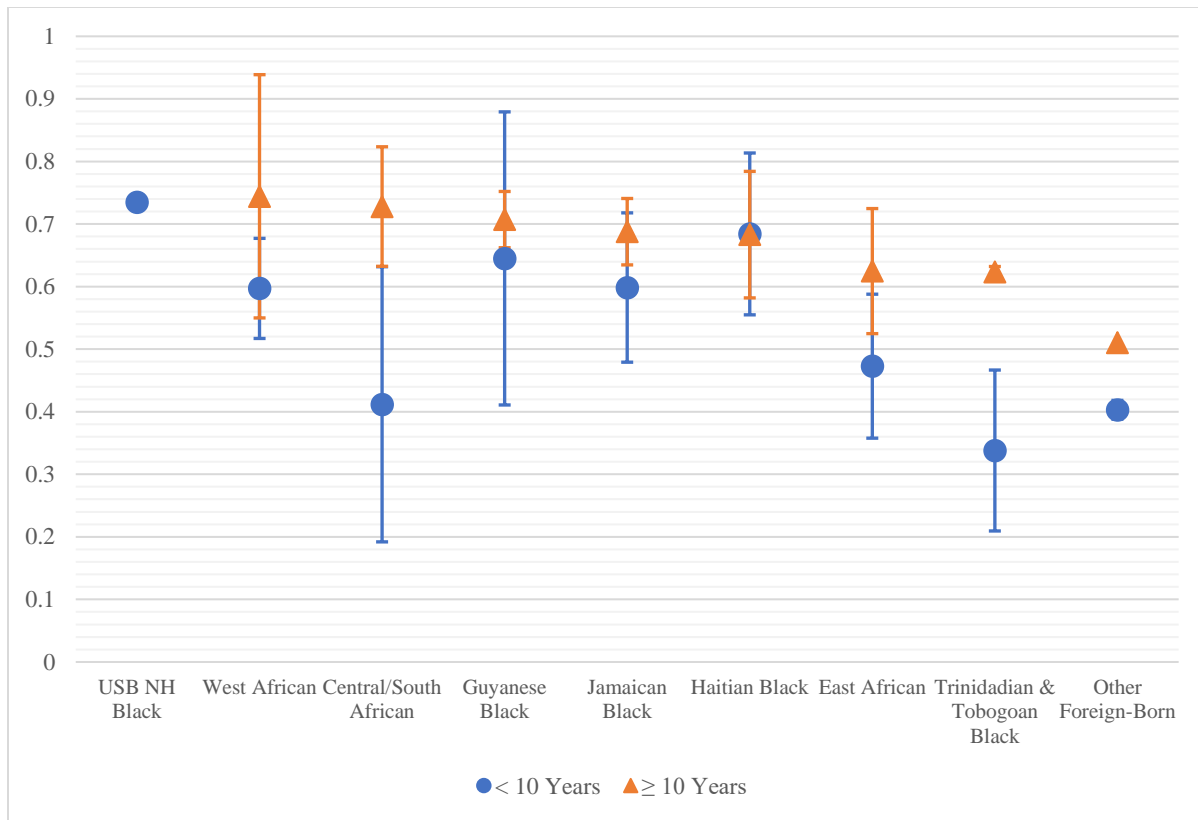
+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Figure 6.5** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Self-Reported Overweight/Obese BMI Relative to Normal Weight by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**



**Panel B. Women**



### *Depressive Symptoms*

In Table 6.10, I present the results of sex-stratified sample-weighted, binomial logistic regression models for depressive symptoms. Based on results from Panel A, I find that U.S.-born non-Hispanic Black men maintain a predicted probability of 6.9% for reporting depressive symptoms. Relative to this reference group, I observe three Afro-Caribbean groups who maintain significantly lower probabilities for depressive symptoms: more recently arrived Haitians (1.7%,  $p < 0.001$ ), tenured Trinidadian & Tobagoan (2.3%,  $p < 0.01$ ), and tenured Guyanese (2.7%,  $p < 0.01$ ). Among African-origin men, I find that more recently arrive Central/South African (3.0%,  $p < 0.05$ ) and East African (1.7%,  $p < 0.001$ ) men, as well as tenured West African men (4.5%,  $p < 0.05$ ), experience significantly lower predicted probabilities for depressive symptoms than U.S.-born non-Hispanic Black men. Between Models 1 and 3 for men, I find that more recently arrived Central/South African men experience a loss of statistical significance in their predicted

probability for depressive symptoms. Outside of this change, there is little fluctuation in findings between the two models.

Relative to U.S.-born non-Hispanic Black women (9.4%), tenured Jamaican (6.1%,  $p < 0.001$ ), Trinidadian & Tobagoan (3.9%,  $p < 0.001$ ), Guyanese (2.2%,  $p < 0.001$ ), and West Africans (6.2%,  $p < 0.01$ ) as well as recently arrived East Africans (3.2%,  $p < 0.001$ ) maintain significantly lower predicted probabilities for reporting depressive symptoms.

In Panel B, tenured Jamaican women are the only respondents to experience a similar loss of statistical significance. In this final model, nearly all groups of men experience the anticipated rise in depressive symptoms with time spent in the United States. Only Guyanese and West African men maintain a lower predicted probability for depression for their more tenured migrants (2.6% and 4.8%, respectively) relative to their more recently arrive peers (8.7% and 5.7%, respectively). This trend is more common amongst women. Indeed, Haitian, Trinidadian & Tobagoan, and Guyanese women all appear to experience higher predicted probabilities for depressive symptoms as their time spent in the United States increases. A similar trend is present among Jamaicans, who show no change with increased duration. When comparing men to women within the same origin categories, I observe only one statistically significant difference for Haitians who most recently arrived.

**Table 6.10** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

**Panel A. Men**

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.104	0.037	**	0.885	0.031	***	1.070	0.037	+

USB NH Other	1.360	0.092	***	1.268	0.084	***	1.374	0.093	***
USB Hispanic	1.071	0.055		1.032	0.054		1.129	0.059	*
Puerto Rican	1.662	0.196	***	1.557	0.177	***	1.643	0.190	***
Haitian Black < 10 Years	0.231	0.154	*	0.386	0.249		0.323	0.217	+
Haitian Black ≥ 10 Years	0.908	0.199		1.026	0.221		1.120	0.248	
Jamaican Black < 10 Years	0.636	0.421		0.695	0.459		0.712	0.463	
Jamaican Black ≥ 10 Years	0.671	0.169		0.685	0.172		0.750	0.188	
Trinidadian & Tobagoan Black < 10 Years	1.000			1.000			1.000		
Trinidadian & Tobagoan Black ≥ 10 Years	0.324	0.233		0.273	0.192	+	0.327	0.225	
Guyanese Black < 10 Years	1.395	1.273		1.349	1.186		1.407	1.343	
Guyanese Black ≥ 10 Years	0.373	0.235		0.350	0.205	+	0.399	0.226	
Central/South African < 10 Years	0.424	0.279		0.399	0.278		0.417	0.287	
Central/South African ≥ 10 Years	1.757	1.102		1.492	0.895		2.014	1.260	
East African < 10 Years	0.234	0.138	*	0.280	0.162	*	0.297	0.172	*
East African ≥ 10 Years	0.883	0.290		0.903	0.301		1.032	0.342	
West African < 10 Years	0.724	0.219		0.795	0.272		0.890	0.296	
West African ≥ 10 Years	0.641	0.166	+	0.588	0.155	*	0.737	0.192	
Other Foreign-Born < 10 Years	0.619	0.043	***	0.574	0.041	***	0.666	0.048	***
Other Foreign-Born ≥ 10 Years	0.818	0.041	***	0.741	0.036	***	0.873	0.044	**
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.069	0.002	***	0.079	0.002	***	0.064	0.002	***
Haitian Black < 10 Years	0.017	0.011		0.032	0.020		0.022	0.014	
Haitian Black ≥ 10 Years	0.063	0.013	***	0.081	0.016	***	0.071	0.014	***
Jamaican Black < 10 Years	0.045	0.028		0.056	0.035		0.046	0.029	
Jamaican Black ≥ 10 Years	0.047	0.011	***	0.055	0.013	***	0.049	0.012	***
Trinidadian & Tobagoan Black < 10 Years	-	-	-	-	-	-	-	-	-
Trinidadian & Tobagoan Black ≥ 10 Years	0.023	0.016		0.023	0.016		0.022	0.015	
Guyanese Black < 10 Years	0.093	0.077		0.103	0.082		0.087	0.076	
Guyanese Black ≥ 10 Years	0.027	0.016		0.029	0.017	+	0.026	0.015	+
Central/South African < 10 Years	0.030	0.019		0.033	0.022		0.028	0.018	
Central/South African ≥ 10 Years	0.115	0.063	+	0.113	0.060	+	0.121	0.066	+
East African < 10 Years	0.017	0.010	+	0.023	0.013	+	0.020	0.011	+
East African ≥ 10 Years	0.061	0.019	***	0.072	0.022	***	0.066	0.020	***
West African < 10 Years	0.051	0.014	***	0.064	0.020	**	0.057	0.018	***
West African ≥ 10 Years	0.045	0.011	***	0.048	0.012	***	0.048	0.012	***
Other Foreign-Born < 10 Years	0.044	0.003	***	0.047	0.003	***	0.043	0.003	***
Other Foreign-Born ≥ 10 Years	0.057	0.002	***	0.060	0.002	***	0.056	0.002	***
Hosmer-Lemeshow Goodness of Fit Test	F(25,1221)	124.190		F(30,1216)	115.180		F(33,1213)	156.670	
Prob > F		0			0			0	

N = 207,627

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.168	0.029	***	0.847	0.021	***	1.082	0.027	**
USB NH Other	1.334	0.067	***	1.108	0.054	*	1.281	0.064	***
USB Hispanic	1.089	0.043	*	1.052	0.041		1.176	0.046	***
Puerto Rican	1.639	0.122	***	1.665	0.121	***	1.724	0.128	***
Haitian Black < 10 Years	0.927	0.304		1.257	0.439		1.216	0.426	
Haitian Black ≥ 10 Years	0.933	0.187		1.040	0.202		1.161	0.232	
Jamaican Black < 10 Years	0.651	0.271		0.676	0.273		0.759	0.313	
Jamaican Black ≥ 10 Years	0.633	0.105	**	0.652	0.110	*	0.752	0.127	+
Trinidadian & Tobagoan Black < 10 Years	1.046	0.614		1.063	0.661		1.329	0.813	
Trinidadian & Tobagoan Black ≥ 10 Years	0.387	0.154	*	0.369	0.151	*	0.437	0.176	*
Guyanese Black < 10 Years	0.655	0.440		0.646	0.426		0.849	0.545	
Guyanese Black ≥ 10 Years	0.221	0.109	**	0.228	0.110	**	0.263	0.126	**
Central/South African < 10 Years	0.849	0.588		1.105	0.734		1.148	0.760	
Central/South African ≥ 10 Years	1.011	0.644		0.978	0.586		1.215	0.759	
East African < 10 Years	0.321	0.120	**	0.401	0.144	*	0.418	0.156	*
East African ≥ 10 Years	0.774	0.307		0.940	0.389		1.069	0.439	
West African < 10 Years	0.565	0.223		0.643	0.247		0.731	0.287	
West African ≥ 10 Years	0.633	0.137	*	0.593	0.131	*	0.774	0.167	
Other Foreign-Born < 10 Years	0.673	0.039	***	0.595	0.034	***	0.768	0.045	***
Other Foreign-Born ≥ 10 Years	0.958	0.037		0.841	0.032	***	1.068	0.042	+
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.094	0.002	***	0.116	0.002	***	0.091	0.002	***
Haitian Black < 10 Years	0.088	0.026	***	0.142	0.043	***	0.108	0.034	***
Haitian Black ≥ 10 Years	0.088	0.016	***	0.120	0.021	***	0.104	0.019	***
Jamaican Black < 10 Years	0.063	0.025	*	0.082	0.030	**	0.070	0.027	**
Jamaican Black ≥ 10 Years	0.061	0.010	***	0.079	0.012	***	0.070	0.011	***
Trinidadian & Tobagoan Black < 10 Years	0.098	0.052	+	0.123	0.067	+	0.117	0.063	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.039	0.015	**	0.046	0.018	**	0.042	0.016	**
Guyanese Black < 10 Years	0.063	0.040		0.078	0.048	+	0.078	0.046	+
Guyanese Black ≥ 10 Years	0.022	0.011	*	0.029	0.014	*	0.026	0.012	*
Central/South African < 10 Years	0.081	0.051		0.127	0.074	+	0.103	0.061	+
Central/South African ≥ 10 Years	0.095	0.055	+	0.114	0.061	+	0.108	0.060	+
East African < 10 Years	0.032	0.012	**	0.050	0.017	**	0.040	0.014	**



East African $\geq 10$ Years	0.074	0.027	**	0.110	0.041	**	0.096	0.036	**
West African < 10 Years	0.055	0.021	**	0.078	0.028	**	0.068	0.025	**
West African $\geq 10$ Years	0.062	0.012	***	0.072	0.015	***	0.072	0.014	***
Other Foreign-Born < 10 Years	0.065	0.003	***	0.073	0.004	***	0.071	0.004	***
Other Foreign-Born $\geq 10$ Years	0.090	0.002	***	0.100	0.003	***	0.096	0.003	***
Hosmer-Lemeshow Goodness of Fit Test	F(26,1221)	181.52		F(31,1216)	178.42		F(34,1213)	238.84	
Prob > F		0			0			0	

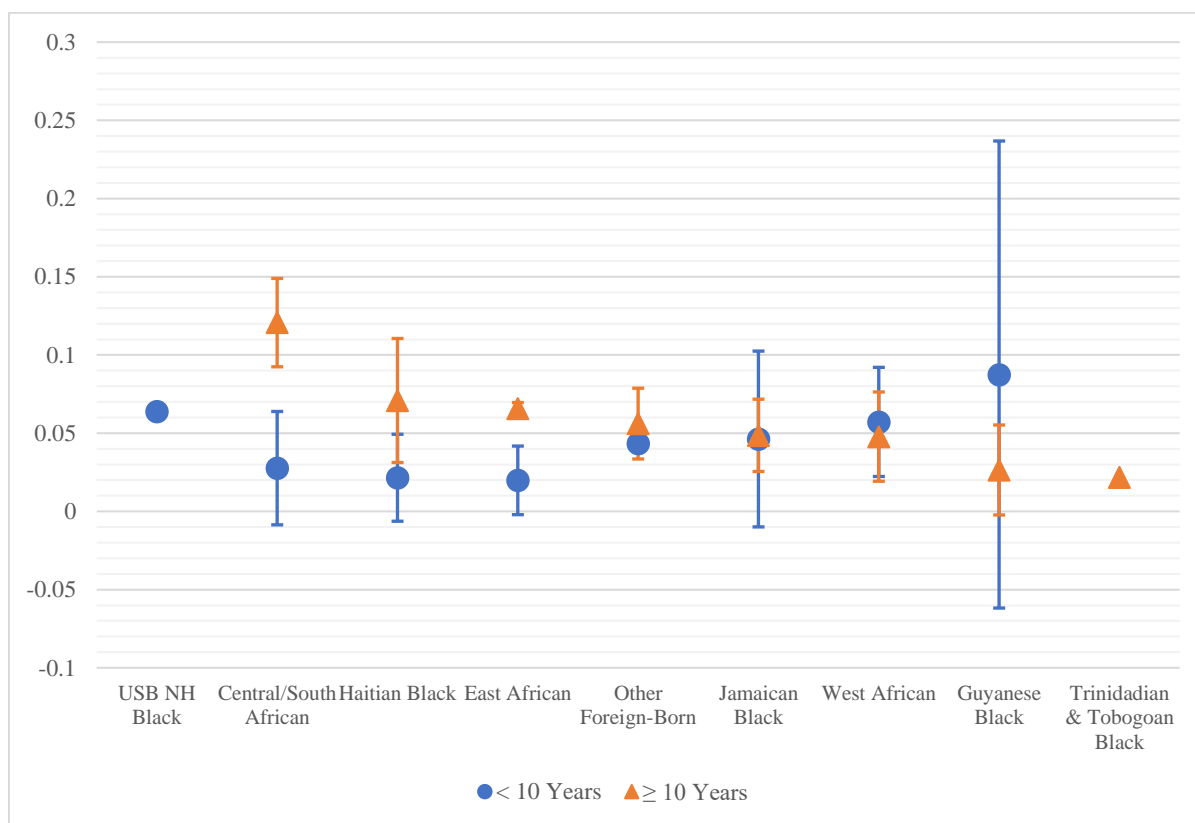
$N = 255,178$

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

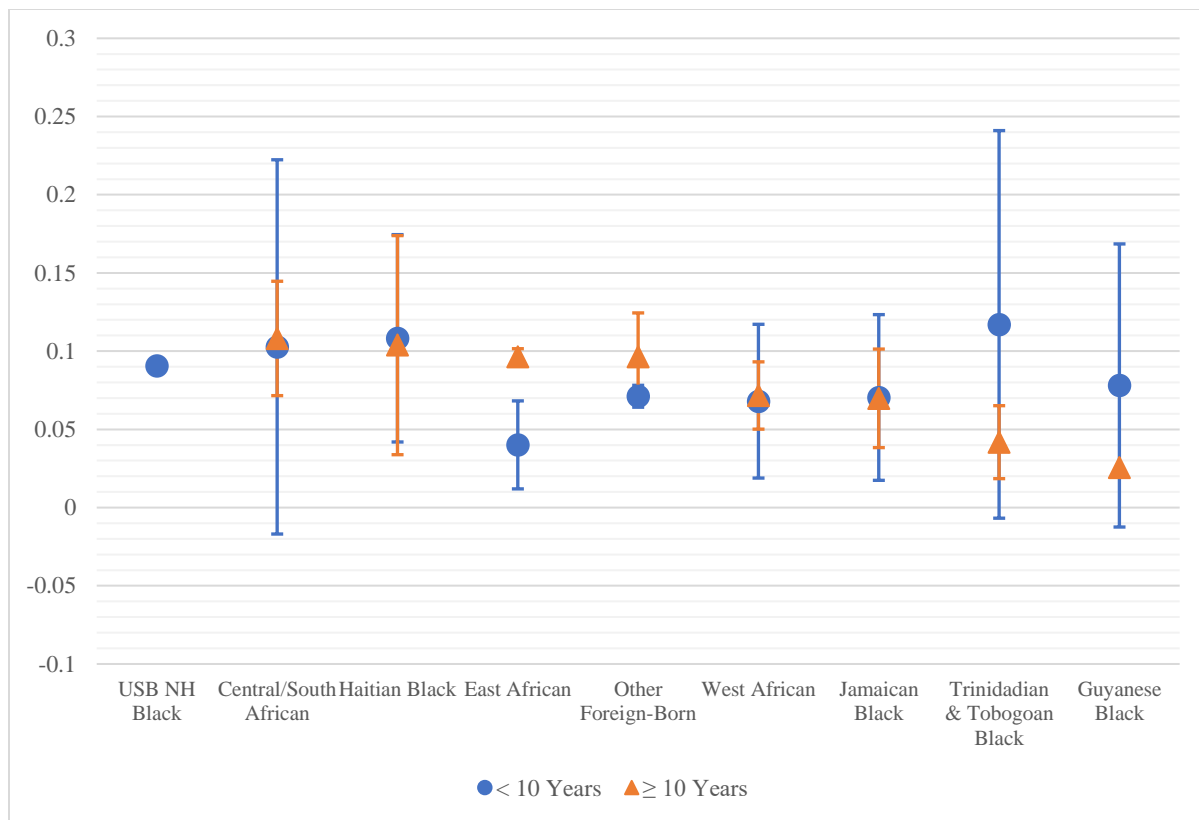
+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Figure 6.6** Results of Sex-Stratified Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults 18-85+, National Health Interview Survey 2000-2018

#### Panel A. Men



#### Panel B. Women



## Discussion

### *Hypothesis 1: Within-Sex Differences*

In this chapter, I use self-reported, cross-sectional health data from the 2000-2018 waves of the NHIS to investigate sex-based differences in the health of several Afro-Caribbean and African-origin groups living in the United States. Comparing U.S.-born Black men to Afro-Caribbean men, I observe partial support for my first hypothesis. Most Afro-Caribbeans display significantly lower probabilities for hypertension and no groups show differences for pre-diabetes or diabetes. The results for self-rated health, asthma, body mass index, and depressive symptoms vary more widely and across national-origin groups. For example, Jamaicans and Guyanese display significant increases across duration in their probability of reporting poor or fair self-rated health. Like men, there are consistent findings across hypertension and pre-diabetes/diabetes for women. Beyond this, trends tend to be within national origin rather than by

health outcome. For example, Guyanese women in either duration category show no significant differences from U.S.-born non-Hispanic Black women for all outcomes except depressive symptoms.

Turning to the African-origin sample, I find more consistent trends by regional origin among men. Central/South Africans consistently show no significant difference from the U.S.-born non-Hispanic Black sample. West African men are generally healthier than their U.S.-born peers. Indeed, West African men exhibit significantly lower predicted probabilities for poor/fair health, hypertension, and asthma, regardless of duration. East African men appear to be the healthiest of the three regional-origin groups. Together, and in line with existing research (Hammond et al., 2011), East and West African men display better health across the greatest number of health outcomes than their U.S.-born referent.

Taken together, these findings show mixed support for the presence of an immigrant health advantage across all outcomes and for both sexes. This is the core perspective underlying my first hypothesis. There are several instances where the health of Afro-Caribbean and African-origin men and women does not differ significantly from that of their same-sex, U.S.-born peers. This is an important finding because it highlights key variation among Afro-Caribbean men and women based on their national origin.

There are multiple instances where more recently arrived migrants display higher predicted probabilities for health outcomes than their tenured peers. This is a rather unanticipated finding as it is a contradiction to the anticipated duration-health relationship (Antecol & Bedard, 2006; Frisbie et al., 2001; Goel et al., 2004; Jasso et al., 2004; Palarino, 2021; Urquia et al., 2012; Van Hook et al., 2018). Men from Trinidad & Tobago and Guyana as well as women from Jamaica, Trinidad & Tobago, and Guyana display declines in the predicted probabilities for

asthma with increased duration. While these declines are not always statistically significant, they do point toward an interesting trend. One potential explanation for this finding is increasing prevalence of asthma throughout the Caribbean, resulting in a higher prevalence of asthma in more recently arrived migrants (Gowrie et al., 2016). Another explanation, in line with this upwards trend, is that less health immigrants are able to migrate following the establishment of immigrant flows that ease the financial, social, and health burden of migration.

While less common than among Afro-Caribbeans, there are some instances of the same trend for African-origin groups. For example, Central/South African women experience a decline in their predicted probability for reporting poor/fair self-rated health from 18.5% to 5.8% for more recently arrived and more tenured respondents, respectively. I also observe this for self-rated health among Central/South African men, pre-diabetes/diabetes for East African men, and depressive symptoms for West African men. The alignment of self-rated health for men and women suggests that this group of immigrants may experience consistently improving self-rated health with increased time in the United States. While this may not necessarily correspond with more physiological measures of health or wellbeing, it does paint a picture of worse perceived health upon arrival.

### *Hypothesis 2: Within-Origin Differences*

Contrary to my second hypothesis, I find no noteworthy differences in the predicted probabilities for each health outcome when comparing women and men of the same national or regional origin. This is also true for each duration category. These findings are quite interesting, given that much of the extant literature shows that male migrants earn more and experience fewer sex-based discriminatory behaviors than female migrants (Corra & Kimuna, 2009; Erving, 2011;

Hammond et al., 2011). Based on these findings, one may reasonably expect that men would be healthier, on average, than women. Instead, I observe findings that more closely align with those reported in Erving (2011). Indeed, here, Erving reports that Afro-Caribbean women show worse self-rated health, but that there is no noteworthy difference between Afro-Caribbean men and women in more physiological measures of health. One potential explanation for these findings is that, despite clear differences in social context in both their origin and destination countries, men and women of the same national or region origin have similar lived experiences in the United States. This may not be true for all groups; however, the general findings of these analyses lend themselves to this as a possible explanation. Further research using larger samples of Afro-Caribbean and African-origin immigrants alongside qualitative approaches to assess the lived experiences of these migrants could provide a better understanding of this trend.

## **Conclusion**

In this chapter, I examine the moderating role of sex in the relationship between national origin and health for Afro-Caribbean and African-origin immigrants in the United States. Generally, I find varying trends in my within-sex analyses. Further, I observe few significant differences when comparing men and women of the same national origin. Taken together, these findings inform the existing body of research in several ways. First, I directly engage with questions surround sex and the way it may impact the health of Black immigrants in the United States. This is a relatively under-developed area of investigation. My findings suggest that there are few instances where sex differences are statistically significant. In turn, sex may not play as large of a role in predicting the health of these immigrant groups than for their U.S.-born peers. Second, these findings continue to engage with the immigrant health advantage literature. Generally,

there remains evidence of an immigrant health advantage by sex. With some exceptions, Afro-Caribbean and African-origin men and women experience better health than their U.S.-born, same-sex peers. Despite these general trends, there are unique contradictions to the duration-health relationship. Specifically, several Afro-Caribbean groups show signs of improving health with increased duration. Third, my findings continue to inform cumulative disadvantage theory. Based on existing work, one may reasonably expect that women's health will be significantly worse and deteriorate more rapidly than men based on exposures to socioeconomic disadvantages and other health insults across their life course. There is little evidence of that in these findings. Indeed, Afro-Caribbean and African-origin men and women do not differ significantly from one another in most measures of health. Finally, these findings build on the current discussion of health variation among Black immigrants. Specifically, there are few trends that transcend national origin groups. Rather, each group displays different relationships to the U.S.-born referent. These findings continue to emphasize that one must use caution when categorizing or aggregating Afro-Caribbean and African-origin immigrants.

## **Chapter 7: Conclusion**

The United States accepts more immigrants than any other nation. In recent years, the composition of that immigrant population has changes. Since the mid-1970s, the foreign-born Black population has burgeoned and, as the Black population of the United States diversifies, it becomes increasingly important to understand the life circumstances of these immigrants. Despite this rapid growth and increased heterogeneity, the health of Black immigrants remains relatively underexamined in the broader context of immigrant health literature.

In this dissertation, I address this gap by setting forth three research questions explicitly devoted to studying the health of Black Caribbean and Sub-Saharan African migrants in the United States. First, I examine the health of Black immigrants based on their national or detailed regional origin. Second, I interrogate the role of time in the immigrant-health relationship. Specifically, I use arrival cohorts to parse out how increasing tenure in the United States impacts the health of these Black immigrants. Third, I assess the moderating role of sex for the health of Black immigrants relative to their U.S.-born counterparts and to other Black immigrants. While these questions cannot address every outstanding area of study, they do serve as a step towards better understanding the various health outcomes of these populations. In what follows, I address the limitations of my dissertation, engage with the contributions of my work, highlight key conclusions from my analyses, and propose future lines of inquiry.

### **Conclusions and Contributions**

#### *Empirical Conclusions and Contributions*

One of the most distinct contributions from my dissertation to the larger immigrant health literature is the disaggregation of the dauntingly large foreign-born Black population into more

refined, informative categories. My ability to capture the experiences of several national-origin groups from the Caribbean and many regional groups from Sub-Saharan Africa allows for a better understanding of how each group experiences health and how these experiences may differ both when compared to the U.S.-born Black population and to other immigrants, Black or otherwise. I also find that the ways in which we categorize nations makes a difference in the ways we observe their health outcomes. In this case, I am speaking directly to the categorization approaches for Sub-Saharan Africa. By using the U.N. geographic categories, categories based on GDP/Educational index, or some other factors, we risk biasing our results. One must take these factors into consideration when conducting research on these immigrants and many other groups (e.g., immigrants originating from Eastern Asia). These differences only serve to reinforce the notion of refined categories for immigrant groups. Ideally, researchers would use national origin to conduct any analyses of these immigrant groups.

These contributions build on work from prominent scholars in the field of Black immigrant health like Yvonne Commodore-Mensah, Irma Elo, and Tod Hamilton. They also respond directly to these authors' calls to action to identify better methods of categorizing this large, heterogenous population of immigrants (Commodore-Mensah et al., 2015; Hamilton, 2019). By understanding that these groups differ notably from one another, researchers can better situate their approaches and can better equip themselves to investigate the differential factors influencing health and mortality in this growing population. Further, by obtaining refined estimates of disease prevalence, clinicians and public health officials are better able to respond to the health needs of each group. These contributions are bolstered by my second research question on the role of time and its importance for the health experiences of Black immigrants in the United States.



Without question, time since arrival is an essential predictor of immigrant health (Abraído-Lanza et al., 2005; Akresh, 2007; Antecol & Bedard, 2006; Kaushal, 2009; Riosmena & Dennis, 2012; Riosmena et al., 2014; Ro, 2014; Palarino, 2021; Urquia et al., 2012; Van Hook et al., 2018). One of the central barriers to our understanding of this component of immigrant health in the Black immigrant population is data availability. Specifically, refined data on time since arrive are scant. I am able to fill this gap in the literature and engage directly in a conversation about the role of duration on immigrant health. Following the lead of authors like Kaushal (2009) and the work of Yang & Land (2013), I use models explicitly devoted to capturing the associations between tenure in the United States and health outcomes across arrival cohorts and while considering the effects of age. These time-focused models allow for a furthered investigation into the true effect of duration on health<sup>18</sup>. I find that there are few differences in this association when looking across immigrant regional-origin groups. Rather, these groups show largely similar changes associated with duration and are clustered quite closely to one another. I also find that there are few differences when looking at different arrival cohorts for Caribbean or Sub-Saharan African immigrants, respectively. These findings indicate that duration is a strong factor in predicting the health of immigrants in the United States and that there are few differences based on national origin. Together, these findings point toward a potentially shared immigrant experience with regards to time and deteriorating health.

This dissertation may contribute to the fields of clinical practice and public health. For instance, over one-third of this U.S.-born Black sample reports having hypertension; however, only 31% of Jamaicans and 11% of East Africans report having the same condition. If we were

---

<sup>18</sup> Note that the NHIS data used in these analyses are purely cross-sectional. As such, I cannot assess change over time. Any conclusions between duration and health are based on cross-sectional point estimates and synthetic cohorts.

to look at only the trend among the U.S.-born population, these nuances fall by the wayside. If we consider these differences, clinicians can better understand the risks experienced by different Black populations and public health officials may be better positioned to employ initiatives targeting each population for screening, management, and, ideally, prevention.

Importantly, the contributions of this dissertation do not stop with our understanding of Black immigrant health. In most cases, U.S-born Black Americans face disproportionately high rates of chronic health conditions and carry an uneven burden of premature mortality. By establishing a more well-rounded understanding of Black immigrant health, researchers may better understand the health and mortality of the entire Black American population, regardless of nativity. Knowing what we know about immigrant health, namely that immigrants frequently display a health advantage, it is essential to know how the health of Black immigrants may impact these trends and disparities. For example, if it is the case that Black immigrants experience significantly lower rates of diabetes and cardiovascular health conditions, one would want to acknowledge that when assessing diabetes and cardiovascular disease prevalence in the Black population. Without adequately acknowledging these points, one may draw an inappropriate conclusion from seemingly improving trends in Black American health. It may not be the case that Black Americans are, at large, experiencing improving health; rather, the growing population of Black immigrants are artificially improving prevalence estimates. Staying informed of the trends and, more importantly, differences within the Black population helps to ensure accurate estimation in future research.

### *Theoretical Conclusions and Contributions*

#### The Immigrant Health Advantage

This dissertation draws heavily on the immigrant health advantage theoretical perspective. In the simplest terms, this perspective highlights better-than-expected health outcomes among immigrants despite disproportionate exposure of socioeconomic barriers. To date, a sizable portion of extant literature on this topic focuses on the Mexican and, to a lesser extent, other Hispanic populations. This comes as little surprise, given that these are the largest immigrant populations in the United States. As migration from regions like Mexico decline, and migration from other regions of the world increase, it is important to understand how this perspective may or may not apply to the experiences of other immigrant populations.

To date, much of the existing research on the health of Black immigrants supports the notion of an immigrant health advantage when compared to the U.S.-born non-Hispanic Black population (see Commodore-Mensa et al., 2017; Ford et al., 2015; Mehta et al., 2015; Palarino, 2021). There are also studies that find less consistent evidence (see O'Connor et al., 2014). In each chapter of this dissertation, I find compelling evidence in support of an immigrant health advantage for Black immigrants when compared to their U.S.-born peers. In many cases, this trend holds true for national- or regional-origin groups.

In Chapter 4, I examine potential sources of variation in the health of Afro-Caribbean and African-origin immigrants in the United States. Here, I place emphasis on national or regional origin. I find that Haitians, Jamaicans, and Trinidadians & Tobagoans all show signs an immigrant health advantage when compared to their U.S.-born non-Hispanic Black peers. The same is true for East and West Africans. These findings echo existing research and build on it in by disaggregating the widely used categories of “Caribbean” and “African.” By disaggregating these large, slightly ambiguous categories, I highlight a few important points.

First, not all “Caribbean” or “African” immigrant groups display evidence of an immigrant health advantage. Stated differently, “Black immigrants” do not show a consistent shared health experience. Rather, each group shows its own trends and associations when compared to the U.S.-born Black sample and to other racially Black immigrants. Guyanese and Central/South African immigrants do not show consistent evidence of an advantage when compared to the U.S.-born referent. One potential explanation for the apparent lack of advantage in these two groups is small sample size. Guyanese and Central/South Africans had two of the smallest sample sizes of any Afro-Caribbean or Sub-Saharan African group. As such, the estimates derived from my analyses may simply lack the precision necessary to truly capture the health advantage for these groups. Looking back at the results from this chapter, one will notice that the standard deviations for these two groups tend to be large relative to their peers. This may be especially true when breaking immigrants into duration categories, where there were few recently arrived Central/South Africans. This explanation very well may play a role here, as there are signs that point estimates follow the immigrant health advantage trend. The only way to interrogate this explanation would be to obtain data with higher cell counts for these groups or to wait for more data to become available in the NHIS.

Another explanation for this apparent lack of an immigrant health advantage could relate back the lived experiences of these migrants. It may be the case that Guyanese or Central/South African immigrants have different experiences than their peer immigrants. This may reflect distinct contextual differences in the sending region, migration flows, methods of entry into the United States, or where these migrants settle once in the United States. I am unable to effectively interrogate each of these explanations using the existing NHIS data set. For instance, NHIS data do not contain information on pre-migration context or health or mode of entry.

Second, while many show evidence of an immigrant health advantage, the advantages are not the same for each group. For example, Haitian immigrants do not show the same advantages as their East African peers. I also find that the ways in which African nations are categorized impacts the trends observed in several health outcomes. Taken together, these findings emphasize that Caribbean immigrants and African immigrants are not homogenous populations. Rather, members of these aggregate categories display unique health experiences and, as researchers, it is important that we both acknowledge and account for these differences.

Third, duration is not consistently negatively associated with health outcomes for each group. Indeed, there are several cases of inverse relationships between health and duration. This is intriguing, given the importance that the immigrant health advantage places on time since arrival. Instead of the anticipated relationship where more recently arrived migrants display better health than their tenured peers, there are several cases where health improves. This is one example of a direct contribution to our understanding of health among several racially Black immigrant groups.

Finally, I engage with this perspective in my investigation of the moderating role of sex. Interestingly, I find no noteworthy differences in health by sex in this sample. This serves to inform the immigrant health advantage in a very specific way. Namely, that sex is an important consideration in our modeling approaches and discussions of health and immigration. Within this sample, it does not moderate the relationship between national/regional origin and health. Rather, it appears that sex is a key mediator of the relationship between national/regional origin and health.

Taken together, this dissertation contributes directly to ongoing discussions in the immigrant health literature, specifically surrounding Black immigrants. I believe that these

findings begin to fill a noteworthy gap in this growing body of literature by explicitly investigating differences at the national or regional origin levels. By disaggregating the larger categories of “Caribbean” and “African”, I believe we can obtain a more well-rounded understanding of the experiences of these immigrant groups and, therefore, are better equipped to explain, react to, and prepare for the health experiences of these growing populations.

### *The Racial Context of Origin Perspective*

The Racial Context of Origin and Destination is a key component in my approach to studying the health of Black immigrants in the United States (Read & Emmerson, 2005). In short, this perspective emphasizes that it is not solely the racial context of the receiving nation, but that the racial context of the origin nation matter in the reception of race migrants (Read & Emmerson, 2005). In this dissertation, I build on this perspective by investigating Black immigrants explicitly based on national origin, the racial composition of the origin nation, and the languages spoken in the origin nation.

Interestingly, I do not find clear support for this perspective. Those from Black minority nations do not display notably worse health than those from Black majority nations. Those from English-speaking countries do not fare notably better than those from non-English-speaking countries. These findings are not to say that there is no value to this perspective. Nor do these findings undermine the racial context of origin approach. Rather, they serve to refine our understanding of how this perspective can be used. For instance, researchers must acknowledge their limitations in understanding the racial structures of origin nations. Simply understanding the racial composition may not be enough to capture racial hierarchies or the complex social relationships that exist prior to migrating. More detailed data on these relationships and the

experiences of migrants once in the United States can truly help shape our understanding of this perspective and its applicability to the diverse foreign-born Black population of the United States.

### *Cumulative (Dis)Advantage Theory*

In addition to these two perspectives, I engage with cumulative (dis)advantage theory. Quickly summarized, cumulative (dis)advantage theory is a life-course perspective and acknowledges that health, and many other outcomes, are life-long processes. As individuals age, they are exposed to protective health factors and health insults. These factors compound and progressively impact health. In the context of immigrant health, this perspective tends to rely on measures of acculturation. In this case, duration is the key indicator.

I use this perspective primarily in my assessment of the relationship between time in the United States and health. Building off the work of Elo and colleagues (2008), I hypothesized that Black immigrants would experience the anticipated health declines associated with increasing tenure in the country. Further, these migrants would experience exacerbated health declines relative to their peer migrants who are largely not Black. The core reason for these aggravated declines rests on exposure to additional health insults once in the United States (e.g., interpersonal racism, structural barriers associated with their racial identity or presentation). I observe largely shared trends in health among most of the immigrant groups examined, including those from the Caribbean and Sub-Saharan Africa. Despite having their own associations between duration and health, these trends may point toward a shared immigrant experience, regardless of racial identity or national origin. Namely, health does decline within the first generation.

Another potential explanation for the similar outcomes for most immigrant groups returns to the topic of health selection. As discussed throughout this dissertation, it may be the case that immigrants residing in the United States are positive selected on both observable characteristics (i.e., socioeconomic status, health, health behaviors) and on unobservable characteristics (e.g., resilience). As such, first generation immigrants may be particularly resilient against many of the health insults they face. This could be the reason for the largely shared health trends for increasing duration.

## **Limitations**

### *Self-Report Data*

As with any research study, this dissertation has its limitations. One such limitation that spans all three research questions is that the NHIS relies entirely on self-reported health information. Because of this, it is unlikely if not impossible that these data capture all respondents who do have each health condition. Numerous studies existing to examine the validity and accuracy of self-report data on physiological health outcomes. Many of these studies find that self-reported data can be used to reliably provide accurate estimates of population health and clinical outcomes (Chan, 2010; Del Boca et al., 2000; Wong et al., 2012). There are some concerns worth addressing, however.

Despite the useful nature of self-report data, there are some outstanding concerns. Respondents may be unable to accurately report their health conditions due to a lack of proper diagnosis, problems with recall, misreporting, among others. These factors likely result in unintentional under-reporting for each health condition. Results in these cases tend to be conservative estimates of the true associations. Thankfully, these conservative findings are less



biased than those with liberal findings as they do not over-estimate the potential associations in the population.

Another concern rests with self-reported weight. Multiple studies find that several sociodemographic characteristics are associated with inaccurate self-reported weight when compared to their actual weight (Stommel & Schoenborn, 2009; Villanueva, 2001). One of the key factors in predicting inaccuracy in self-reported weight was gender. This is an incredibly importance consideration in all three research questions but especially so in Chapter 6. In these studies, the authors find that men showed higher likelihoods of over-reporting their height, while women were more likely to over-report their weight (Villanueva, 2001). This was particularly true for younger men but was true across the age range for women. Factors that helped to correct for these inaccuracies included cigarette smoking status for men and measures of physical activity for women. In all models, controls such as these are included. Stommel and Schoenborn (2009) go on to find that inaccuracies tend to be most common in individuals with a BMI below 22 and above 28. Variation tended to be roughly  $\pm 2$  points on the BMI scale. Thankfully, the categorizations used in my analyses of BMI likely minimize the impact of these inaccurate reports.

### *Self-Report Data among Immigrants*

Concerns surrounding validity on self-report measures of health extend into the immigrant health literature. Beyond the general concerns touched on in the previous section, immigrants come from many cultural backgrounds and speak many languages outside of English. For these reasons, their understanding and/or interpretations of subjective measures of health (i.e., self-rated health) may differ from that of Americans. As with the general American population, one

could reasonably assume that immigrants would over-report their self-rated health in the good, very good, or excellent range. Further, these measures are widely used in population health research on immigrants, particularly so with the NHIS (see Hamilton, 2015; Hamilton & Hummer, 2011). I attempt to address this concern by including controls for interview language and in my categorization of immigrants into more refined groups.

Additional concerns surround access to care and accurate diagnosis. Discussed earlier in the dissertation, immigrant groups tend to face greater socioeconomic barriers than U.S.-born individuals. This includes access to care. For these reasons, it may be the case that many immigrants have never received formal diagnoses for each health condition and, therefore, cannot accurately report their positive status. Again, these concerns would likely result in conservative estimates and, therefore, be of little concerns regarding bias. Further, these measures are frequently used in immigrant health research at the population scale.

### *Conceptualizations of Race*

As an American, I am largely restricted in my understanding of race to an American perspective. This conceptualization of race relies entirely on categories like White and Black Americans and may differ notably from other definitions of race.

### *The Role of Refugee Status*

In NHIS data, I am unable to identify the mode of entry to the country. This limits my ability to understand the key motivators for migration and the pathways through which individual entered the country (e.g., refugee visas, family reunification, student visas, etc.). As such, I cannot evaluate health differences along these important lines. Refugees are a distinct group of foreign-

born individuals. They often did not leave their respective home countries completely of their own volition. For this reason, they are likely less selected on economic, social, or health characteristics compared to economic migrants, for instance. This may result in qualitatively different experiences when compared to other types of migrants.

### *Immigrant Selectivity*

I am unable to conduct any assessment of health selection. I do not have access to information on the health of non-movers in each migrant's respective country of origin. The NHIS does not contain pre-migration measures of health, either. For these reasons, I cannot directly examine the role of immigrant selection. Rather, I can simply discuss the notion of selection and the potential role it plays in my results.

### *Cross-Sectional Data*

NHIS data are purely cross-sectional and, therefore, cannot be used to measure change across time. This is a key consideration for this dissertation, given the emphasis on the role of time in the immigrant-health relationship. I work around this limitation by creating synthetic cohorts and measuring point estimates at each duration marker. To truly assess change over time or with increasing duration, one must utilize longitudinal data.

### *Sample Size*

Finally, sample sizes for many foreign-born groups are relatively small. As a result, confidence intervals for these groups are quite large, making it difficult to obtain reliable estimates from bivariate and multivariate analyses.

In Chapter 4, I rely on regional categorizations for African immigrants. I am unable to account for national origin among African immigrants due to small cell sizes. I work around this by categorizing these migrants by regional origin; however, some variation is still lost in these aggregated categories. Similarly, there is a non-negligible group of African-origin immigrants who do not self-identify as Black who would otherwise be considered black by an observer (Commodore-Mensah et al., 2015).

### **Future Research Directions**

The analyses conducted in this dissertation contribute to the existing literature on Black immigrant health, but many future lines of inquiry remain. One such direction may be to continue to explore the ways in which we categorize immigrants in the United States, particularly groups aggregated at continental levels of origin. As the United States becomes increasingly diverse, and new migration flows emerge and grow, it is essential that researchers investigate the heterogeneity within new immigrant populations and attempt to identify the best possible ways to categorize such immigrants while also considering data limitations. As shown in this dissertation, these factors play a large role in predicting health outcomes. Without conscious considerations of these groupings, there is the potential for unaccounted for bias in results.

Beyond the categorization of immigrant groups, one must also consider the outcomes investigated. Here, I rely entirely on self-reported health data at a population scale. These findings provide a tremendous amount of information on the general trends in health one may expect for the groups examined. Future work can build on these findings by using clinical health measures to validate findings for self-reported health. Potential sources for these data could come

from other national surveys like the National Health and Nutrition Examination Survey (NHANES) or perhaps clinical records for smaller-scale studies.

Another important area of research that was not properly addressed in this dissertation is the health of refugee and asylee populations. Throughout this dissertation, there were allusions to this population but no explicit analyses. Future research can play an essential role in developing a better understanding of not only how refugee and asylee populations experience health in the United States, but how these groups differ from other migrants who may have been economically motivated to migrate or those who did so for family reunification. It may well be the case that an immigrant health advantage remains evident for these groups, however, the current study is not equipped to directly answer such questions.

Similarly, future research could exert a more concerted effort in studying the impacts of various political context on the health of immigrant groups. For instance, a study examining the health of different arrival cohorts based on the political context of reception (i.e., immigration laws in the United States, public opinions toward different national-origin groups) and/or the political context of various sending nations (i.e., expanded allowances for international migration, economic expansion or depression, conflict). These structural factors play an essential role in determining who migrates, how those individuals leave their respective countries of origin, how these migrants enter the United States, and what their experiences are like once in the country. In this dissertation, I provide some preliminary analyses along these lines by conducting analyses along arrival cohort lines. This provides some contextual information about when certain groups arrived in the United States but does not explicitly examine the true sociopolitical environment. Obtaining a more refined understanding of these relationships and processes could help researchers both understand health trajectories based on when someone

arrived and possibly predict the health of more recently arrived migrants based on shared or disparate sociopolitical conditions.

Finally, NHIS data are cross-sectional. Future studies could use longitudinal data sources to obtain a better understanding of how the health of these immigrant groups change over time. Without these data sources, we cannot truly assess the role of time, including duration, on the health of immigrants living in the United States.

## **Final Remarks**

In this dissertation, I examine the health experiences of Black immigrants in the United States. My findings suggest that national origin, regional origin, time-based variables like duration in the United States, and sex all play essential roles in understanding the health of these Black Americans, foreign-born or otherwise. As population health research continues to examine these groups, we progressively learn more about the nuances within this heterogeneous population of immigrants and can better understand the substantial amount of variation that has been largely unexamined to this point. These findings serve to inform sociological research on health, immigrant health research, population health research, and public health all while contributing to several theoretical perspectives like the immigrant health advantage.

As I reflect on this dissertation, I see both the importance of my findings and the limitations of my analyses. As we obtain more refined data and learn more about the identities of the Black immigrant population, we are better able to understand the nuances that exist between the various national or regional-origin groups. We can then better react to health concerns and, potentially, make efforts to protect the health of these populations. This is a step in that direction

but is by no means the end. It is my hope that future research will continue these lines of inquiry so that we can better explain the health of these groups.

## References

- Abegaz, T.D. (2017). Target organ damage and the long-term effect of nonadherence to clinical practice guidelines in patients with hypertension: A retrospective cohort study. *International Journal of Hypertension*, 2017. <https://doi.org/10.1155/2017/2637051>
- Abraído-Lanza, A.F., Dohrenwend, B.P., Ng-Mak, D.S., & Turner, J.B. (1999). The Latino mortality paradox: A test of the “salmon bias” and healthy migrant hypothesis. *Am J Public Health*, 89, 1543-1548. <https://doi.org/10.2105/AJPH.89.10.1543>
- Abraído-Lanza, A.F., Chao, M.T., Flórez, K.R. (2005). Do healthy behaviors decline with greater acculturation? Implications for the Latino mortality paradox. *Social Science & Medicine*, 61(6), 1243-1255. <https://doi.org/10.1016/j.socscimed.2005.01.016>
- Acevedo-Garcia, D., Bates, L.M., Osypuk, T.L., & McArdle, N. (2010). The effect of immigrant generation and duration on self-rated health among US adults 2003-2007. *Social Science & Medicine*, 71, 1161-1172. 10.1016/j.socscimed.2010.05.034
- Adair, R., & Nwaneri, M.O. (1999). Communicable disease in African immigrants in Minneapolis. *Archives of Internal Medicine*, 159(1), 83-85. 10.1001/archinte.159.1.83.
- Adeloye, D., Chan, K. Y., Rudan, I., & Campbell, H. (2013). An estimate of asthma prevalence in Africa: a systematic analysis. *Croatian Medical Journal*, 54(6), 519-531. 10.3325/cmj.2013.54.519
- Adjepong, A. (2018). Afropolitan projects: African immigrant identities and solidarities in the United States. *Ethnic and Racial Studies*, 41(2), 248-266. 10.1080/01419870.2017.1281985



- Adler, N. E., & Ostrove, J. M. (1999). Socioeconomic status and health: what we know and what we don't. *Annals of the New York Academy of Sciences*, 896(1), 3-15.
- Ahmed, S., & Rasmussen, A. (2020). Changes in social status and postmigration mental health among West African immigrants. *American Journal of Orthopsychiatry*, 90(2), 171-180. 10.1037/ort0000419
- Akinbami, L.J., Moorman, J.E., & Liu, X. (2011, January 12). Asthma prevalence, health care use, and mortality: United States, 2005-2009. *National Health Statistics Reports*, 32.
- Akinbami, L.J., Simon, A.E., & Rossen, L.M. (2015). Changing trends in asthma prevalence among children. *Pediatrics*, 137(1). <https://doi.org/10.1542/peds.2015-2354>
- Akresh, I.R. (2007). Dietary assimilation and health among Hispanic immigrants to the United States. *Journal of Health and Social Behavior*, 48(4), 404-417
- Akresh, I.R., & Frank, R. (2008). Health selection among new immigrants. *American Journal of Public Health*, 98, 1-7.
- Alba, R., & Nee, V. (1997). Rethinking assimilation theory for a new era of immigration. *International Migration Review*, 31(4), 826-874.
- Ali, M., Mwendwa, D.T., Sims, R., Ricks, M., & Summer, A.E. (2016). Age at immigration and kidney function among self-identified healthy Africans in the United States. *J Immigrant Minority Health*, 18, 194-201. 10.1007/s10903-014-0138-0
- Amin, N.S. (2014). Acculturation, gender, and health among Middle Eastern immigrants in the United States. *International Journal of Sociology*, 44(3), 60-83. 10.2753/IJS0020-7659440304

- Anderson, M. (2017, February 14). African immigrant population in U.S. steadily climbs. Pew Research Center. <https://www.pewresearch.org/fact-tank/2017/02/14/african-immigrant-population-in-u-s-steadily-climbs/>
- Anderson, M., & López, G. (2018, January 24). Key facts about Black immigrants in the U.S. Pew Research Center. <https://www.pewresearch.org/fact-tank/2018/01/24/key-facts-about-Black-immigrants-in-the-u-s/>
- Antecol, H., & Bernard, K. (2006). Unhealthy assimilation: Why do immigrants converge to American health status levels? *Demography*, 43(2), 337-360.  
<http://www.jstor.org/stable/4137201>
- Arias, E., Tejada-Vera, B., & Ahmad, F. (2021, February). Provisional Life Expectancy Estimates for January through June, 2020. Vital Statistics Rapid Release; no 10. Hyattsville, MD: National Center for Health Statistics. <https://dx.doi.org/10.15620/cdc:100392>.
- Assari, S., Thomas, A., Caldwell, C.H., & Mincy, R.B. (2018). Black's diminished health return of family structure and socioeconomic status; 15 years of follow-up of a national urban sample of youth. *Journal of Urban Health*, 95, 21-35. 10.1007/s11524-017-0217-3
- Avila, R. M., & Bramlett, M. D. (2013). Language and immigrant status effects on disparities in Hispanic children's health status and access to health care. *Maternal and Child Health Journal*, 17(3), 415-423. <https://doi.org/10.1007/s10995-012-0988-9>
- Bailis, D.S., Segall, A., & Chipperfield, J.G. (2003). Two views of self-rated general health status. *Social Science & Medicine*, 56, 203-217. [https://doi.org/10.1016/S0277-9536\(02\)00020-5](https://doi.org/10.1016/S0277-9536(02)00020-5)

- Batty, G. D., Shipley, M. J., Gunnell, D., Huxley, R., Kivimaki, M., Woodward, M., ... & Smith, G. D. (2009). Height, wealth, and health: an overview with new data from three longitudinal studies. *Economics & Human Biology*, 7(2), 137-152.  
<https://doi.org/10.1016/j.ehb.2009.06.004>
- Bennett, G.G., Wolin, K.Y., Askew, S., Fletcher, R., & Emmons, K.M. (2006). Immigration and obesity among lower income Blacks. *Obesity*, 15(6), 1391-1394.  
<https://doi.org/10.1038/oby.2007.166>
- Bingham, B.A., Duong, M.T., . . . , Berrigan, D., & Sumner, A.E. (2016). The association between stress measured by allostatic load score and physiologic dysregulation in African immigrants: The Africans in America Study. *Front. Public Health*, 4(265).  
10.3389/fpubh.2016.00265
- Bird, C.E., & Rieker, P.P. (2008). *Gender and health: The effects of constrained choices and social policies*. Cambridge Univ. Press
- Blewett, L.A., Rivera Drew, J.A., King, M.L., & Williams, K.C.W. (2019). IPUMS Health Surveys: National Health Interview Survey, Version 6.4 [dataset]. Minneapolis,MN: IPUMS. <https://doi.org/10.18128/D070.V6.4>
- Boardman, J. D., Onge, J. M. S., Rogers, R. G., & Denney, J. T. (2005). Race differentials in obesity: the impact of place. *Journal of Health and Social Behavior*, 46(3), 229-243.  
<https://doi.org/10.1177/002214650504600302>
- Bonilla-Silva, E. (1997). Rethinking racism: Toward a structural interpretation. *American Sociological Review*, 62(3), 465-480. <http://www.jstor.org/stable/2657316>
- Bozzoli, C., Deaton, A., & Quintana-Domeque, C. (2009). Adult height and childhood disease. *Demography*, 46(4), 647-669. 10.1353/dem.0.0079

- Brown, A.G.M., Houser, R.F., Mattei, J., Mozaffarian, D., Lichtenstein, A.H., & Foltz, S.C. (2017). Hypertension among U.S.-born and foreign-born non-Hispanic Blacks: NHANES 2003-2014 data. *Journal of Hypertension*, 35(12), 2380-2387. 10.1097/HJH.0000000000001489
- Budiman, A. (2020, August 20). Key findings about U.S. immigrants. Pew Research Center. <https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/>
- Caballero, B. (2007). The global epidemic of obesity: An overview. *Epidemiologic Review*, 29(1), 1-5. <https://doi.org/10.1093/epirev/mxm012>
- Cagney, K., Browning, C.R., & Wallace, D.M. (2007). The Latino Paradox in neighborhood context: The case of asthma and other respiratory conditions. *American Journal of Public Health*, 97(5), 919-927. <https://doi.org/10.2105/AJPH.2005.071472>
- Capps, R., McCabe, K., & Fix, M. (2012). *Diverse streams: Black African migrants to the United States*. Migration Policy Institute. <https://www.migrationpolicy.org/pubs/CBI-AfricanMigration.pdf>
- Carlisle, S.K. (2012). Nativity difference in chronic health conditions between nationally representative samples of Asian American, Latino American, and Afro-Caribbean American respondents. *Journal of Immigrant and Minority Health*, 14(6), 903-911.
- Case, A.D., & Hunter, C.D. (2014). Cultural racism-related stress in Black Caribbean immigrants: Examining the predictive roles of length of residence and racial identity. *Journal of Black Psychology*, 40(5), 401-423. 10.1177/0095798413493926
- Case, A., & Paxson, C. (2010). Causes and consequences of early-life health. *Demography*, 47(Supplement), S65-S85. <https://doi.org/10.1353/dem.2010.0007>

- Centers for Disease Control and Prevention. (2020, September). National Health Interview Survey. [https://www.cdc.gov/nchs/nhis/about\\_nhis.htm](https://www.cdc.gov/nchs/nhis/about_nhis.htm)
- Chan, D. (2010). So why ask me? Are self-report data really that bad? *In Statistical and methodological myths and urban legends* (pp. 329-356). Routledge.
- Chaney, E.M. (1987). The context of Caribbean migration. Chapter 1 in C.R. Sutton & E.M. Chaney (Eds.), *Caribbean Life in New York City: Sociocultural Dimension* (pp. 3-14). Center for Migration Studies of New York, Inc.
- Chaumba, J. (2011). Health status, use of health care resources, and treatment strategies of Ethiopian and Nigerian immigrants in the United States. *Social Work in Health Care*, 50(6), 466-481. 10.1080/00981389.2011.581999
- Chlebowski, R.T., Hendrix, S.L., Langer, R.D., et al. (2003). Influence of estrogen plus progestin on breast cancer and mammography in healthy postmenopausal women: The Women's Health Initiative Randomized Trial. *JAMA*, 289, 3243–53. 10.1001/jama.289.24.3243
- Cho, Y., Frisbie, W.P., Hummer, R.A., & Rogers, R.G. (2004). Nativity, duration of residence, and the health of Hispanic adults in the United States. *International Migration Review*, 38(1), 184-211.
- Colen, C.G., Ramey, D.M., Cooksey, E.C., & Williams, D.R. (2018). Racial disparities in health among nonpoor African Americans and Hispanics: The role of acute and chronic discrimination. *Social Science & Medicine*, 199, 167-180. 10.1016/j.socscimed.2017.04.051
- Commodore-Mensah, Y., Himmelfarb, C. D., Agyemang, C., & Summer, A. E. (2015). Cardiometabolic health in African Immigrants to the United States: A Call to Re-

- Examine research on African-Descent populations. *Ethnicity and Disease*, 25(3), 373–380. <https://doi.org/10.18865/ed.25.3.373>
- Commodore-Mensah, Y., Matthie, N., Wells, J., Dunbar, S.B., Himmelfarb, C.D., Cooper, L.A., & Chandler, R.D. (2017a). African Americans, African Immigrants, and Afro-Caribbeans differ in social determinants of hypertension and diabetes: Evidence from the National Health Interview Survey. *J Racial and Ethnic Health Disparities*, 5, 995-1002. 10.1007/s40615-017-0446-x
- Commodore-Mensah, Y., Ukonu, N., Cooper, L.A., Agyemang, C., & Himmelfarb, C.D. (2017b). The association between acculturation and cardiovascular disease risk in Ghanaian and Nigerian-born African immigrants in the United States: The Afro-Cardiac Study. *J Immigrant Minority Health*, 20(5), 1137-1146. 10.1007/s10903-017-0644-y
- Commodore-Mensah, Y., Ukonu, N., Obisesan, O., Aboagye, J. K., Agyemang, C., Reilly, C. M., ... & Okosun, I. S. (2016). Length of residence in the United States is associated with a higher prevalence of cardiometabolic risk factors in immigrants: a contemporary analysis of the National Health Interview Survey. *Journal of the American Heart Association*, 5(11), e004059. <https://doi.org/10.1161/JAHA.116.004059>
- Connor, P., & López, G. (2016, May 8). 5 facts about the U.S. rank in worldwide migration. Pew Research Center. <https://www.pewresearch.org/fact-tank/2016/05/18/5-facts-about-the-u-s-rank-in-worldwide-migration/>
- Cooper, R., Rotimi, C., Ataman, S., McGee, D., Osotimehin, B., Kadiri, S., et al. (1997). The prevalence of hypertension in seven populations of West African Origin. *American Journal of Public Health*, 87, 160–168. <https://doi.org/10.2105/AJPH.87.2.160>.
- Corra, M.K., & Kimuna, S.R. (2009). Double jeopardy? Female African and Caribbean

- immigrants in the United States. *Journal of Ethnic and Migration Studies*, 35(6), 1015-1035. <https://doi.org/10.1080/13691830902957767>
- Crimmins, E.M., Hayward, M.D., & Seeman, T.E. (2001). Race/ethnicity, socioeconomic status, and health. In Anderson, N.B., Bulato, R.A., & Cohen, B. (eds.) *Critical Perspectives on Racial and Ethnic Differences in Late Life* (pp. 310-352). National Academies Press. Washington, D.C.
- Crimmins, E.M., Hayward, M.D., Ueda, H., Saito, Y., & Kim J.K. (2008). Life with and without heart disease among women and men over 50. *Journal of Women & Aging*, 20(1-2), 5-19. 10.1300/J074v20n01\_02
- Curran, S.R., Shafer, S., Donato, K.M., & Garip, F. (2006). Mapping gender and migration in sociological scholarship: Is it segregation or integration? *International Migration Review*, 40, 199-223.
- Cutler, D. M., Lleras-Muney, A., & Vogl, T. (2008). Socioeconomic status and health: dimensions and mechanisms. National Bureau of Economic Research, Working Paper 14333. 10.3386/w14333
- Dannefer, D. (1987, March). Aging as intracohort differentiation: Accentuation, the Matthew effect, and the life course. *In Sociological forum* (Vol. 2, No. 2, pp. 211-236). Kluwer Academic Publishers.
- Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *Journals of Gerontology: Social Sciences*, 58B(6), S327-S337. 10.1093/geronb/58.6.S327
- Deaton, A. (2007). Height, health, and development. *Proceedings of the National Academy of Sciences*, 104(33), 13232-13237. <https://doi.org/10.1073/pnas.0611500104>

- Del Boca, F.K., & Noll, J.A. (2000). Truth or consequences: The validity of self-reported data in health services research on addiction. *Addiction*, 95(Supplement 3), S347-S360.
- Dillon, M., & Walsh, C.A. (2012). Left behind: The experiences of children of the Caribbean whose parents have migrated. *Journal of Comparative Family Studies*, 43(6), 871-902.  
<https://www.jstor.org/stable/41756275>
- Dolezsar, C. M., McGrath, J. J., Herzig, A. J., & Miller, S. B. (2014). Perceived racial discrimination and hypertension: a comprehensive systematic review. *Health Psychology*, 33(1), 20-34. <https://doi.org/10.1037/a0033718>
- Du Bois, W.E.B. (1996 [1899]). *The Philadelphia Negro: A social study*. University of Pennsylvania Press.
- Elo, I. T., Mehta, N. K., & Huang, C. (2008). Health of native-born and foreign-born Black residents in the United States: Evidence from the 2000 Census of Population and the National Health Interview Survey. *Population Aging Research Center Working Paper Series*, 17.
- Elo, I.T., Mehta, N.K., & Huang, C. (2011). Disability among native-born and foreign-born Blacks in the United States. *Demography*, 48(1), 241-265. 10.1007/s13524-010-0008-x
- Erving, C. L. (2011). Gender and physical health: A study of African American and Caribbean Black adults. *Journal of Health and Social Behavior*, 52(3), 383-399.  
<https://doi.org/10.1177/0022146511415857>
- Farmer, M.M., & Ferraro, K.F. (2005). Are racial disparities in health conditional on socioeconomic status? *Social Science & Medicine*, 60(1), 191-204.  
10.1016/j.socscimed.2004.04.026



- Feeney, A., North, F., Head, J., Canner, R., Marmot, M. (1998). Socioeconomic and sex differentials in reason for sickness absence from the Whitehall II Study. *Occup Environ Med.*, 55, 91–8. 10.1136/oem.55.2.91
- Fenelon, A. (2017). Rethinking the Hispanic Paradox: The mortality experiences of Mexican immigrants in traditional gateways and new destinations. *International Migration Review*, 51(3), 567-599. <https://doi.org/10.1111/imre.12263>
- Ferraro, K.F., & Kelley-Moore, J.A. (2003). Cumulative disadvantage and health: Long-term consequences of obesity? *Am Sociol Rev*, 68(5), 707-729.
- Ford, N.D., Venkat Narayan, K.M., & Mehta, N.K. (2015). Diabetes among US- and foreign-born Blacks in the USA. *Ethnicity & Health*, 21(1), 71-84.  
10.1080/13557858.2015.1010490
- Franks, P., Muenning, P., Lubetkin, E., & Haomiao, J. (2006). The burden of disease associated with being African-American in the United States and the contribution of socioeconomic status. *Social Science & Medicine*, 62(10), 2469-2478.  
<https://doi.org/10.1016/j.socscimed.2005.10.035>
- Frisbie, W.P., Cho, Y., & Hummer, R. A. (2001). Immigration and the health of Asian and Pacific Islander adults in the United States. *American Journal of Epidemiology*, 153(4), 372-380. <https://doi.org/10.1093/aje/153.4.372>
- Fryar, C.D., Carroll, M.D., & Afful, J. (2020). Prevalence of overweight, obesity, and severe obesity among adults aged 20 and over: United States, 1960–1962 through 2017–2018. *NCHS Health E-Stats*. <https://www.cdc.gov/nchs/data/hestat/obesity-adult-17-18/obesity-adult.htm#Citation>

- Garcia, M.A., & Reyes, A.M. (2018). Physical functioning and disability trajectories by age of migration among Mexican elders in the United States. *Journals of Gerontology: Social Sciences*, 73(1), 1292-1302. 10.1093/geronb/gbw167
- Garcia, M.A., Reyes, A.M., & Rote, S. (2019). Disability and the immigrant health paradox: Gender and timing of migration. Chapter 12 in W.A. Vega, J.L., Angel, L.M.F. Gutierrez Robledo, & K.S. Markides (eds.) *Contextualizing Health and Aging in the Americas* (pp. 249-269). Springer. 10.1007/978-3-030-00584-9\_12
- Glymour, M. M., Avendano, M., & Kawachi, I. (2014). Socioeconomic status and health. *Social Epidemiology*, 2, 17-63.
- Goel, M.S., McCarthy, E.P., Phillips, R.S., & Wee, C.C. (2004). Obesity among US immigrant subgroups by duration of residence. *JAMA*, 292(23), 2860–7. PubMed: 15598917
- Gonzalez-Barrera, A. (July, 2021). Before COVID-19, more Mexicans came to the U.S. than left for Mexico for the first time in years. Pew Research Center. Retrieved from: <https://www.pewresearch.org/fact-tank/2021/07/09/before-covid-19-more-mexicans-came-to-the-u-s-than-left-for-mexico-for-the-first-time-in-years/>
- Gordon, M. (1961). Assimilation in America: theory and reality. *Daedalus*, 90(2), 263-285.
- Gordon, A. (1998). The new diaspora – African immigration to the United States. *Journal of Third World Studies*, 15(1), 79-103. stable: <http://www.jstor.com/stable/45197785>
- Gorman, B.K., & Read, J.G. (2006). Gender disparities in adult health: An examination of three measures of morbidity. *Journal of Health and Social Behavior*, 47(2), 95-110. <https://doi.org/10.1177/002214650604700201>

- Gorman, B. K., Read, J. N. G., & Krueger, P. M. (2010). Gender, acculturation, and health among Mexican Americans. *Journal of Health and Social Behavior*, 51(4), 440-457. <https://doi.org/10.1177/0022146510386792>
- Gowrie, M., Agard, J., Barclay, G., & Mohammed, A. (2016). Forecasting emergency paediatric asthma hospital admissions in Trinidad and Tobago: Development of a local model incorporating the interactions of airborne dust and pollen concentrations with meteorological parameters and a time-lag factor. *Open Journal of Air Pollution*, 5(4), 109-126. 10.4236/ojap.2016.54009
- Grosfoguel, R. (2003). Race and ethnicity or racialized ethnicities? *Ethnicities*, 4(3), 315-336. 10.1177/1468796804045237
- Gubernskaya, Z., Bean, F. D., & Van Hook, J. (2013). (Un) Healthy immigrant citizens: Naturalization and activity limitations in older age. *Journal of Health and Social Behavior*, 54(4), 427-443. 10.1177/0022146513504760
- Hale, L., & Rivero-Fuentes, E. (2011). Negative acculturation in sleep duration among Mexican immigrants and Mexican Americans. *Journal of Immigrant and Minority Health*, 13, 402-407. 10.1007/s10903-009-9284-1
- Hales, C. M., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2020, February). Prevalence of obesity among adults and youth: United States, 2017–2018. NCHS Data Brief, No. 360. <https://stacks.cdc.gov/view/cdc/85451>
- Hall, G.M. (2005). *Slavery and African ethnicities in the Americas: Restoring the links*. The University of North Carolina Press.
- Hamilton, T. G. (2020). Black immigrants and the changing portrait of Black America. *Annual Review of Sociology*, 46, 295-313. <https://doi.org/10.1146/annurev-soc-121919-054728>

- Hamilton, T.G. (2019). *Immigration and the Remaking of Black America*. Russell Sage Foundation.
- Hamilton, T. G., & Hagos, R. (2021). Race and the healthy immigrant effect. *Public Policy & Aging Report*, 31(1), 14-18. <https://doi-org.colorado.idm.oclc.org/10.1093/ppar/praa042>
- Hamilton, T.G., & Green, T.L. (2017). Intergenerational differences in smoking among West Indian, Haitian, Latin American, and African Blacks in the United States. *Social Science & Medicine – Population Health*, 3, 305-317. 10.1016/j.ssmph.2017.01.007
- Hamilton, T.G., & Hummer, R.A. (2011). Immigration and the health of U.S. Black adults: Does country of origin matter? *Social Science & Medicine*, 73, 1551-1560. 10.1016/j.socscimed.2011.07.026
- Hammond, W.P., Mohottige, D., Chantala, K., Hastings, J.F., Neighbors, H.W., & Snowden, L. (2011). Determinants of usual source of care disparities among African American and Caribbean Black men: Findings from the National Survey of American Life. *J Health Care Poor Underserved*, 22(1), 157-175. 10.1353/hpu.2011.0016
- Hao, L., & Kim, J. J. (2009). Immigration and the American obesity epidemic. *International Migration Review*, 43(2), 237-262. 10.1111/j.1747-7379.2009.00764.x
- Hertz, R.P, Unger, A.N., Cornell, J.A., & Saunders, E. (2005). Racial disparities in hypertension prevalence, awareness, and management. *Arch Intern Med*, 165, 2098-2104.
- Heyman, D.K., & Jeffers, C.C. (1963). Effect of time lapse on consistency of self-health and medical evaluations of elderly persons. *Journal of Gerontology*, 18(2), 160-164.
- Hintzen, P.C., & Rahier, J.M. (2003). From structural politics to the politics of deconstruction. Self-ethnographies problematizing Blackness. Introduction from P.C. Hintzen & J.M.

- Rahier's *Problematizing Blackness: Self-ethnographies by Black immigrants in the United States* (pp. 1-20). Routledge.
- Human Development Report. (2020). Human Development Index.  
[http://hdr.undp.org/sites/default/files/hdr2020\\_technical\\_notes.pdf](http://hdr.undp.org/sites/default/files/hdr2020_technical_notes.pdf)
- Hummer, R.A., & Chinn, J.J. (2011). Race/ethnicity and U.S. adult mortality. *Du Bois Review*, 8(1), 5-24. 10.1017/S1742058X11000051
- Hummer, R.A., & Hamilton, E.R. (2019). *Population Health in America*. University of California Press.
- Hurtado-de-Mendoza, A., Song, M., Kigen, O., Jennings, Y., Nwabukwu, I., & Sheppard, V.B. (2014). Addressing cancer control needs of African-born immigrants in the US: A systematic literature review. *Preventive Medicine*, 67, 89-99.  
<http://dx.doi.org/10.1016/j.ypmed.2014.07.006>
- Idler, E.L., Benyamini Y. (1997) Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior*, 38, 21–37.
- Imoagene, O. (2017). *Beyond expectations: Second-generation Nigerians in the United States and Britain*. University of California Press.
- Jackson, J.S., & Antonucci, T.C. (2005). Physical and mental health consequences of aging in place and aging out of place among Black Caribbean immigrants. *Research in Human Development*, 2(4), 229-244
- Jasso, G., Massey, D.G., Rosenzweig, M.R., & Smith, J.P. (2004). Immigrant health: Selectivity and Acculturation. *The Institute for Fiscal Studies*, WP04/23

- Jasso, G., Massey, D.S., Rosenzweig, R.S., & Smith, J.P. (2005). Immigration, health, and New York City: Early results based on the U.S. new immigrant cohort of 2003. *Economic Policy Review*, 11, 127-151
- Jung, M. (2009). The racial unconscious of assimilation theory. *Du Bois Review*, 6(2), 375-395.
- Jylhä, M. (2009). What is self-rated health and why does it predict mortality? Towards a unified conceptual model. *Social Science & Medicine*, 69, 307-316.  
<https://doi.org/10.1016/j.socscimed.2009.05.013>
- Jylhä, M. (2011). Self-rated health and subjective survival probabilities as predictors of mortality. Chapter 16 in Rogers, R.G., & Crimmins, E.M. (Eds.), *International Handbook of Adult Mortality* (pp. 329-344). Springer
- Kalban, B.B. (2000). Why men die younger. *North American Actuarial Journal*, 4(4), 83-111.  
10.1080/10920277.2000.10595939
- Karlson, K. B., Holm, A., & Breen, R. (2012). Comparing regression coefficients between same-sample nested models using logit and probit: A new method. *Sociological Methodology*, 42(1), 286-313. 10.1177/0081175012444861
- Kaushal, N. (2009). Adversities of acculturation? Prevalence of obesity among immigrants. *Health Economics*, 18, 291-303. 10.1002/hec.1368
- Kasinitz, P. (1992). *Caribbean New York: Black immigrants and the politics of race*. Cornell University Press.
- Kent, M.M. (2007). Immigration and America's Black population. *Population Bulletin*, 62(4).
- Ichou, M., & Wallace, M. (2019). The healthy immigrant effect: The role of educational selectivity in the good health of migrants. *Demographic Research*, 40(4), 61-94.  
10.4054/DemRes.2019.40.4

- Lambert, D. (2017, November 16). An introduction to the Caribbean, empire and slavery. British Library. <https://www.bl.uk/west-india-regiment/articles/an-introduction-to-the-caribbean-empire-and-slavery#>
- Lara, M., Gamboa, C., Kahramanian, M. I., Morales, L. S., & Hayes Bautista, D. E. (2005). Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context. *Annu. Rev. Public Health*, 26, 367-397.
- Link, B.G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, 35, 80-94. <https://doi.org/10.2307/2626958>
- Lim, S., Yi, S.S., De La Cruz, N.L., & Trinh-Shevrin, C. (2017). Defining ethnic enclave and its associations with self-reported health outcomes among Asian American adults in New York City. *Journal of Immigrant and Minority Health*, 19, 138-146.  
<https://doi.org/10.1007/s10903-015-0334-6>
- Loftus, P. A., & Wise, S. K. (2016). Epidemiology of asthma. *Current Opinion in Otolaryngology & Head and Neck Surgery*, 24(3), 245-249.  
[10.1097/MOO.0000000000000262](https://doi.org/10.1097/MOO.0000000000000262)
- Lopez-Gonzalez, L., Aravena, V.C., & Hummer, R.A. (2005). Immigrant acculturation, gender, and health behavior: A research note. *Social Forces*, 48, 581-593.
- Louis, D., Thompson, K., Smith, P., Williams, H.M.A., & Watson, J. (2017). Afro-Caribbean immigrant faculty experiences in the American academy: Voices of an invisible Black population. *The Urban Review*, 49(4). [10.1007/s11256-017-0414-0](https://doi.org/10.1007/s11256-017-0414-0)
- Lundberg, O., & Manderbacka, K. (1996). Assessing reliability of a measure of self-rated health. *Scandinavian Journal of Public Health*, 24(3), 218-224.  
<https://doi.org/10.1177/140349489602400314>

- Lutfey, K., & Freese, J. (2005). Toward some fundamentals of fundamental causality: Socioeconomic status and health in the routine clinic visit for diabetes. *American Journal of Sociology*, 110(5), 1326-1372.
- Macinko, J., & Elo, I.T. (2009). Black-White differences in avoidable mortality in the USA, 1980-2005. *J Epidemiol Community Health*, 63, 715-721. 10.1136/jech.2008.081141
- Mackenbach, J.P., Simon, J.G., Looman, C.W., & Joung, L.M. (2002). Self-assessed health and mortality: Could psychosocial factors explain the association? *International Journal of Epidemiology*, 31(6), 1162-1168. <https://doi.org/10.1093/ije/31.6.1162>
- Markides, K.S., & Coreil, J. (1986). The health of Hispanics in the Southwestern United States: An epidemiologic paradox. *Public Health Reports*, 101(3), 253.
- Marmot, Michael. 2004. "Status Syndrome." *Significance* 1(4):150-154.
- Massey, D.S., & Denton, N.A. (1993). *American apartheid: Segregation and the making of the underclass*. Harvard University Press.
- Masters, R.K., Powers, D.A., & Link, B.G. (2013). Obesity and US mortality risk over the adult life course. *American Journal of Epidemiology*, 177(5), 431-442. <https://doi.org/10.1093/aje/kws325>
- Mayo Clinic. (2020, October 30). Diabetes. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/diabetes/diagnosis-treatment/drc-20371451>
- Mehta, N. K., Elo, I. T., Engelman, M., Lauderdale, D. S., & Kestenbaum, B. M. (2016). Obesity among U.S.- and foreign-born Blacks by region of birth. *American Journal of Preventive Medicine*, 49(2), 269-273. 10.1016/j.amepre.2015.02.014



- Mehta, N.K., Elo, I.T., Ford, N.D., & Siegel, K.R. (2015). Obesity among U.S.- and foreign-born Blacks by region of birth. *Am J Prev Med*, 49(2), 269-273.  
/10.1016/j.amepre.2015.02.014
- Miltiades, H.B., & Wu, B. (2008). Factors affecting physician visit in Chinese and Chinese immigrant samples. *Social Science & Medicine*, 66, 704-714.
- Model, S. (2008). *West Indian immigrants: A Black success story?* Russell Sage Foundation. New York, New York.
- Mossey, J.M., & Shapiro, E. (1982). Self-rated health: A predictor of mortality among the elderly. *American Journal of Public Health*, 72(8), 800-808.  
<https://doi.org/10.2105/AJPH.72.8.800>
- Mustillo, S.A., Lizardo, O.A., & McVeigh, R.M. (2018). Editors' comment: A few guidelines for quantitative submissions. *American Sociological Review*, 83(6), 1281-1283.  
10.1177/0003122418806282
- Njeru, J.W., Tan, E.M., St. Sauver, J., Jacobson, D.J., Agunwamba, A.A., Wilson, P.M., Rutten, L.J., Damodaran, S., & Wieland, M.L. (2016). High rates of diabetes mellitus, pre-diabetes, and obesity among Somali immigrants and refugees in Minnesota: A retrospective chart review. *J Immigrant Minority Health*, 18, 1343-1349.  
10.1007/s10903-015-0280-3
- O'Connor, M. Y., Thoreson, C. K., Ricks, M., Couville, A. B., Thomas, F., Yao, J., Katzmarzyk, P. T., & Summer, A. E. (2014). Worse cardiometabolic health in African immigrant men and African American men: Reconsidering the healthy immigrant effect. *Metabolic Syndrome and Related Disorders*, 12(6), 347-353. 10.1089/met.2014.0026

- Okafor, M.C., Carter-Pokras, O.D., & Zhan, M. (2013a). Greater dietary acculturation (dietary change) is associated with poorer current self-rated health among African immigrant adults. *J Nutr Educ Behav*, 46, 226-235. 10.1016/j.jneb.2013.11.015
- Okafor, M.C., Carter-Pokras, O.D., Picot, S.J., & Zhan, M. (2013b). The relationship of language acculturation (English proficiency) to current self-rated health among African immigrant adults. *J Immigrant Minority Health*, 15, 499-509. 10.1007/s10903-012-9614-6
- Oksuzyan, A., Juel, K., Vaupel, J. W., & Christensen, K. (2008). Men: good health and high mortality. Sex differences in health and aging. *Aging Clinical and Experimental Research*, 20(2), 91–102. <https://doi.org/10.1007/BF03324754>
- Okwusoa, T.E., & Williams, K.A. (2012). Cardiovascular health in Africans living in the United States. *Curr Cardiovasc Risk Rep*, 6, 219-228. 10.1007/s12170-012-0227-3
- Olshansky, S.J., Antounucci, T., Berkman, L., . . . Zheng, Y., & Rowe, J. (2012). Differences in life expectancy due to race and educational differences are widening, and many may not catch up. *Health Affairs*, 31(8), 1803-1813. 10.1377/hlthaff.2011.0746
- Olshansky, S. J., Passaro, D. J., Hershow, R. C., Layden, J., Carnes, B. A., Brody, J., ... & Ludwig, D. S. (2005). A potential decline in life expectancy in the United States in the 21st century. *New England Journal of Medicine*, 352(11), 1138-1145. 10.1056/NEJMs043743
- Orsi, J.M., Margellos-Anast, H., & Whitman, S. (2010). Black-White health disparities in the United States and Chicago: A 15-year progress analysis. *Am J Public Health*, 100, 346-356. 10.2105/AJPH.2009.165407

- Ostchega, Y., Fryar, C.D., Nwankwo, T., & Nguyen, D.T. (2020, April). Hypertension prevalence among adults aged 18 and over: United States, 2017-2018. NCHS Data Brief, No. 364. <https://www.cdc.gov/nchs/data/databriefs/db364-h.pdf>
- Oza-Frank, R., & Narayan, K. V. (2010). Overweight and diabetes prevalence among US immigrants. *American Journal of Public Health*, 100(4), 661-668. 10.2105/AJPH.2008.149492
- Pais, J. (2014). Cumulative structural disadvantage and racial health disparities: The pathways of childhood socioeconomic influence. *Demography*, 51(5), 1729-1753. <http://www.jstor.com/stable/43697481>
- Palarino, J.V. (2021). The immigrant health advantage: An examination of African-origin Black immigrants in the United States. *Population Research and Policy Review*. 10.1007/s11113-021-09647-6
- Palloni, A., & Arias, E. (2004). Paradox lost: Explaining the Hispanic adult advantage\*. *Demography*, 41(3), 385-415. 10.1353/dem.2004.0024
- Park, R.E. (1928). Human migration and the marginal man. *American Journal of Sociology*, 33, 881-893.
- Perkins, J. M., Subramanian, S. V., Davey Smith, G., & Özaltin, E. (2016). Adult height, nutrition, and population health. *Nutrition Reviews*, 74(3), 149-165. <https://doi.org/10.1093/nutrit/nuv105>
- Phelan, J. C., & Link, B. G. (2015). Is racism a fundamental cause of inequalities in health?. *Annual Review of Sociology*, 41, 311-330. <https://doi.org/10.1146/annurev-soc-073014-112305>

- Plummer, B. G. (1982). The Afro-American response to the occupation of Haiti, 1915-1934. *Phylon* (1960-), 43(2), 125-143. <https://www.jstor.org/stable/274462>
- Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants among post-1965 immigrant youth. *Annals of the American Academy of Political and Social Science*, 530, 74-98.
- Pottie, K., Ng, E., Spitzer, D., Mohammed, A., & Glazier, R. (2008). Language proficiency, gender and self-reported health. *Canadian Journal of Public Health*, 99(6), 505-510. 10.1007/BF03403786
- Power, C., & Hertzman, C. (1999). Health, well-being, and coping skills. *Developmental Health and a Wealth of Nations: Social, Education, and Biological Dynamics*. Guilford Press.
- Rahman, M., & Berenson, A.B. (2010). Accuracy of current body mass index obesity classification for White, Black, and Hispanic reproductive-age women. *Obstet Gynecol.*, 115(5), 982-988. 10.1097/AOG.0b013e3181da9423
- Razak, F., Anand, S.S., Shannon, H., Vuksan., . . . , & Yusuf, S. (2007). Defining obesity cut points in a multiethnic population. *Circulation*, 115, 2111-2118. 10.1161/CIRCULATIONAHA.106.635011
- Read, J.G., & Emmerson, M.O. (2005). Racial context, Black immigration and the U.S. Black/White health disparity. *Social Forces*, 84(1), 181-199. <https://doi.org/10.1353/sof.2005.0120>
- Read, J.G., Emerson, M.O., & Tarlov, A. (2005). Implications of Black immigrant health for U.S. racial disparities in health. *Journal of Immigrant Health*, 7(3), 205-212. 10.1007/s10903-005-3677-6

- Read, J.G., & Gorman, B.K. (2010). Gender and health inequality. *Annual Review of Sociology*, 36, 371-386. <https://doi.org/10.1146/annurev.soc.012809.102535>
- Read, J.G., & Reynolds, M.M. (2012). Gender differences in immigrant health: The case of Mexican and Middle Eastern immigrants. *Journal of Health and Social Behavior*, 53(1), 99-123. 10.1177/0022146511431267
- Read, J.G., & Smith, P.B. (2017). Gender and national origin differences in health care utilization among U.S. immigrants from Mexico, China, and India. *Ethnicity & Health*, 23(8), 867-883. 10.1080/13557858.2017.1297776
- Reyes, A.M., & Garcia, M.A. (2020). Gender and age of migration differences in mortality among older Mexican Americans. *Journals of Gerontology: Social Sciences*, 75(8), 1707-1718. 10.1093/geronb/gbz038
- Riosmena, F., & Dennis, J.A. (2012). Chapter 8: A tale of three paradoxes: The weak socioeconomic gradients in health among Hispanic immigrants and their relation to the Hispanic health paradox and negative acculturation. In Jacqueline L. Angel, Fernando Torres-Gil, & Kyriakos Markides (Eds.), *Aging, Health, and Longevity in the Mexican-Origin Population* (pp. 95-110). Springer. 10.1007/978-1-4614-1867-2
- Riosmena, F., Everett, B.G., Rogers, R.G., & Dennis, J.A. (2015). Negative acculturation and nothing more? Cumulative disadvantage and mortality during the immigrant adaptation process among Latinos in the United States. *International Migration Review*, 49(2), 443-478. 10.1111/imre.12102
- Riosmena, F., Kuhn, R., & Jochem, W.C.. (2017). Explaining the immigrant health advantage: Self-selection and protection in health-related factors among five major national-origin

- immigrant groups in the United States. *Demography*, 54(1), 175-200. 10.1007/s13524-016-0542-2
- Rivera, Á.G. (2007). Migration, ethnicity, and interactions between the United States and Hispanic Caribbean popular culture. *Latin American Perspectives*, 152(34), 83-93. 10.1177/0094582X06296339
- Ro, A. (2014). The longer you stay, the worse your health? A critical review of the negative acculturation theory among Asian immigrants. *International Journal of Environmental Research and Public Health*, 11, 8038-8057. 10.3390/ijerph110808038
- Rogers, R.G., Hummer, R.A., Krueger, P.M., & Pampel, F.C. (2005). Mortality attributable to cigarette smoking in the United States. *Population and Development Review*, 31(2), 259-292
- Rogers, R.G., Hummer, R.A., Kreuger, P.M., & Vinneau, J.M. (2019). Chapter 14: Adult mortality. In Dudley L. Poston, Jr. (Eds.), *Handbook of Population Second Edition* (pp. 355-381). Springer, Cham.
- Rosenstock, S., Whitman, S., West, J.F., & Balkin, M. (2014). Racial disparities in diabetes mortality in the 50 most populous US cities. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 91(5), 873-885. 10.1007/s11524-013-9861-4
- Rossouw, J.E., Anderson, G.L., Prentice, R.L., et al. (2002). Risks and benefits of estrogen plus progestin in healthy postmenopausal women: principal results from the Women's Health Initiative Randomized Controlled Trial. *JAMA*, 288, 321–33. 10.1001/jama.288.3.321
- Ryan, A.M., Gee, G.C., & Laflamme, D.F. (2006). The association between self-reported discrimination, physical health and blood pressure: Findings from African Americans,

- Black immigrants, and Latino immigrants in New Hampshire. *Journal of Health Care for the Poor and Underserved*, 17, 116-132. /10.1353/hpu.2006.0079
- Schnittker, J., & Bacak, V. (2014). The increasing predictive validity of self-rated health. *PLoS One*, 9(1). <https://doi.org/10.1371/journal.pone.0084933>
- Shavers, V. L. (2007). Measurement of socioeconomic status in health disparities research. *Journal of the national medical association*, 99(9), 1013.
- Showers, F. (2015). Being Black, foreign and woman: African immigrant identities in the United States. *Ethnic and Racial Studies*, 38(10), 1815-1830.  
<http://dx.doi.org/10.1080/01419870.2015.1036763>
- Singer, E., McElroy, R., & Muenning, P. (2017). Social capital and the paradox of poor but healthy groups in the United States. *Journal of Immigrant and Minority Health*, 19, 716-722. 10.1007/s10903-016-0396-0
- Stommel, M., & Schoenborn, C.A. (2009). Accuracy and usefulness of BMI measures based on self-reported weight and height: Findings from the NHANES & NHIS 2001-2006. *BMC Public Health*, 9(421). <https://doi.org/10.1186/1471-2458-9-421>
- Suchanek, P., Lesna, I.K., Mengerova, O., Mrazkova, J., Lanska, V., & Stavek, P. (2012). Which index best correlates with body fat mass: BAI, BMI, waist or WHR? *Neuroendocrinology Letters*, 33(2), 78-82. PMID: 23183515
- Takougang, J. (1995). Recent African immigrants to the United States: A historical perspective. *Journal of Black Studies*, 19(1), 50-56.
- Takougang, J. (2003). Contemporary African immigrants to the United States. *Irinkerindo: A Journal of African Migration*, 2(1), 1-15.

- Taylor, C. A., & Sarathchandra, D. (2016). Migrant selectivity or cultural buffering? Investigating the Black immigrant health advantage in low birth weight. *Journal of Immigrant and Minority Health*, 18(2), 390-396. 10.1007/s10903-015-0194-0
- Thomas, S.C., Umer, A., Commodore-Mensah, Y., Davidov, D., & Abildso, C.G. (2019). Length of residence and cardiovascular health among Afro-Caribbeans in New York City. *J Racial Ethn Health Disparities*, 6(3), 487-496. 10.1007/s40615-018-00547-8
- Torbog, L. (2018, February 16). Mayo Clinic Q and A: Is daily drinking problem drinking? <https://newsnetwork.mayoclinic.org/discussion/mayo-clinic-q-and-a-is-daily-drinking-problem-drinking/>
- Turkson-Ocran, R.N., Nmezi, N.A., Botchway, M.O., Szanton, S.L., Golden, S.H., Cooper, L.A., Commodore-Mensah, Y. (2020). Comparison of cardiovascular disease risk factors among African immigrants and African Americans: An analysis of the 2010 to 2016 National Health Interview Surveys. *J Am Heart Assoc.*, 9(5), e013220. 10.1161/JAHA.119.013220.
- Ukegbu, U. J., Castillo, D. C., Knight, M. G., Ricks, M., Miller III, B. V., Onumah, B. M., & Sumner, A. E. (2011). Metabolic syndrome does not detect metabolic risk in African men living in the U.S. *Diabetes Care*, 34, 2297-2299. 10.2337/dc11-1055
- United Nations. (2020). World Economic Situation and Prospects. [https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020\\_Annex.pdf](https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/WESP2020_Annex.pdf)
- United Nations Statistics Division. (2022). Demographic and Social Statistics. Retried from: <https://unstats.un.org/unsd/demographic-social/sconcerns/popsizes/>



- United States Department of Health and Human Services (HHS). (2018). Physical activity guidelines for Americans, 2<sup>nd</sup> Edition. United States Department of Health and Human Services. [https://health.gov/sites/default/files/2019-09/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf](https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf)
- Urquia, M.L., Glazier, R.H., Blondel, B., . . ., Stray-Pedersen, B., & Gagnon, A.J. (2010). International migration and adverse birth outcomes: Role of ethnicity, region of origin and destination. *I Epidemiol Community Health*, 64, 243-251. 10.1136/jech.2008.083535
- Urquia, M.L., O'Campo, P.J., & Heaman, M.I. (2012). Revisiting the immigrant paradox in reproductive health: The roles of duration of residence and ethnicity. *Social Science & Medicine*, 74, 1610-1621. 10.1016/j.socscimed.2012.02.013
- van de Vijver, S., Akinyi, H., Oti, S., Olajide, A., Agyemang, C., Aboderin, I., & Kyobutungi, C. (2013). Status report on hypertension in Africa – Consultative review for the 6<sup>th</sup> session of the African Union Conference of Ministers of Health on CD's. *Pan African Medical Journal*, 16(38). 10.11604/pamj.2013.16.38.3100
- Van Hook, J., Quirós, S., Dondero, M., & Altman, C.E. (2018). Healthy eating among Mexican immigrants: Migration in childhood and time in the United States. *Journal of Health and Social Behavior*, 0(00), 1-20. <https://doi.org/10.1177/00221465187888>
- Vega, W.A., & Amaro, H. (1994). Latino outlook: Good health, uncertain prognosis. *Annual Review of Public Health*, 15, 39-67.
- Venters, H., & Gany, F. (2011). African immigrant health. *J Immigrant Minority Health*, 13, 333-334. 10.1007/s10903-009-9243-x
- Villanueva, E.V. (2001). The validity of self-reported weight in US adults: A population based cross-sectional study. *BMC Public Health*, 1(11). <https://doi.org/10.1186/1471-2458-1-11>

- Waters, M. (1999). *Black Identities*. Harvard University Press.
- Williams, D. R., & Jackson, P. B. (2005). Social sources of racial disparities in health. *Health Affairs*, 24(2), 325-334.
- Williams, D.R., & Mohammed, S.A. (2009). Discrimination and racial disparities in health: evidence and needed research. *J Behav Med*, 32(1), 20-47. 10.1007/s10865-008-9185-0
- Williams, D. R., Mohammed, S. A., Leavell, J., & Collins, C. (2010). Race, socioeconomic status, and health: complexities, ongoing challenges, and research opportunities. *Annals of the New York Academy of Sciences*, 1186(1), 69-101. <https://doi.org/10.1111/j.1749-6632.2009.05339.x>
- Williams, D. R., Priest, N., & Anderson, N. B. (2016). Understanding associations among race, socioeconomic status, and health: Patterns and prospects. *Health Psychology*, 35(4), 407. [10.1037/hea0000242](https://doi.org/10.1037/hea0000242)
- Wilkinson, A.V., Spitz, M.R., Strom, S.S., Prokhorov, A.V., Barcenas, C.H., Cao, Y., et al. (2005). Effects of nativity, age at migration, and acculturation on smoking among adult Houston residents of Mexican descent. *Am J Public Health*, 95(6), 1043–49. PubMed: 15914831
- Willson, A.E., Shuey, K.M., & Elder Jr., G.H. (2007). Cumulative advantage mechanisms of inequality in life course health. *American Journal of Sociology*, 112, 1886-1924
- Wingard, D.L. (1984). The sex differential in morbidity, mortality, and lifestyle. *Annu Rev Public Health*, 5, 433–58. 10.1146/annurev.pu.05.050184.002245
- Winant, H. (2001). *The World is a Ghetto: Race and Democracy Since WWII*. Basic Books.

- Winship, C., & Harding, D.J. (2008). A mechanism-based approach to the identification of age-period-cohort models. *Sociological Methods & Research*, 36(3), 362-401.  
<https://doi.org/10.1177/0049124107310635>
- Wong, S.L., Shields, M., Leatherdale, S., Malaisson, E., & Hammond, D. (2012). Assessment of validity of self-reported smoking status. *Health Reports*, 23(1), 47-53. PMID: 22590805.
- Xu, G., Liu, B., Sun, Y., Du, Y., Snetselaar, L.G., Hu, F.B., & Bao, W. (2018). Prevalence of diagnosed type 1 and type 2 diabetes among US adults in 2016 and 2017: population based study. *BMJ*, 362, k1497. <https://doi.org/10.1136/bmj.k1497>
- Yang, Y., & Land, K.C. (2013). *Age-Period-Cohort Analysis New Models, Methods, and Empirical Applications*. CRC Press.
- Zhang, H., & Rodriguez-Monguio, R. (2012). Racial disparities in the risk of developing obesity-related diseases: A cross-sectional study. *Ethnicity & Disease*, 22(3), 308-316.
- Zhou, M. (1997). Segmented assimilation: Issues, controversies, and recent research on the new second generation. *International Migration Review*, 31(4), 975-1008.
- Zong, J., & Batalova, J. (2019, February 13). Caribbean immigrants in the United States. Migration Policy Institute. <https://www.migrationpolicy.org/article/caribbean-immigrants-united-states-2017>
- Zong, J., Batalova, J., & Hallock, J. (February, 2018). Frequently requested statistics on immigrants and immigration in the United States. Migration Policy Institute. Retrieved from: <https://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states-2016>

## Appendix 1 – Full Multivariate Tables for Analyses Found in Chapter 4

**Appendix Table 1.1** Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.445	0.009	***	0.652	0.012	***	0.503	0.010	***	0.654	0.012	***
USB NH Other	0.739	0.030	***	0.903	0.033	**	0.807	0.032	***	0.917	0.034	*
USB Hispanic	0.707	0.020	***	0.826	0.023	***	0.821	0.023	***	0.909	0.026	***
Puerto Rican	0.911	0.049	+	0.999	0.054		0.928	0.052		0.969	0.054	
Haitian Black < 10 Years	0.485	0.159	*	0.373	0.125	**	0.486	0.162	*	0.456	0.149	*
Haitian Black ≥ 10 Years	0.527	0.053	***	0.571	0.064	***	0.536	0.055	***	0.602	0.066	***
Jamaican Black < 10 Years	0.318	0.094	***	0.309	0.093	***	0.317	0.097	***	0.329	0.101	***
Jamaican Black ≥ 10 Years	0.606	0.074	***	0.712	0.093	**	0.683	0.084	**	0.778	0.102	+
Trinidadian & Tobagoan Black < 10 Years	0.298	0.178	*	0.336	0.201	+	0.410	0.221	+	0.445	0.264	
Trinidadian & Tobagoan Black ≥ 10 Years	0.373	0.089	***	0.473	0.112	**	0.428	0.099	***	0.523	0.117	**
Guyanese Black < 10 Years	0.180	0.112	**	0.208	0.132	*	0.190	0.117	**	0.212	0.133	*
Guyanese Black ≥ 10 Years	0.627	0.123	*	0.788	0.171		0.783	0.153		0.938	0.201	
Central/South African < 10 Years	0.689	0.339		0.711	0.342		0.802	0.400		0.804	0.382	
Central/South African ≥ 10 Years	0.436	0.238		0.743	0.428		0.516	0.302		0.801	0.472	
East African < 10 Years	0.216	0.092	***	0.212	0.095	**	0.216	0.093	***	0.230	0.103	***
East African ≥ 10 Years	0.316	0.076	***	0.362	0.085	***	0.347	0.089	***	0.388	0.096	***
West African < 10 Years	0.158	0.042	***	0.171	0.045	***	0.163	0.043	***	0.185	0.049	***
West African ≥ 10 Years	0.348	0.078	***	0.506	0.113	**	0.396	0.091	***	0.525	0.119	**
Other Foreign-Born < 10 Years	0.297	0.013	***	0.361	0.017	***	0.311	0.014	***	0.389	0.018	***
Other Foreign-Born ≥ 10 Years	0.458	0.013	***	0.619	0.017	***	0.526	0.015	***	0.672	0.019	***
Age (Mean-Centered)												
Age	1.038	0.000	***	1.040	0.000	***	1.031	0.000	***	1.032	0.000	***
Female (Male)												
Female	1.088	0.013	***	0.977	0.012	+	0.914	0.012	***	0.850	0.011	***
Interview Year (Centered at 2000)												
Interview Year	1.001	0.001		1.005	0.001	***	1.014	0.001	***	1.013	0.001	***
English Interview (Non-English Interview)												
English Interview	0.452	0.013	***	0.772	0.022	***	0.506	0.015	***	0.716	0.021	***
College Degree or Higher (Less than a College Degree)												
College Degree or Higher				0.423	0.008	***				0.542	0.010	***
Family Income-to-Needs Ratio (< 1.00)												
Family Income-to-Needs Ratio				0.594	0.010	***				0.619	0.011	***
1.00-1.99												
≥ 2.00				0.245	0.004	***				0.289	0.005	***
Insured (Uninsured)												
Insured							0.633	0.013	***	0.847	0.017	***
Last Healthcare Visit < 1 Year (≥ 1 Year)												
Last Healthcare Visit							0.395	0.008	***	0.376	0.008	***
Cigarette Smoking Status (Abstainer)												
Cigarette Smoking Status												
Former Smoker							1.617	0.025	***	1.493	0.024	***
Current Smoker							2.714	0.044	***	2.139	0.035	***

Alcohol use Status (Abstainer)

Former Drinker	0.937	0.017	***	1.036	0.019	+
Current Drinker	0.550	0.009	***	0.687	0.012	***

Vigorous Exercise Status (None)

< 75 Minutes per Week	0.462	0.011	***	0.530	0.013	***
≥ 75 Minutes per Week	0.300	0.006	***	0.355	0.007	***

Intercept	0.443	0.016	***	0.645	0.024	***	0.822	0.033	***	0.951	0.040	
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.176	0.002	***	0.117	0.002	***	0.131	0.002	***	0.099	0.002	***
Haitian Black < 10 Years	0.094	0.028	***	0.047	0.015	**	0.068	0.021	**	0.048	0.015	***
Haitian Black ≥ 10 Years	0.101	0.009	***	0.071	0.007	***	0.074	0.007	***	0.062	0.006	***
Jamaican Black < 10 Years	0.064	0.018	***	0.039	0.011	**	0.045	0.013	**	0.035	0.010	***
Jamaican Black ≥ 10 Years	0.115	0.012	***	0.087	0.010	***	0.093	0.010	***	0.078	0.009	***
Trinidadian & Tobagoan Black < 10 Years	0.060	0.034	+	0.043	0.025	+	0.058	0.030	*	0.046	0.026	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.074	0.016	***	0.059	0.013	***	0.060	0.013	***	0.054	0.011	***
Guyanese Black < 10 Years	0.037	0.022	+	0.027	0.017		0.028	0.017	+	0.023	0.014	
Guyanese Black ≥ 10 Years	0.118	0.020	***	0.095	0.018	***	0.105	0.018	***	0.093	0.018	***
Central/South African < 10 Years	0.129	0.055	*	0.086	0.038	*	0.107	0.048	*	0.081	0.035	*
Central/South African ≥ 10 Years	0.085	0.043	*	0.090	0.047	+	0.072	0.039	+	0.081	0.044	+
East African < 10 Years	0.044	0.018	*	0.027	0.012	*	0.031	0.013	*	0.025	0.011	*
East African ≥ 10 Years	0.063	0.014	***	0.046	0.010	***	0.050	0.012	***	0.041	0.010	***
West African < 10 Years	0.033	0.008	***	0.022	0.006	***	0.024	0.006	***	0.020	0.005	***
West African ≥ 10 Years	0.069	0.014	***	0.063	0.013	***	0.056	0.012	***	0.054	0.012	***
Other Foreign-Born < 10 Years	0.060	0.002	***	0.046	0.002	***	0.045	0.002	***	0.041	0.002	***
Other Foreign-Born ≥ 10 Years	0.089	0.002	***	0.076	0.002	***	0.073	0.002	***	0.068	0.001	***
F-Statistic	F(24,12 23)			F(27,12 20)			F(32,12 15)			F(35,12 12)		
	573.22			977.05			792.94			883.69		
Prob > F	0			0			0			0		

N = 468,026

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

< .001

**Appendix Table 1.2** Results of Sample-Weighted, Binomial Logistic Regression Models for Heart Conditions by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	1.066	0.022	**	1.221	0.025	***	1.097	0.022	***	1.214	0.025	***
USB NH Other	1.258	0.055	***	1.352	0.062	***	1.288	0.057	***	1.354	0.061	***
USB Hispanic	0.870	0.032	***	0.921	0.033	*	0.922	0.033	*	0.959	0.035	
Puerto Rican	1.142	0.069	*	1.170	0.070	**	1.146	0.069	*	1.155	0.069	*
Haitian Black < 10 Years	0.170	0.109	**	0.154	0.097	**	0.196	0.126	*	0.186	0.117	**
Haitian Black ≥ 10 Years	0.408	0.081	***	0.418	0.086	***	0.436	0.088	***	0.452	0.093	***
Jamaican Black < 10 Years	0.194	0.121	**	0.193	0.120	**	0.208	0.130	*	0.212	0.133	*
Jamaican Black ≥ 10 Years	0.597	0.088	***	0.624	0.094	**	0.642	0.095	**	0.665	0.101	**
Trinidadian & Tobagoan Black < 10 Years	1.000			1.000			1.000			1.000		
Trinidadian & Tobagoan Black ≥ 10 Years	0.407	0.134	**	0.445	0.146	*	0.451	0.147	*	0.482	0.157	*
Guyanese Black < 10 Years	0.139	0.105	**	0.148	0.110	**	0.156	0.115	*	0.163	0.118	*
Guyanese Black ≥ 10 Years	0.662	0.193		0.711	0.210		0.749	0.217		0.792	0.232	
Central/South African < 10 Years	0.686	0.439		0.683	0.438		0.774	0.496		0.752	0.481	
Central/South African ≥ 10 Years	0.962	0.698		1.155	0.828		1.071	0.823		1.229	0.936	
East African < 10 Years	0.495	0.194	+	0.495	0.194	+	0.591	0.236		0.603	0.239	
East African ≥ 10 Years	0.262	0.084	***	0.276	0.088	***	0.285	0.093	***	0.295	0.096	***
West African < 10 Years	0.271	0.094	***	0.277	0.095	***	0.318	0.110	***	0.329	0.111	***
West African ≥ 10 Years	0.419	0.113	***	0.472	0.130	**	0.453	0.124	**	0.496	0.138	*
Other Foreign-Born < 10 Years	0.474	0.028	***	0.505	0.031	***	0.541	0.032	***	0.578	0.035	***
Other Foreign-Born ≥ 10 Years	0.609	0.019	***	0.679	0.021	***	0.660	0.021	***	0.720	0.023	***
Age (Mean-Centered)												
	1.054	0.000	***	1.054	0.000	***	1.048	0.000	***	1.048	0.000	***
Female (Male)												
	0.799	0.010	***	0.771	0.010	***	0.757	0.009	***	0.740	0.009	***
Interview Year (Centered at 2000)												
	0.996	0.001	***	0.997	0.001	*	0.999	0.001		0.999	0.001	
English Interview (Non-English Interview)												
	1.032	0.038		1.250	0.047	***	0.995	0.037		1.144	0.044	***
College Degree or Higher (Less than a College Degree)												
				0.838	0.012	***				0.901	0.013	***
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				0.764	0.016	***				0.772	0.016	***
≥ 2.00				0.580	0.011	***				0.587	0.011	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							0.949	0.022	*	1.065	0.025	**
							0.387	0.010	***	0.382	0.009	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.486	0.020	***	1.450	0.020	***
Current Smoker							1.519	0.026	***	1.395	0.025	***
Alcohol use Status (Abstainer)												
Former Drinker							1.097	0.021	***	1.138	0.022	***

Current Drinker	0.873	0.015	***	0.946	0.016	***
Vigorous Exercise Status (None)						
< 75 Minutes per Week	0.819	0.019	***	0.858	0.020	***
≥ 75 Minutes per Week	0.745	0.012	***	0.790	0.012	***
Intercept	0.106	0.005	***	0.128	0.006	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.082	0.002	***	0.074	0.001	***
Haitian Black < 10 Years	0.015	0.009		0.012	0.008	
Haitian Black ≥ 10 Years	0.035	0.007	***	0.032	0.006	***
Jamaican Black < 10 Years	0.017	0.010		0.015	0.009	
Jamaican Black ≥ 10 Years	0.051	0.007	***	0.047	0.007	***
Trinidadian & Tobogean Black < 10 Years	-	-	-	-	-	-
Trinidadian & Tobogean Black ≥ 10 Years	0.035	0.011	**	0.034	0.011	**
Guyanese Black < 10 Years	0.012	0.009		0.012	0.009	
Guyanese Black ≥ 10 Years	0.056	0.015	***	0.054	0.015	***
Central/South African < 10 Years	0.058	0.035	+	0.052	0.031	+
Central/South African ≥ 10 Years	0.079	0.053		0.084	0.055	
East African < 10 Years	0.042	0.016	**	0.038	0.014	**
East African ≥ 10 Years	0.023	0.007	***	0.022	0.007	***
West African < 10 Years	0.024	0.008	**	0.022	0.007	**
West African ≥ 10 Years	0.036	0.009	***	0.036	0.010	***
Other Foreign-Born < 10 Years	0.041	0.002	***	0.039	0.002	***
Other Foreign-Born ≥ 10 Years	0.052	0.001	***	0.051	0.001	***
F-Statistic	F(23,12 24)	877.97		F(26,12 21)	845.34	
Prob > F	0			0		

N = 468,049

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 1.3** Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.482	0.007	***	0.533	0.008	***	0.491	0.007	***	0.530	0.008	***
USB NH Other	0.626	0.020	***	0.664	0.021	***	0.642	0.021	***	0.671	0.021	***
USB Hispanic	0.537	0.014	***	0.553	0.014	***	0.559	0.015	***	0.568	0.015	***
Puerto Rican	0.633	0.031	***	0.647	0.032	***	0.620	0.032	***	0.629	0.032	***
Haitian Black < 10 Years	0.375	0.115	***	0.352	0.108	***	0.401	0.125	**	0.386	0.120	**
Haitian Black ≥ 10 Years	0.504	0.054	***	0.518	0.054	***	0.515	0.058	***	0.532	0.058	***
Jamaican Black < 10 Years	0.363	0.095	***	0.356	0.094	***	0.356	0.098	***	0.353	0.098	***
Jamaican Black ≥ 10 Years	0.640	0.051	***	0.671	0.055	***	0.647	0.053	***	0.670	0.056	***
Trinidadian & Tobagoan Black < 10 Years	0.076	0.043	***	0.075	0.041	***	0.082	0.047	***	0.080	0.045	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.406	0.074	***	0.435	0.079	***	0.426	0.079	***	0.448	0.083	***
Guyanese Black < 10 Years	0.545	0.239		0.558	0.243		0.531	0.230		0.539	0.232	
Guyanese Black ≥ 10 Years	0.618	0.094	**	0.651	0.098	**	0.654	0.098	**	0.679	0.102	**
Central/South African < 10 Years	0.458	0.203	+	0.486	0.216		0.472	0.203	+	0.493	0.214	
Central/South African ≥ 10 Years	0.569	0.249		0.687	0.299		0.620	0.286		0.727	0.327	
East African < 10 Years	0.224	0.051	***	0.226	0.052	***	0.249	0.056	***	0.254	0.058	***
East African ≥ 10 Years	0.308	0.056	***	0.329	0.061	***	0.328	0.059	***	0.348	0.063	***
West African < 10 Years	0.346	0.054	***	0.367	0.058	***	0.377	0.059	***	0.403	0.063	***
West African ≥ 10 Years	0.682	0.078	***	0.790	0.091	*	0.690	0.081	**	0.784	0.092	*
Other Foreign-Born < 10 Years	0.278	0.011	***	0.306	0.012	***	0.304	0.012	***	0.337	0.013	***
Other Foreign-Born ≥ 10 Years	0.386	0.008	***	0.426	0.009	***	0.408	0.009	***	0.443	0.009	***
Age (Mean-Centered)												
	1.064	0.000	***	1.064	0.000	***	1.059	0.000	***	1.059	0.000	***
Female (Male)												
	0.855	0.008	***	0.837	0.008	***	0.758	0.008	***	0.747	0.008	***
Interview Year (Centered at 2000)												
	1.016	0.001	***	1.018	0.001	***	1.020	0.001	***	1.020	0.001	***
English Interview (Non-English Interview)												
	0.946	0.022	*	1.122	0.026	***	0.912	0.021	***	1.037	0.025	
College Degree or Higher (Less than a College Degree)												
				0.719	0.008	***				0.742	0.009	***
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				0.865	0.015	***				0.868	0.015	***
≥ 2.00				0.737	0.011	***				0.736	0.011	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							0.874	0.015	***	0.963	0.016	*
							0.318	0.005	***	0.312	0.005	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.228	0.014	***	1.177	0.014	***
Current Smoker							1.241	0.016	***	1.122	0.014	***
Alcohol use Status (Abstainer)												
Former Drinker							1.125	0.017	***	1.157	0.018	***



Current Drinker							0.913	0.011	***	0.987	0.013	
Vigorous Exercise Status (None)												
< 75 Minutes per Week							0.848	0.015	***	0.897	0.016	***
≥ 75 Minutes per Week							0.683	0.008	***	0.732	0.008	***
Intercept	0.612	0.017	***	0.666	0.019	***	0.902	0.029	***	0.914	0.030	**
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.374	0.003	***	0.355	0.003	***	0.357	0.003	***	0.342	0.003	***
Haitian Black < 10 Years	0.183	0.046	***	0.162	0.042	***	0.182	0.046	***	0.167	0.043	***
Haitian Black ≥ 10 Years	0.232	0.019	***	0.222	0.018	***	0.222	0.019	***	0.217	0.019	***
Jamaican Black < 10 Years	0.178	0.038	***	0.164	0.036	***	0.165	0.038	***	0.155	0.036	***
Jamaican Black ≥ 10 Years	0.277	0.016	***	0.270	0.016	***	0.264	0.016	***	0.258	0.016	***
Trinidadian & Tobogean Black < 10 Years	0.043	0.023	+	0.040	0.021	+	0.043	0.024	+	0.040	0.021	+
Trinidadian & Tobogean Black ≥ 10 Years	0.195	0.029	***	0.193	0.028	***	0.191	0.029	***	0.189	0.029	***
Guyanese Black < 10 Years	0.246	0.081	**	0.235	0.078	**	0.227	0.076	**	0.219	0.073	**
Guyanese Black ≥ 10 Years	0.270	0.030	***	0.264	0.029	***	0.266	0.029	***	0.261	0.029	***
Central/South African < 10 Years	0.215	0.075	**	0.211	0.074	**	0.207	0.071	**	0.204	0.070	**
Central/South African ≥ 10 Years	0.254	0.083	**	0.274	0.087	**	0.256	0.088	**	0.274	0.089	**
East African < 10 Years	0.118	0.024	***	0.110	0.022	***	0.121	0.024	***	0.117	0.023	***
East African ≥ 10 Years	0.156	0.024	***	0.153	0.024	***	0.154	0.023	***	0.153	0.023	***
West African < 10 Years	0.171	0.022	***	0.168	0.022	***	0.173	0.022	***	0.173	0.022	***
West African ≥ 10 Years	0.290	0.023	***	0.303	0.024	***	0.277	0.023	***	0.290	0.024	***
Other Foreign-Born < 10 Years	0.143	0.004	***	0.144	0.004	***	0.144	0.004	***	0.149	0.005	***
Other Foreign-Born ≥ 10 Years	0.188	0.002	***	0.190	0.002	***	0.184	0.002	***	0.187	0.002	***
F-Statistic	F(24,12 23)		2061	F(27,12 20)		1969.12	F(32,12 15)		1562.57	F(35,12 12)		1517.1
Prob > F		0			0			0			0	

N = 467,804

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 1.4** Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.506	0.009	***	0.578	0.010	***	0.549	0.010	***	0.600	0.011	***
USB NH Other	0.887	0.040	**	0.958	0.041		0.944	0.043		0.993	0.044	
USB Hispanic	0.984	0.033		1.028	0.034		1.080	0.036	*	1.103	0.037	**
Puerto Rican	1.149	0.066	*	1.194	0.068	**	1.147	0.066	*	1.169	0.067	**
Haitian Black < 10 Years	0.323	0.179	*	0.299	0.164	*	0.315	0.180	*	0.305	0.172	*
Haitian Black ≥ 10 Years	1.147	0.150		1.201	0.154		1.134	0.157		1.189	0.161	
Jamaican Black < 10 Years	0.640	0.202		0.628	0.196		0.613	0.190		0.612	0.189	
Jamaican Black ≥ 10 Years	0.910	0.103		0.962	0.111		0.925	0.104		0.961	0.109	
Trinidadian & Tobagoan Black < 10 Years	0.282	0.229		0.287	0.236		0.351	0.288		0.350	0.290	
Trinidadian & Tobagoan Black ≥ 10 Years	0.869	0.206		0.956	0.228		0.957	0.231		1.018	0.247	
Guyanese Black < 10 Years	0.453	0.226		0.469	0.236		0.441	0.213	+	0.453	0.220	
Guyanese Black ≥ 10 Years	1.234	0.281		1.327	0.297		1.383	0.321		1.449	0.329	
Central/South African < 10 Years	0.087	0.064	***	0.092	0.068	***	0.090	0.067	***	0.094	0.069	***
Central/South African ≥ 10 Years	0.410	0.193	+	0.532	0.251		0.443	0.210	+	0.551	0.260	
East African < 10 Years	0.425	0.147	*	0.430	0.150	*	0.453	0.162	*	0.465	0.164	*
East African ≥ 10 Years	0.557	0.127	**	0.606	0.137	*	0.570	0.138	*	0.606	0.145	*
West African < 10 Years	0.341	0.090	***	0.366	0.097	***	0.358	0.095	***	0.386	0.102	***
West African ≥ 10 Years	0.886	0.135		1.066	0.162		0.881	0.136		1.016	0.156	
Other Foreign-Born < 10 Years	0.362	0.022	***	0.406	0.024	***	0.402	0.024	***	0.450	0.027	***
Other Foreign-Born ≥ 10 Years	0.642	0.018	***	0.731	0.020	***	0.705	0.020	***	0.779	0.022	***
Age (Mean-Centered)												
	1.052	0.000	***	1.052	0.000	***	1.043	0.000	***	1.043	0.000	***
Female (Male)												
	0.847	0.011	***	0.815	0.011	***	0.715	0.010	***	0.699	0.010	***
Interview Year (Centered at 2000)												
	1.028	0.001	***	1.031	0.001	***	1.034	0.001	***	1.035	0.001	***
English Interview (Non-English Interview)												
	0.736	0.024	***	0.909	0.031	**	0.733	0.025	***	0.848	0.029	***
College Degree or Higher (Less than a College Degree)												
				0.656	0.011	***				0.713	0.012	***
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				0.846	0.018	***				0.854	0.018	***
≥ 2.00				0.674	0.013	***				0.702	0.014	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							0.881	0.022	***	0.979	0.024	
							0.238	0.008	***	0.234	0.007	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.357	0.023	***	1.300	0.022	***
Current Smoker							1.272	0.024	***	1.142	0.022	***
Alcohol use Status (Abstainer)												
Former Drinker							1.168	0.024	***	1.208	0.024	***

Current Drinker							0.658	0.012	***	0.717	0.013	***
Vigorous Exercise Status (None)												
< 75 Minutes per Week							0.803	0.020	***	0.855	0.021	***
≥ 75 Minutes per Week							0.606	0.011	***	0.656	0.012	***
Intercept	0.144	0.005	***	0.158	0.006	***	0.237	0.011	***	0.239	0.011	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.111	0.002	***	0.099	0.001	***	0.092	0.001	***	0.086	0.001	***
Haitian Black < 10 Years	0.039	0.021	+	0.032	0.017	+	0.031	0.017	+	0.028	0.015	+
Haitian Black ≥ 10 Years	0.125	0.014	***	0.117	0.013	***	0.104	0.013	***	0.100	0.012	***
Jamaican Black < 10 Years	0.074	0.022	***	0.065	0.019	***	0.059	0.017	***	0.054	0.016	***
Jamaican Black ≥ 10 Years	0.102	0.010	***	0.096	0.010	***	0.086	0.009	***	0.083	0.008	***
Trinidadian & Tobogean Black < 10 Years	0.034	0.027		0.031	0.024		0.035	0.027		0.032	0.025	
Trinidadian & Tobogean Black ≥ 10 Years	0.098	0.021	***	0.095	0.020	***	0.089	0.019	***	0.087	0.019	***
Guyanese Black < 10 Years	0.054	0.025	*	0.049	0.023	*	0.043	0.020	*	0.041	0.019	*
Guyanese Black ≥ 10 Years	0.134	0.026	***	0.128	0.025	***	0.124	0.025	***	0.119	0.024	***
Central/South African < 10 Years	0.011	0.008		0.010	0.007		0.009	0.007		0.009	0.006	
Central/South African ≥ 10 Years	0.049	0.022	*	0.055	0.025	*	0.043	0.020	*	0.049	0.022	*
East African < 10 Years	0.050	0.017	**	0.045	0.015	**	0.044	0.015	**	0.042	0.014	**
East African ≥ 10 Years	0.065	0.014	***	0.063	0.013	***	0.055	0.013	***	0.054	0.012	***
West African < 10 Years	0.041	0.010	***	0.039	0.010	***	0.035	0.009	***	0.035	0.009	***
West African ≥ 10 Years	0.100	0.014	***	0.105	0.014	***	0.082	0.012	***	0.087	0.012	***
Other Foreign-Born < 10 Years	0.043	0.002	***	0.043	0.002	***	0.039	0.002	***	0.040	0.002	***
Other Foreign-Born ≥ 10 Years	0.074	0.001	***	0.074	0.001	***	0.067	0.001	***	0.068	0.001	***
F-Statistic	F(24,12 23)		906.410	F(27,12 20)		884.340	F(32,12 15)		771.470	F(35,12 12)		741.820
Prob > F		0.000			0.000			0.000			0.000	

N = 467,988

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 1.5** Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.913	0.017	***	0.979	0.018		0.896	0.017	***	0.952	0.018	**
USB NH Other	1.238	0.041	***	1.285	0.043	***	1.234	0.041	***	1.272	0.042	***
USB Hispanic	0.968	0.028		1.009	0.029		0.984	0.028		1.022	0.030	
Puerto Rican	1.825	0.105	***	1.838	0.105	***	1.815	0.104	***	1.820	0.104	***
Haitian Black < 10 Years	0.274	0.147	*	0.256	0.138	*	0.306	0.165	*	0.292	0.158	*
Haitian Black ≥ 10 Years	0.488	0.094	***	0.496	0.096	***	0.520	0.099	***	0.534	0.103	***
Jamaican Black < 10 Years	0.619	0.167	+	0.640	0.174	+	0.655	0.179		0.682	0.188	
Jamaican Black ≥ 10 Years	0.633	0.080	***	0.659	0.083	***	0.656	0.084	***	0.682	0.087	**
Trinidadian & Tobagoan Black < 10 Years	0.449	0.302		0.482	0.320		0.467	0.314		0.501	0.334	
Trinidadian & Tobagoan Black ≥ 10 Years	0.369	0.103	***	0.387	0.108	***	0.382	0.108	***	0.400	0.113	***
Guyanese Black < 10 Years	0.728	0.369		0.773	0.389		0.759	0.386		0.808	0.409	
Guyanese Black ≥ 10 Years	0.451	0.123	**	0.478	0.129	**	0.475	0.129	**	0.501	0.136	*
Central/South African < 10 Years	0.058	0.041	***	0.057	0.041	***	0.062	0.044	***	0.061	0.043	***
Central/South African ≥ 10 Years	0.319	0.295		0.330	0.308		0.336	0.311		0.342	0.319	
East African < 10 Years	0.148	0.053	***	0.146	0.052	***	0.166	0.060	***	0.166	0.060	***
East African ≥ 10 Years	0.289	0.074	***	0.295	0.075	***	0.309	0.079	***	0.315	0.080	***
West African < 10 Years	0.333	0.093	***	0.330	0.093	***	0.369	0.104	***	0.369	0.104	***
West African ≥ 10 Years	0.281	0.058	***	0.295	0.061	***	0.293	0.061	***	0.306	0.064	***
Other Foreign-Born < 10 Years	0.310	0.016	***	0.317	0.016	***	0.334	0.017	***	0.343	0.017	***
Other Foreign-Born ≥ 10 Years	0.496	0.015	***	0.521	0.016	***	0.515	0.016	***	0.541	0.017	***
Age (Mean-Centered)												
	0.992	0.000	***	0.992	0.000	***	0.988	0.000	***	0.989	0.000	***
Female (Male)												
	1.368	0.017	***	1.345	0.016	***	1.306	0.016	***	1.288	0.016	***
Interview Year (Centered at 2000)												
	1.022	0.001	***	1.021	0.001	***	1.023	0.001	***	1.022	0.001	***
English Interview (Non-English Interview)												
	1.352	0.048	***	1.479	0.053	***	1.267	0.045	***	1.363	0.049	***
College Degree or Higher (Less than a College Degree)												
				1.006	0.014					1.019	0.014	
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				0.815	0.015	***				0.817	0.015	***
≥ 2.00				0.690	0.011	***				0.677	0.011	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							1.010	0.020		1.077	0.022	***
							0.606	0.013	***	0.605	0.013	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.261	0.019	***	1.249	0.019	***
Current Smoker							1.206	0.018	***	1.157	0.018	***
Alcohol use Status (Abstainer)												
Former Drinker							1.158	0.024	***	1.180	0.025	***

Current Drinker							1.035	0.018	0.041	1.079	0.019	***
Vigorous Exercise Status (None)									0.086			
< 75 Minutes per Week							0.966	0.020		0.988	0.020	
≥ 75 Minutes per Week							0.918	0.013	***	0.942	0.013	***
Intercept	0.081	0.003	***	0.095	0.004	***	0.083	0.004	***	0.094	0.004	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.135	0.002	***	0.128	0.002	***	0.134	0.002	***	0.127	0.002	***
Haitian Black < 10 Years	0.041	0.021	+	0.036	0.019	+	0.045	0.023	+	0.041	0.021	+
Haitian Black ≥ 10 Years	0.071	0.013	***	0.068	0.012	***	0.074	0.013	***	0.072	0.013	***
Jamaican Black < 10 Years	0.088	0.022	***	0.086	0.021	***	0.092	0.023	***	0.091	0.023	***
Jamaican Black ≥ 10 Years	0.090	0.010	***	0.088	0.010	***	0.092	0.011	***	0.091	0.010	***
Trinidadian & Tobagoan Black < 10 Years	0.066	0.041		0.066	0.041		0.067	0.042		0.068	0.042	
Trinidadian & Tobagoan Black ≥ 10 Years	0.055	0.014	***	0.054	0.014	***	0.056	0.015	***	0.055	0.015	***
Guyanese Black < 10 Years	0.102	0.046	*	0.102	0.046	*	0.105	0.048	*	0.106	0.048	*
Guyanese Black ≥ 10 Years	0.066	0.017	***	0.066	0.017	***	0.068	0.017	***	0.068	0.017	***
Central/South African < 10 Years	0.009	0.006		0.008	0.006		0.009	0.007		0.009	0.006	
Central/South African ≥ 10 Years	0.048	0.042		0.046	0.041		0.049	0.043		0.048	0.042	
East African < 10 Years	0.023	0.008	**	0.021	0.007	**	0.025	0.009	**	0.024	0.008	**
East African ≥ 10 Years	0.043	0.011	***	0.042	0.010	***	0.045	0.011	***	0.044	0.011	***
West African < 10 Years	0.049	0.013	***	0.046	0.012	***	0.054	0.014	***	0.051	0.014	***
West African ≥ 10 Years	0.042	0.008	***	0.042	0.008	***	0.043	0.009	***	0.043	0.009	***
Other Foreign-Born < 10 Years	0.046	0.002	***	0.045	0.002	***	0.049	0.002	***	0.048	0.002	***
Other Foreign-Born ≥ 10 Years	0.072	0.002	***	0.071	0.002	***	0.074	0.002	***	0.073	0.002	***
F-Statistic	F(24,12 23)		145.750	F(27,12 20)		157.970	F(32,12 15)		146.600	F(35,12 12)		159.070
Prob > F	0.000			0.000			0.000			0.000		

N = 467,920

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 1.6** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.568	0.009	***	0.588	0.009	***	0.577	0.009	***	0.590	0.009	***
USB NH Other	0.557	0.017	***	0.573	0.017	***	0.568	0.017	***	0.580	0.017	***
USB Hispanic	0.885	0.021	***	0.878	0.021	***	0.891	0.021	***	0.877	0.021	***
Puerto Rican	0.718	0.037	***	0.731	0.038	***	0.714	0.037	***	0.726	0.038	***
Haitian Black < 10 Years	0.401	0.125	**	0.397	0.125	**	0.401	0.124	**	0.402	0.124	**
Haitian Black ≥ 10 Years	0.737	0.068	***	0.747	0.069	**	0.751	0.070	**	0.759	0.071	**
Jamaican Black < 10 Years	0.525	0.102	***	0.515	0.100	***	0.494	0.097	***	0.486	0.096	***
Jamaican Black ≥ 10 Years	0.841	0.077	+	0.856	0.078	+	0.837	0.078	+	0.842	0.078	+
Trinidadian & Tobagoan Black < 10 Years	0.295	0.101	***	0.291	0.096	***	0.286	0.092	***	0.279	0.088	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.646	0.112	*	0.664	0.115	*	0.652	0.112	*	0.663	0.114	*
Guyanese Black < 10 Years	0.502	0.169	*	0.493	0.164	*	0.478	0.166	*	0.467	0.161	*
Guyanese Black ≥ 10 Years	0.732	0.140		0.737	0.142		0.733	0.139		0.732	0.140	
Central/South African < 10 Years	0.373	0.102	***	0.403	0.112	***	0.377	0.103	***	0.405	0.111	***
Central/South African ≥ 10 Years	0.699	0.251		0.811	0.297		0.681	0.245		0.774	0.283	
East African < 10 Years	0.322	0.053	***	0.329	0.053	***	0.320	0.053	***	0.329	0.054	***
East African ≥ 10 Years	0.480	0.070	***	0.506	0.075	***	0.496	0.073	***	0.521	0.077	***
West African < 10 Years	0.448	0.054	***	0.485	0.058	***	0.449	0.054	***	0.487	0.059	***
West African ≥ 10 Years	0.964	0.111		1.060	0.121		0.973	0.113		1.057	0.122	
Other Foreign-Born < 10 Years	0.314	0.009	***	0.344	0.010	***	0.310	0.009	***	0.340	0.010	***
Other Foreign-Born ≥ 10 Years	0.481	0.010	***	0.506	0.011	***	0.485	0.010	***	0.506	0.011	***
Age (Mean-Centered)												
	1.015	0.000	***	1.015	0.000	***	1.011	0.000	***	1.011	0.000	***
Female (Male)												
	0.536	0.005	***	0.535	0.005	***	0.506	0.005	***	0.507	0.005	***
Interview Year (Centered at 2000)												
	1.016	0.001	***	1.018	0.001	***	1.018	0.001	***	1.019	0.001	***
English Interview (Non-English Interview)												
	0.622	0.013	***	0.676	0.014	***	0.638	0.014	***	0.678	0.014	***
College Degree or Higher (Less than a College Degree)												
				0.710	0.007	***				0.717	0.007	***
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				1.078	0.018	***				1.067	0.018	***
≥ 2.00				1.085	0.016	***				1.080	0.017	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							0.901	0.012	***	0.936	0.013	***
							0.843	0.010	***	0.833	0.010	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.207	0.013	***	1.164	0.013	***
Current Smoker							0.854	0.010	***	0.797	0.009	***
Alcohol use Status (Abstainer)												
Former Drinker							1.316	0.019	***	1.331	0.020	***

Current Drinker							1.065	0.013	***	1.117	0.014	***
Vigorous Exercise Status (None)												
< 75 Minutes per Week							0.967	0.014	**	1.005	0.014	
≥ 75 Minutes per Week							0.712	0.007	***	0.744	0.007	***
Intercept	5.596	0.153	***	5.073	0.145	***	6.311	0.183	***	5.611	0.168	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.751	0.003	***	0.746	0.003	***	0.750	0.003	***	0.746	0.003	***
Haitian Black < 10 Years	0.548	0.078	***	0.538	0.078	***	0.546	0.077	***	0.542	0.077	***
Haitian Black ≥ 10 Years	0.690	0.019	***	0.687	0.019	***	0.693	0.019	***	0.691	0.020	***
Jamaican Black < 10 Years	0.613	0.046	***	0.602	0.046	***	0.597	0.047	***	0.589	0.048	***
Jamaican Black ≥ 10 Years	0.718	0.018	***	0.715	0.018	***	0.715	0.019	***	0.712	0.019	***
Trinidadian & Tobagoan Black < 10 Years	0.471	0.085	***	0.461	0.082	***	0.462	0.080	***	0.451	0.078	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.661	0.039	***	0.660	0.039	***	0.662	0.038	***	0.661	0.038	***
Guyanese Black < 10 Years	0.602	0.080	***	0.591	0.080	***	0.589	0.084	***	0.579	0.084	***
Guyanese Black ≥ 10 Years	0.688	0.041	***	0.684	0.041	***	0.688	0.041	***	0.683	0.041	***
Central/South African < 10 Years	0.529	0.068	***	0.541	0.069	***	0.531	0.068	***	0.544	0.068	***
Central/South African ≥ 10 Years	0.678	0.078	***	0.704	0.076	***	0.671	0.079	***	0.695	0.077	***
East African < 10 Years	0.493	0.041	***	0.491	0.040	***	0.490	0.041	***	0.492	0.041	***
East African ≥ 10 Years	0.591	0.035	***	0.597	0.035	***	0.598	0.035	***	0.605	0.035	***
West African < 10 Years	0.575	0.029	***	0.587	0.029	***	0.574	0.030	***	0.589	0.029	***
West African ≥ 10 Years	0.744	0.022	***	0.757	0.021	***	0.745	0.022	***	0.757	0.021	***
Other Foreign-Born < 10 Years	0.487	0.006	***	0.502	0.006	***	0.482	0.006	***	0.500	0.006	***
Other Foreign-Born ≥ 10 Years	0.592	0.004	***	0.597	0.003	***	0.593	0.004	***	0.598	0.003	***
F-Statistic	F(24,12 23)		483.890	F(27,12 20)		488.690	F(32,12 15)		432.600	F(35,12 12)		434.530
Prob > F		0.000			0.000			0.000			0.000	

N = 449,424

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 1.7** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

	Model 1			Model 2			Model 3			Model 4		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)												
USB NH White	0.824	0.017	***	1.144	0.024	***	0.866	0.018	***	1.085	0.023	***
USB NH Other	1.117	0.045	**	1.350	0.058	***	1.177	0.048	***	1.330	0.056	***
USB Hispanic	0.936	0.030	*	1.085	0.035	*	1.047	0.033		1.162	0.037	***
Puerto Rican	1.528	0.099	***	1.652	0.110	***	1.623	0.106	***	1.696	0.112	***
Haitian Black < 10 Years	0.676	0.189		0.546	0.170	+	0.815	0.241		0.745	0.235	
Haitian Black ≥ 10 Years	0.845	0.116		0.925	0.135		1.025	0.142		1.138	0.164	
Jamaican Black < 10 Years	0.607	0.200		0.646	0.211		0.686	0.227		0.742	0.241	
Jamaican Black ≥ 10 Years	0.546	0.076	***	0.646	0.091	**	0.660	0.090	**	0.747	0.104	*
Trinidadian & Tobagoan Black < 10 Years	0.526	0.316		0.676	0.404		0.646	0.412		0.777	0.488	
Trinidadian & Tobagoan Black ≥ 10 Years	0.299	0.118	**	0.363	0.144	*	0.327	0.128	**	0.391	0.152	*
Guyanese Black < 10 Years	0.824	0.516		1.000	0.651		0.975	0.611		1.153	0.753	
Guyanese Black ≥ 10 Years	0.236	0.098	***	0.287	0.118	**	0.281	0.111	***	0.324	0.126	**
Central/South African < 10 Years	0.608	0.308		0.654	0.327		0.726	0.362		0.767	0.377	
Central/South African ≥ 10 Years	0.972	0.401		1.409	0.651		1.254	0.539		1.660	0.754	
East African < 10 Years	0.298	0.086	***	0.291	0.087	***	0.354	0.103	***	0.372	0.111	***
East African ≥ 10 Years	0.715	0.188		0.827	0.216		0.917	0.246		1.051	0.280	
West African < 10 Years	0.586	0.149		0.645	0.164		0.709	0.188		0.810	0.213	
West African ≥ 10 Years	0.464	0.081	***	0.644	0.111	*	0.587	0.104	**	0.760	0.131	
Other Foreign-Born < 10 Years	0.523	0.022	***	0.651	0.028	***	0.583	0.025	***	0.722	0.032	***
Other Foreign-Born ≥ 10 Years	0.694	0.020	***	0.901	0.028	***	0.797	0.024	***	0.984	0.031	
Age (Mean-Centered)												
	0.997	0.000	***	0.999	0.000	*	0.994	0.000	***	0.996	0.000	***
Female (Male)												
	1.484	0.019	***	1.402	0.018	***	1.435	0.019	***	1.385	0.019	***
Interview Year (Centered at 2000)												
	1.013	0.002	***	1.015	0.002	***	1.025	0.002	***	1.023	0.002	***
English Interview (Non-English Interview)												
	0.751	0.024	***	1.170	0.038	***	0.815	0.026	***	1.076	0.035	*
College Degree or Higher (Less than a College Degree)												
				0.536	0.010	***				0.649	0.013	***
Family Income-to-Needs Ratio (< 1.00)												
1.00-1.99				0.696	0.013	***				0.714	0.013	***
≥ 2.00				0.327	0.006	***				0.370	0.007	***
Insured (Uninsured)												
Last Healthcare Visit < 1 Year (≥ 1 Year)							0.587	0.011	***	0.740	0.014	***
							0.558	0.011	***	0.544	0.011	***
Cigarette Smoking Status (Abstainer)												
Former Smoker							1.434	0.025	***	1.334	0.024	***
Current Smoker							2.716	0.043	***	2.239	0.037	***
Alcohol use Status (Abstainer)												
Former Drinker							1.191	0.026	***	1.287	0.029	***



Current Drinker							0.937	0.018	***	1.140	0.022	***
Vigorous Exercise Status (None)												
< 75 Minutes per Week							0.710	0.017	***	0.795	0.020	***
≥ 75 Minutes per Week							0.576	0.010	***	0.660	0.011	***
Intercept	0.120	0.005	***	0.154	0.007	***	0.141	0.006	***	0.152	0.007	***
	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t	Margin	Std. Error	P >  t
USB NH Black	0.114	0.002	***	0.080	0.001	***	0.096	0.002	***	0.076	0.001	***
Haitian Black < 10 Years	0.080	0.021	***	0.045	0.013	***	0.080	0.022	***	0.058	0.017	***
Haitian Black ≥ 10 Years	0.098	0.012	***	0.075	0.010	***	0.099	0.012	***	0.086	0.011	***
Jamaican Black < 10 Years	0.072	0.022	***	0.053	0.016	***	0.068	0.021	***	0.058	0.018	***
Jamaican Black ≥ 10 Years	0.066	0.008	***	0.053	0.007	***	0.066	0.008	***	0.058	0.008	***
Trinidadian & Tobagoan Black < 10 Years	0.063	0.036	+	0.056	0.031	+	0.064	0.038	+	0.060	0.035	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.037	0.014	**	0.031	0.012	**	0.034	0.013	**	0.031	0.012	**
Guyanese Black < 10 Years	0.096	0.054	+	0.080	0.048	+	0.094	0.054	+	0.087	0.052	+
Guyanese Black ≥ 10 Years	0.029	0.012	*	0.024	0.010	*	0.029	0.011	**	0.026	0.010	**
Central/South African < 10 Years	0.072	0.034	*	0.054	0.026	*	0.072	0.033	*	0.059	0.027	*
Central/South African ≥ 10 Years	0.111	0.041	**	0.109	0.045	*	0.118	0.045	**	0.120	0.048	*
East African < 10 Years	0.037	0.010	***	0.025	0.007	***	0.036	0.010	***	0.030	0.009	***
East African ≥ 10 Years	0.084	0.020	***	0.067	0.016	***	0.089	0.022	***	0.080	0.019	***
West African < 10 Years	0.070	0.017	***	0.053	0.013	***	0.070	0.017	***	0.063	0.015	***
West African ≥ 10 Years	0.056	0.009	***	0.053	0.009	***	0.059	0.010	***	0.059	0.010	***
Other Foreign-Born < 10 Years	0.063	0.002	***	0.054	0.002	***	0.059	0.002	***	0.056	0.002	***
Other Foreign-Born ≥ 10 Years	0.082	0.002	***	0.073	0.002	***	0.078	0.002	***	0.075	0.002	***
F-Statistic	F(24,12 23)		68.800	F(27,12 20)		329.660	F(32,12 15)		302.960	F(35,12 12)		399.950
Prob > F		0.000			0.000			0.000			0.000	

N = 462,821

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Appendix 2 – Full Multivariate Tables for Analyses Found in Chapter 5

**Appendix Table 2.1** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

### Panel A. Pre-1965

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.37	0.08	0.00	0.37	0.08	0.00	0.05	0.05	0.00
East Asia	0.51	0.13	0.01	0.51	0.13	0.01	0.16	0.19	0.12
Southeast Asia	0.39	0.11	0.00	0.39	0.11	0.00	0.08	0.18	0.28
Southwest Asia	0.31	0.27	0.18	0.31	0.27	0.18	2.81	8.30	0.73
China/Hong Kong	0.54	0.20	0.09	0.53	0.20	0.09	0.07	0.13	0.14
Middle East	0.25	0.12	0.00	0.25	0.12	0.00	8.92	22.42	0.38
Europe	0.59	0.08	0.00	0.59	0.08	0.00	0.37	0.22	0.10
Central America	0.43	0.11	0.00	0.43	0.11	0.00	2.93	4.91	0.52
South America	0.55	0.30	0.27	0.55	0.30	0.27	0.94	3.11	0.99
Caribbean	0.84	0.12	0.24	0.84	0.12	0.22	0.65	0.57	0.63
Sub-Saharan Africa	0.50	0.43	0.42	0.50	0.43	0.42	76.61	221.29	0.13
North Africa	1.29	0.69	0.64	1.28	0.69	0.64	3.83	10.71	0.63
Other Foreign-Born	0.83	0.11	0.16	0.83	0.11	0.16	1.13	0.78	0.86
Female (Male)	1.02	0.09	0.78	1.02	0.09	0.78	1.02	0.09	0.79
Age (Centered at 18)	1.01	0.00	0.00	1.01	0.00	0.01	1.01	0.00	0.00
Time in the United States (Centered at 0 years)				1.00	0.00	0.66	0.99	0.01	0.30
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.85	0.09	0.12	0.86	0.09	0.15	0.88	0.09	0.22
College Degree or Higher (Less than a College Degree)	0.69	0.08	0.00	0.70	0.08	0.00	0.70	0.08	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.61	0.07	0.00	0.61	0.07	0.00	0.61	0.07	0.00
≥ 2.00	0.32	0.04	0.00	0.32	0.04	0.00	0.32	0.04	0.00
Insured (Uninsured)	1.03	0.20	0.90	1.03	0.20	0.90	1.05	0.21	0.79
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.41	0.07	0.00	0.41	0.07	0.00	0.41	0.07	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.72	0.17	0.00	1.72	0.17	0.00	1.72	0.17	0.00
Current Smoker	1.66	0.22	0.00	1.67	0.22	0.00	1.69	0.22	0.00

Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.12	0.59	1.07	0.12	0.58	1.07	0.12	0.53
Current Drinker	0.64	0.07	0.00	0.64	0.07	0.00	0.64	0.07	0.00
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.45	0.11	0.00	0.45	0.11	0.00	0.45	0.11	0.00
≥ 75 Minutes per Week	0.36	0.05	0.00	0.36	0.05	0.00	0.36	0.05	0.00
Intercept	0.73	0.22	0.30	0.78	0.25	0.43	1.09	0.57	0.86

$N = 16,297$

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.13	0.03	0.00	-0.13	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.32	0.10	0.00
10	-	-	-	-	-	-	-0.29	0.08	0.00
20	-	-	-	-	-	-	-0.26	0.06	0.00
30	-	-	-	-	-	-	-0.23	0.05	0.00
40	-	-	-	-	-	-	-0.20	0.03	0.00
50	-	-	-	-	-	-	-0.16	0.03	0.00
East Asia	-0.10	0.03	0.00	-0.10	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.25	0.13	0.05
10	-	-	-	-	-	-	-0.23	0.11	0.04
20	-	-	-	-	-	-	-0.20	0.09	0.02
30	-	-	-	-	-	-	-0.17	0.07	0.01
40	-	-	-	-	-	-	-0.14	0.05	0.00
50	-	-	-	-	-	-	-0.11	0.03	0.00
Southeast Asia	-0.13	0.03	0.00	-0.13	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.30	0.15	0.05
10	-	-	-	-	-	-	-0.27	0.13	0.04
20	-	-	-	-	-	-	-0.24	0.12	0.04
30	-	-	-	-	-	-	-0.21	0.09	0.03
40	-	-	-	-	-	-	-0.17	0.06	0.01
50	-	-	-	-	-	-	-0.14	0.04	0.00
Southwest Asia	-0.15	0.08	0.06	-0.15	0.08	0.06	-	-	-
0	-	-	-	-	-	-	0.21	0.61	0.73
10	-	-	-	-	-	-	0.12	0.49	0.81
20	-	-	-	-	-	-	0.02	0.35	0.95
30	-	-	-	-	-	-	-0.06	0.21	0.79
40	-	-	-	-	-	-	-0.12	0.12	0.33
50	-	-	-	-	-	-	-0.16	0.08	0.05
China/Hong Kong	-0.09	0.05	0.06	-0.09	0.05	0.05	-	-	-

0	-	-	-	-	-	-	-0.30	0.12	0.01
10	-	-	-	-	-	-	-0.27	0.11	0.01
20	-	-	-	-	-	-	-0.24	0.09	0.01
30	-	-	-	-	-	-	-0.20	0.08	0.01
40	-	-	-	-	-	-	-0.16	0.06	0.01
50	-	-	-	-	-	-	-0.12	0.05	0.02
Middle East	-0.17	0.04	0.00	-0.17	0.04	0.00	-	-	-
0	-	-	-	-	-	-	0.42	0.38	0.27
10	-	-	-	-	-	-	0.30	0.40	0.45
20	-	-	-	-	-	-	0.15	0.32	0.64
30	-	-	-	-	-	-	0.01	0.20	0.97
40	-	-	-	-	-	-	-0.10	0.09	0.27
50	-	-	-	-	-	-	-0.17	0.04	0.00
Europe	-0.08	0.02	0.00	-0.08	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.17	0.11	0.11
10	-	-	-	-	-	-	-0.15	0.09	0.08
20	-	-	-	-	-	-	-0.13	0.07	0.04
30	-	-	-	-	-	-	-0.12	0.05	0.01
40	-	-	-	-	-	-	-0.10	0.03	0.00
50	-	-	-	-	-	-	-0.09	0.02	0.00
Central America	-0.12	0.03	0.00	-0.12	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.22	0.34	0.52
10	-	-	-	-	-	-	0.14	0.28	0.62
20	-	-	-	-	-	-	0.06	0.20	0.77
30	-	-	-	-	-	-	-0.01	0.13	0.92
40	-	-	-	-	-	-	-0.07	0.06	0.27
50	-	-	-	-	-	-	-0.12	0.03	0.00
South America	-0.09	0.07	0.21	-0.09	0.07	0.21	-	-	-
0	-	-	-	-	-	-	-0.01	0.63	0.99
10	-	-	-	-	-	-	-0.03	0.48	0.95
20	-	-	-	-	-	-	-0.05	0.35	0.89
30	-	-	-	-	-	-	-0.06	0.22	0.78
40	-	-	-	-	-	-	-0.08	0.12	0.54
50	-	-	-	-	-	-	-0.09	0.07	0.21
Caribbean	-0.03	0.02	0.24	-0.03	0.02	0.22	-	-	-
0	-	-	-	-	-	-	-0.08	0.16	0.62
10	-	-	-	-	-	-	-0.07	0.12	0.58
20	-	-	-	-	-	-	-0.06	0.09	0.52
30	-	-	-	-	-	-	-0.05	0.06	0.43
40	-	-	-	-	-	-	-0.04	0.04	0.27
50	-	-	-	-	-	-	-0.03	0.02	0.16
Sub-Saharan Africa	-0.10	0.10	0.34	-0.10	0.10	0.34	-	-	-
0	-	-	-	-	-	-	0.61	0.14	0.00

10	-	-	-	-	-	-	0.57	0.21	0.01
20	-	-	-	-	-	-	0.46	0.30	0.12
30	-	-	-	-	-	-	0.28	0.30	0.36
40	-	-	-	-	-	-	0.07	0.21	0.74
50	-	-	-	-	-	-	-0.09	0.11	0.42
North Africa	0.04	0.10	0.65	0.04	0.10	0.65	-	-	-
0	-	-	-	-	-	-	0.27	0.55	0.62
10	-	-	-	-	-	-	0.23	0.47	0.62
20	-	-	-	-	-	-	0.18	0.37	0.62
30	-	-	-	-	-	-	0.13	0.27	0.61
40	-	-	-	-	-	-	0.09	0.17	0.60
50	-	-	-	-	-	-	0.04	0.10	0.65
Other Foreign-Born	-0.03	0.02	0.16	-0.03	0.02	0.16	-	-	-
0	-	-	-	-	-	-	0.02	0.14	0.86
10	-	-	-	-	-	-	0.01	0.11	0.91
20	-	-	-	-	-	-	0.00	0.08	0.99
30	-	-	-	-	-	-	-0.01	0.06	0.88
40	-	-	-	-	-	-	-0.02	0.04	0.61
50	-	-	-	-	-	-	-0.03	0.02	0.23

## Panel B. 1965-1984

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.43	0.12	0.00	0.43	0.12	0.00	0.96	0.86	0.96
East Asia	0.49	0.07	0.00	0.50	0.07	0.00	4.70	2.66	0.01
Southeast Asia	0.85	0.08	0.11	0.88	0.09	0.19	2.67	0.99	0.01
Southwest Asia	0.70	0.13	0.06	0.73	0.14	0.09	1.35	0.91	0.66
China/Hong Kong	0.62	0.13	0.03	0.64	0.14	0.04	0.44	0.39	0.35
Middle East	0.96	0.16	0.79	0.99	0.17	0.93	4.60	3.23	0.03
Europe	0.69	0.07	0.00	0.69	0.07	0.00	2.05	0.82	0.07
Central America	0.89	0.10	0.29	0.91	0.10	0.40	1.98	0.80	0.09
South America	0.57	0.22	0.15	0.58	0.23	0.17	0.57	1.00	0.75
Caribbean	0.76	0.06	0.00	0.77	0.06	0.00	2.77	0.92	0.00
Sub-Saharan Africa	0.64	0.16	0.09	0.67	0.17	0.12	11.62	10.80	0.01
North Africa	1.11	0.38	0.76	1.15	0.40	0.69	7.65	8.67	0.07
Other Foreign-Born	0.86	0.07	0.07	0.87	0.07	0.09	1.84	0.68	0.10
Female (Male)									
Age (Centered at 18)	1.04	0.06	0.54	1.03	0.06	0.61	1.03	0.06	0.61
Time in the United States (Centered at 0 years)	1.04	0.00	0.00	1.04	0.00	0.00	1.03	0.00	0.00
Origin * Time in the United States (Centered at 0 years)				1.01	0.00	0.02	1.03	0.01	0.00
							<i>Included</i>		

English Interview (Non-English Interview)	0.69	0.04	0.00	0.67	0.04	0.00	0.67	0.04	0.00
College Degree or Higher (Less than a College Degree)	0.59	0.05	0.00	0.59	0.05	0.00	0.59	0.05	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.60	0.04	0.00	0.60	0.04	0.00	0.60	0.04	0.00
≥ 2.00	0.31	0.02	0.00	0.31	0.02	0.00	0.31	0.02	0.00
Insured (Uninsured)	0.89	0.06	0.09	0.88	0.06	0.06	0.86	0.06	0.03
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.37	0.03	0.00	0.37	0.03	0.00	0.37	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.55	0.11	0.00	1.55	0.11	0.00	1.57	0.11	0.00
Current Smoker	1.63	0.13	0.00	1.62	0.13	0.00	1.62	0.13	0.00
Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.08	0.40	1.05	0.08	0.46	1.05	0.08	0.49
Current Drinker	0.69	0.04	0.00	0.68	0.04	0.00	0.68	0.04	0.00
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.75	0.08	0.01	0.75	0.08	0.01	0.75	0.08	0.01
≥ 75 Minutes per Week	0.47	0.04	0.00	0.46	0.04	0.00	0.46	0.04	0.00
Intercept	0.29	0.04	0.00	0.25	0.03	0.00	0.12	0.03	0.00
<hr/>									
<i>N</i> = 61,682									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.09	0.02	0.00	-0.08	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.00	0.06	0.96
10	-	-	-	-	-	-	-0.02	0.05	0.65
20	-	-	-	-	-	-	-0.04	0.03	0.21
30	-	-	-	-	-	-	-0.07	0.02	0.00
40	-	-	-	-	-	-	-0.11	0.02	0.00
50	-	-	-	-	-	-	-0.14	0.04	0.00
East Asia	-0.08	0.01	0.00	-0.07	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.17	0.08	0.04
10	-	-	-	-	-	-	0.10	0.05	0.06
20	-	-	-	-	-	-	0.02	0.03	0.39
30	-	-	-	-	-	-	-0.05	0.01	0.00
40	-	-	-	-	-	-	-0.11	0.02	0.00
50	-	-	-	-	-	-	-0.18	0.02	0.00
Southeast Asia	-0.02	0.01	0.10	-0.02	0.01	0.18	-	-	-
0	-	-	-	-	-	-	0.09	0.04	0.02

10	-	-	-	-	-	-	0.07	0.03	0.03
20	-	-	-	-	-	-	0.04	0.02	0.07
30	-	-	-	-	-	-	0.00	0.01	0.96
40	-	-	-	-	-	-	-0.04	0.02	0.01
50	-	-	-	-	-	-	-0.09	0.03	0.00
Southwest Asia	-0.04	0.02	0.04	-0.04	0.02	0.07	-	-	-
0	-	-	-	-	-	-	0.02	0.05	0.69
10	-	-	-	-	-	-	0.01	0.04	0.82
20	-	-	-	-	-	-	-0.01	0.03	0.84
30	-	-	-	-	-	-	-0.03	0.02	0.18
40	-	-	-	-	-	-	-0.05	0.03	0.05
50	-	-	-	-	-	-	-0.08	0.05	0.09
China/Hong Kong	-0.05	0.02	0.01	-0.05	0.02	0.02	-	-	-
0	-	-	-	-	-	-	-0.04	0.03	0.22
10	-	-	-	-	-	-	-0.05	0.03	0.16
20	-	-	-	-	-	-	-0.05	0.03	0.07
30	-	-	-	-	-	-	-0.05	0.02	0.01
40	-	-	-	-	-	-	-0.05	0.03	0.09
50	-	-	-	-	-	-	-0.05	0.07	0.48
Middle East	-0.01	0.02	0.79	0.00	0.02	0.93	-	-	-
0	-	-	-	-	-	-	0.17	0.10	0.11
10	-	-	-	-	-	-	0.12	0.07	0.08
20	-	-	-	-	-	-	0.07	0.04	0.07
30	-	-	-	-	-	-	0.02	0.02	0.36
40	-	-	-	-	-	-	-0.04	0.03	0.19
50	-	-	-	-	-	-	-0.10	0.05	0.04
Europe	-0.04	0.01	0.00	-0.04	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.06	0.04	0.11
10	-	-	-	-	-	-	0.04	0.03	0.20
20	-	-	-	-	-	-	0.01	0.02	0.64
30	-	-	-	-	-	-	-0.02	0.01	0.06
40	-	-	-	-	-	-	-0.06	0.01	0.00
50	-	-	-	-	-	-	-0.11	0.02	0.00
Central America	-0.01	0.01	0.29	-0.01	0.01	0.40	-	-	-
0	-	-	-	-	-	-	0.06	0.04	0.14
10	-	-	-	-	-	-	0.04	0.03	0.13
20	-	-	-	-	-	-	0.02	0.02	0.20
30	-	-	-	-	-	-	0.00	0.01	0.99
40	-	-	-	-	-	-	-0.03	0.02	0.15
50	-	-	-	-	-	-	-0.06	0.04	0.07
South America	-0.06	0.04	0.10	-0.06	0.04	0.11	-	-	-
0	-	-	-	-	-	-	-0.03	0.08	0.69
10	-	-	-	-	-	-	-0.04	0.07	0.59

20	-	-	-	-	-	-	-0.05	0.06	0.40
30	-	-	-	-	-	-	-0.06	0.04	0.13
40	-	-	-	-	-	-	-0.07	0.05	0.18
50	-	-	-	-	-	-	-0.08	0.11	0.47
Caribbean	-0.03	0.01	0.00	-0.03	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.10	0.04	0.01
10	-	-	-	-	-	-	0.06	0.03	0.01
20	-	-	-	-	-	-	0.03	0.02	0.08
30	-	-	-	-	-	-	-0.01	0.01	0.24
40	-	-	-	-	-	-	-0.06	0.01	0.00
50	-	-	-	-	-	-	-0.11	0.02	0.00
Sub-Saharan Africa	-0.05	0.03	0.06	-0.05	0.03	0.08	-	-	-
0	-	-	-	-	-	-	0.33	0.17	0.06
10	-	-	-	-	-	-	0.20	0.11	0.07
20	-	-	-	-	-	-	0.08	0.06	0.15
30	-	-	-	-	-	-	-0.02	0.03	0.39
40	-	-	-	-	-	-	-0.11	0.03	0.00
50	-	-	-	-	-	-	-0.19	0.03	0.00
North Africa	0.04	0.10	0.65	0.04	0.10	0.65	-	-	-
0	-	-	-	-	-	-	0.25	0.20	0.21
10	-	-	-	-	-	-	0.18	0.14	0.18
20	-	-	-	-	-	-	0.12	0.09	0.17
30	-	-	-	-	-	-	0.05	0.05	0.34
40	-	-	-	-	-	-	-0.02	0.05	0.63
50	-	-	-	-	-	-	-0.10	0.07	0.15
Other Foreign-Born	-0.02	0.01	0.07	-0.02	0.01	0.09	-	-	-
0	-	-	-	-	-	-	0.05	0.03	0.13
10	-	-	-	-	-	-	0.04	0.03	0.17
20	-	-	-	-	-	-	0.02	0.02	0.34
30	-	-	-	-	-	-	-0.01	0.01	0.57
40	-	-	-	-	-	-	-0.03	0.01	0.01
50	-	-	-	-	-	-	-0.07	0.02	0.01

### Panel C. 1985-1999

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.64	0.29	0.32	0.69	0.31	0.41	0.28	0.54	0.51
East Asia	1.49	0.27	0.03	1.56	0.28	0.01	2.08	0.82	0.06
Southeast Asia	1.12	0.12	0.29	1.18	0.13	0.13	1.92	0.54	0.02
Southwest Asia	1.13	0.18	0.45	1.21	0.20	0.24	1.31	0.45	0.44
China/Hong Kong	0.84	0.13	0.28	0.90	0.14	0.50	0.55	0.27	0.23



Middle East	1.25	0.21	0.19	1.32	0.23	0.11	1.65	0.87	0.34
Europe	1.27	0.14	0.03	1.37	0.15	0.00	2.57	0.72	0.00
Central America	1.18	0.12	0.09	1.19	0.12	0.09	1.63	0.41	0.05
South America	0.13	0.10	0.01	0.13	0.11	0.02	1.28	3.69	0.93
Caribbean	1.17	0.09	0.05	1.22	0.10	0.02	1.74	0.38	0.01
Sub-Saharan Africa	0.85	0.17	0.40	0.91	0.18	0.65	1.15	0.49	0.75
North Africa	1.81	0.59	0.07	1.94	0.63	0.04	3.34	1.89	0.03
Other Foreign-Born	0.87	0.09	0.17	0.90	0.09	0.31	1.17	0.30	0.55
Female (Male)	1.06	0.06	0.37	1.05	0.06	0.39	1.06	0.06	0.35
Age (Centered at 18)	1.05	0.00	0.00	1.05	0.00	0.00	1.05	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.00	0.00	1.03	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.64	0.04	0.00	0.62	0.04	0.00	0.62	0.04	0.00
College Degree or Higher (Less than a College Degree)	0.50	0.04	0.00	0.50	0.04	0.00	0.50	0.04	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.74	0.05	0.00	0.73	0.05	0.00	0.73	0.05	0.00
≥ 2.00	0.37	0.02	0.00	0.37	0.02	0.00	0.36	0.02	0.00
Insured (Uninsured)	1.03	0.06	0.63	0.98	0.06	0.79	0.98	0.06	0.69
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.46	0.03	0.00	0.46	0.03	0.00	0.46	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.29	0.11	0.00	1.30	0.11	0.00	1.31	0.11	0.00
Current Smoker	1.50	0.13	0.00	1.51	0.13	0.00	1.51	0.13	0.00
Alcohol use Status (Abstainer)									
Former Drinker	0.97	0.07	0.68	0.95	0.07	0.51	0.95	0.07	0.51
Current Drinker	0.82	0.06	0.00	0.80	0.05	0.00	0.80	0.05	0.00
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.68	0.07	0.00	0.67	0.07	0.00	0.67	0.07	0.00
≥ 75 Minutes per Week	0.58	0.04	0.00	0.56	0.04	0.00	0.56	0.04	0.00
Intercept	0.10	0.01	0.00	0.08	0.01	0.00	0.07	0.01	0.00

*N* = 97,565

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.03	0.03	0.25	-0.02	0.03	0.35	-	-	-
0	-	-	-	-	-	-	-0.04	0.04	0.25
10	-	-	-	-	-	-	-0.04	0.03	0.25

20	-	-	-	-	-	-	-0.03	0.02	0.26
30	-	-	-	-	-	-	0.00	0.11	0.97
40	-	-	-	-	-	-	0.06	0.29	0.83
50	-	-	-	-	-	-	0.15	0.54	0.79
East Asia	0.03	0.02	0.04	0.04	0.02	0.03	-	-	-
0	-	-	-	-	-	-	0.05	0.03	0.13
10	-	-	-	-	-	-	0.04	0.02	0.03
20	-	-	-	-	-	-	0.04	0.02	0.04
30	-	-	-	-	-	-	0.03	0.03	0.41
40	-	-	-	-	-	-	0.01	0.06	0.82
50	-	-	-	-	-	-	-0.01	0.09	0.95
Southeast Asia	0.01	0.01	0.29	0.01	0.01	0.14	-	-	-
0	-	-	-	-	-	-	0.04	0.02	0.05
10	-	-	-	-	-	-	0.03	0.01	0.02
20	-	-	-	-	-	-	0.01	0.01	0.21
30	-	-	-	-	-	-	-0.01	0.02	0.52
40	-	-	-	-	-	-	-0.04	0.03	0.20
50	-	-	-	-	-	-	-0.07	0.05	0.12
Southwest Asia	0.01	0.01	0.46	0.02	0.01	0.26	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.47
10	-	-	-	-	-	-	0.02	0.01	0.28
20	-	-	-	-	-	-	0.02	0.02	0.29
30	-	-	-	-	-	-	0.02	0.03	0.62
40	-	-	-	-	-	-	0.01	0.06	0.81
50	-	-	-	-	-	-	0.01	0.09	0.91
China/Hong Kong	-0.01	0.01	0.26	-0.01	0.01	0.49	-	-	-
0	-	-	-	-	-	-	-0.02	0.02	0.14
10	-	-	-	-	-	-	-0.02	0.01	0.16
20	-	-	-	-	-	-	-0.01	0.01	0.58
30	-	-	-	-	-	-	0.02	0.03	0.62
40	-	-	-	-	-	-	0.05	0.08	0.49
50	-	-	-	-	-	-	0.10	0.14	0.45
Middle East	0.02	0.02	0.22	0.02	0.02	0.14	-	-	-
0	-	-	-	-	-	-	0.03	0.04	0.41
10	-	-	-	-	-	-	0.03	0.02	0.24
20	-	-	-	-	-	-	0.02	0.02	0.17
30	-	-	-	-	-	-	0.01	0.04	0.70
40	-	-	-	-	-	-	0.00	0.07	0.98
50	-	-	-	-	-	-	-0.01	0.11	0.90
Europe	0.02	0.01	0.04	0.03	0.01	0.01	-	-	-
0	-	-	-	-	-	-	0.07	0.02	0.01
10	-	-	-	-	-	-	0.05	0.01	0.00
20	-	-	-	-	-	-	0.02	0.01	0.04

30	-	-	-	-	-	-	-0.01	0.02	0.59
40	-	-	-	-	-	-	-0.05	0.03	0.15
50	-	-	-	-	-	-	-0.09	0.05	0.06
Central America	0.01	0.01	0.10	0.01	0.01	0.10	-	-	-
0	-	-	-	-	-	-	0.03	0.02	0.08
10	-	-	-	-	-	-	0.02	0.01	0.03
20	-	-	-	-	-	-	0.01	0.01	0.16
30	-	-	-	-	-	-	0.00	0.02	0.92
40	-	-	-	-	-	-	-0.02	0.03	0.55
50	-	-	-	-	-	-	-0.04	0.05	0.41
South America	-0.08	0.01	0.00	-0.08	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.01	0.17	0.94
10	-	-	-	-	-	-	-0.05	0.03	0.13
20	-	-	-	-	-	-	-0.09	0.02	0.00
30	-	-	-	-	-	-	-0.13	0.02	0.00
40	-	-	-	-	-	-	-0.16	0.02	0.00
50	-	-	-	-	-	-	-0.20	0.03	0.00
Caribbean	0.01	0.01	0.06	0.02	0.01	0.02	-	-	-
0	-	-	-	-	-	-	0.03	0.02	0.02
10	-	-	-	-	-	-	0.03	0.01	0.00
20	-	-	-	-	-	-	0.01	0.01	0.04
30	-	-	-	-	-	-	0.00	0.02	0.90
40	-	-	-	-	-	-	-0.02	0.03	0.41
50	-	-	-	-	-	-	-0.05	0.04	0.26
Sub-Saharan Africa	-0.01	0.01	0.38	-0.01	0.01	0.64	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.76
10	-	-	-	-	-	-	0.00	0.01	0.95
20	-	-	-	-	-	-	-0.01	0.02	0.62
30	-	-	-	-	-	-	-0.02	0.04	0.56
40	-	-	-	-	-	-	-0.04	0.06	0.56
50	-	-	-	-	-	-	-0.06	0.10	0.56
North Africa	0.06	0.04	0.12	0.06	0.04	0.09	-	-	-
0	-	-	-	-	-	-	0.09	0.06	0.12
10	-	-	-	-	-	-	0.08	0.04	0.05
20	-	-	-	-	-	-	0.05	0.04	0.16
30	-	-	-	-	-	-	0.03	0.06	0.67
40	-	-	-	-	-	-	-0.01	0.09	0.93
50	-	-	-	-	-	-	-0.05	0.12	0.70
Other Foreign-Born	-0.01	0.01	0.16	-0.01	0.01	0.30	-	-	-
0	-	-	-	-	-	-	0.01	0.01	0.56
10	-	-	-	-	-	-	0.00	0.01	0.90
20	-	-	-	-	-	-	-0.01	0.01	0.24
30	-	-	-	-	-	-	-0.02	0.02	0.17

40	-	-	-	-	-	-	-0.04	0.03	0.19
50	-	-	-	-	-	-	-0.06	0.05	0.21

## Panel D. 2000-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.59	0.26	0.24	0.66	0.29	0.35	0.72	0.41	0.56
East Asia	0.37	0.12	0.00	0.41	0.13	0.01	0.42	0.27	0.18
Southeast Asia	0.83	0.16	0.34	0.91	0.17	0.62	0.94	0.35	0.87
Southwest Asia	0.89	0.17	0.52	0.96	0.18	0.82	1.14	0.32	0.64
China/Hong Kong	0.65	0.14	0.04	0.70	0.15	0.09	0.45	0.20	0.08
Middle East	0.80	0.21	0.39	0.89	0.23	0.65	1.29	0.47	0.47
Europe	0.79	0.15	0.20	0.84	0.16	0.36	0.43	0.15	0.01
Central America	0.96	0.12	0.75	0.98	0.12	0.85	1.97	0.50	0.01
South America	0.36	0.20	0.06	0.37	0.19	0.06	0.07	0.08	0.03
Caribbean	1.13	0.17	0.43	1.20	0.18	0.23	0.81	0.20	0.40
Sub-Saharan Africa	0.65	0.14	0.05	0.70	0.15	0.10	0.91	0.36	0.81
North Africa	1.30	0.46	0.46	1.39	0.50	0.36	0.96	0.54	0.95
Other Foreign-Born	1.01	0.13	0.94	1.07	0.14	0.61	1.15	0.25	0.52
Female (Male)	1.23	0.11	0.02	1.21	0.11	0.03	1.21	0.11	0.04
Age (Centered at 18)	1.06	0.00	0.00	1.06	0.00	0.00	1.06	0.00	0.00
Time in the United States (Centered at 0 years)				1.03	0.01	0.00	1.03	0.02	0.08
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.62	0.06	0.00	0.60	0.06	0.00	0.59	0.06	0.00
College Degree or Higher (Less than a College Degree)	0.56	0.06	0.00	0.57	0.06	0.00	0.57	0.06	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.65	0.06	0.00	0.63	0.06	0.00	0.63	0.06	0.00
≥ 2.00	0.46	0.05	0.00	0.45	0.05	0.00	0.44	0.05	0.00
Insured (Uninsured)	0.82	0.08	0.03	0.79	0.07	0.01	0.79	0.08	0.01
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.50	0.05	0.00	0.50	0.05	0.00	0.50	0.05	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.46	0.18	0.00	1.45	0.18	0.00	1.43	0.17	0.00
Current Smoker	1.78	0.21	0.00	1.80	0.21	0.00	1.83	0.22	0.00
Alcohol use Status (Abstainer)									
Former Drinker	0.88	0.10	0.23	0.87	0.10	0.22	0.88	0.10	0.26
Current Drinker	0.92	0.09	0.37	0.91	0.09	0.34	0.91	0.09	0.35

Vigorous Exercise Status (None)

< 75 Minutes per Week	0.77	0.10	0.05	0.76	0.10	0.04	0.76	0.10	0.04
≥ 75 Minutes per Week	0.57	0.07	0.00	0.55	0.06	0.00	0.55	0.06	0.00

Intercept	0.07	0.01	0.00	0.06	0.01	0.00	0.06	0.01	0.00
-----------	------	------	------	------	------	------	------	------	------

*N* = 67,669

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.03	0.02	0.16	-0.02	0.02	0.28	-	-	-
0	-	-	-	-	-	-	-0.01	0.02	0.51
10	-	-	-	-	-	-	-0.02	0.02	0.38
20	-	-	-	-	-	-	-0.03	0.06	0.60
30	-	-	-	-	-	-	-0.04	0.11	0.70
40	-	-	-	-	-	-	-0.06	0.17	0.74
50	-	-	-	-	-	-	-0.07	0.25	0.77
East Asia	-0.04	0.01	0.00	-0.04	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.03	0.02	0.08
10	-	-	-	-	-	-	-0.04	0.01	0.01
20	-	-	-	-	-	-	-0.05	0.05	0.29
30	-	-	-	-	-	-	-0.06	0.09	0.51
40	-	-	-	-	-	-	-0.08	0.16	0.63
50	-	-	-	-	-	-	-0.09	0.24	0.70
Southeast Asia	-0.01	0.01	0.32	-0.01	0.01	0.62	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.87
10	-	-	-	-	-	-	-0.01	0.01	0.66
20	-	-	-	-	-	-	-0.01	0.03	0.81
30	-	-	-	-	-	-	-0.01	0.07	0.87
40	-	-	-	-	-	-	-0.02	0.11	0.89
50	-	-	-	-	-	-	-0.02	0.17	0.90
Southwest Asia	-0.01	0.01	0.51	0.00	0.01	0.82	-	-	-
0	-	-	-	-	-	-	0.01	0.01	0.65
10	-	-	-	-	-	-	-0.01	0.01	0.68
20	-	-	-	-	-	-	-0.02	0.03	0.48
30	-	-	-	-	-	-	-0.04	0.05	0.44
40	-	-	-	-	-	-	-0.06	0.08	0.43
50	-	-	-	-	-	-	-0.09	0.11	0.42
China/Hong Kong	-0.02	0.01	0.02	-0.02	0.01	0.06	-	-	-
0	-	-	-	-	-	-	-0.03	0.01	0.03
10	-	-	-	-	-	-	-0.01	0.01	0.30
20	-	-	-	-	-	-	0.03	0.05	0.58
30	-	-	-	-	-	-	0.10	0.14	0.46

40	-	-	-	-	-	-	0.21	0.26	0.42
50	-	-	-	-	-	-	0.35	0.38	0.36
Middle East	-0.01	0.01	0.35	-0.01	0.01	0.64	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.50
10	-	-	-	-	-	-	-0.02	0.02	0.26
20	-	-	-	-	-	-	-0.05	0.03	0.10
30	-	-	-	-	-	-	-0.08	0.04	0.06
40	-	-	-	-	-	-	-0.12	0.06	0.05
50	-	-	-	-	-	-	-0.15	0.08	0.06
Europe	-0.01	0.01	0.18	-0.01	0.01	0.35	-	-	-
0	-	-	-	-	-	-	-0.03	0.01	0.00
10	-	-	-	-	-	-	0.00	0.01	0.81
20	-	-	-	-	-	-	0.07	0.04	0.13
30	-	-	-	-	-	-	0.20	0.12	0.09
40	-	-	-	-	-	-	0.38	0.20	0.06
50	-	-	-	-	-	-	0.55	0.22	0.01
Central America	0.00	0.01	0.74	0.00	0.01	0.84	-	-	-
0	-	-	-	-	-	-	0.04	0.02	0.02
10	-	-	-	-	-	-	-0.02	0.01	0.04
20	-	-	-	-	-	-	-0.06	0.02	0.00
30	-	-	-	-	-	-	-0.09	0.03	0.00
40	-	-	-	-	-	-	-0.13	0.05	0.01
50	-	-	-	-	-	-	-0.16	0.07	0.03
South America	-0.04	0.02	0.01	-0.04	0.01	0.01	-	-	-
0	-	-	-	-	-	-	-0.05	0.01	0.00
10	-	-	-	-	-	-	-0.05	0.01	0.00
20	-	-	-	-	-	-	0.03	0.08	0.68
30	-	-	-	-	-	-	0.27	0.32	0.39
40	-	-	-	-	-	-	0.60	0.42	0.16
50	-	-	-	-	-	-	0.77	0.21	0.00
Caribbean	0.01	0.01	0.44	0.01	0.01	0.25	-	-	-
0	-	-	-	-	-	-	-0.01	0.01	0.38
10	-	-	-	-	-	-	0.02	0.01	0.10
20	-	-	-	-	-	-	0.07	0.04	0.08
30	-	-	-	-	-	-	0.16	0.10	0.10
40	-	-	-	-	-	-	0.28	0.17	0.10
50	-	-	-	-	-	-	0.40	0.23	0.08
Sub-Saharan Africa	-0.02	0.01	0.03	-0.02	0.01	0.08	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.80
10	-	-	-	-	-	-	-0.02	0.01	0.08
20	-	-	-	-	-	-	-0.04	0.03	0.19
30	-	-	-	-	-	-	-0.07	0.06	0.23
40	-	-	-	-	-	-	-0.09	0.08	0.24

50	-	-	-	-	-	-	-0.13	0.11	0.25
North Africa	0.02	0.02	0.49	0.02	0.03	0.41	-	-	-
0	-	-	-	-	-	-	0.00	0.03	0.95
10	-	-	-	-	-	-	0.03	0.03	0.34
20	-	-	-	-	-	-	0.09	0.10	0.40
30	-	-	-	-	-	-	0.17	0.23	0.46
40	-	-	-	-	-	-	0.28	0.39	0.47
50	-	-	-	-	-	-	0.40	0.52	0.44
Other Foreign-Born	0.00	0.01	0.94	0.00	0.01	0.62	-	-	-
0	-	-	-	-	-	-	0.01	0.01	0.53
10	-	-	-	-	-	-	0.00	0.01	0.71
20	-	-	-	-	-	-	0.00	0.02	0.93
30	-	-	-	-	-	-	-0.01	0.04	0.84
40	-	-	-	-	-	-	-0.02	0.07	0.80
50	-	-	-	-	-	-	-0.03	0.11	0.78

*Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file*

*\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$*

**Appendix Table 2.2** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.90	0.13	0.47	0.89	0.13	0.42	1.05	0.83	0.95
East Asia	0.88	0.18	0.53	0.89	0.18	0.55	1.85	2.32	0.62
Southeast Asia	1.25	0.26	0.27	1.30	0.26	0.20	1.05	1.58	0.98
Southwest Asia	2.09	0.90	0.09	2.21	0.96	0.07	0.55	1.92	0.86
China/Hong Kong	0.65	0.15	0.07	0.67	0.15	0.08	1.27	1.84	0.87
Middle East	0.57	0.17	0.06	0.58	0.17	0.07	0.06	0.13	0.22
Europe	0.86	0.09	0.16	0.86	0.09	0.18	0.82	0.50	0.74
Central America	1.49	0.35	0.09	1.51	0.35	0.08	2.12	2.87	0.58
South America	0.43	0.23	0.11	0.44	0.23	0.12	0.17	0.53	0.57
Caribbean	1.04	0.13	0.74	1.08	0.14	0.56	1.08	0.92	0.92
Sub-Saharan Africa	0.53	0.30	0.26	0.54	0.30	0.27	0.00	0.00	0.16
North Africa	0.75	0.33	0.52	0.76	0.34	0.54	0.20	0.57	0.57
Other Foreign-Born	1.08	0.12	0.52	1.08	0.12	0.53	1.65	1.16	0.48
Female (Male)	0.97	0.07	0.64	0.97	0.07	0.66	0.97	0.07	0.63
Age (Centered at 18)	1.04	0.00	0.00	1.03	0.00	0.00	1.03	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.00	0.04	1.01	0.01	0.36
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.87	0.09	0.20	0.84	0.09	0.11	0.85	0.09	0.11
College Degree or Higher (Less than a College Degree)	0.87	0.07	0.08	0.86	0.07	0.06	0.86	0.07	0.06
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.93	0.11	0.57	0.94	0.11	0.60	0.94	0.11	0.58
≥ 2.00	0.75	0.09	0.02	0.75	0.09	0.01	0.75	0.09	0.01
Insured (Uninsured)	1.01	0.17	0.93	1.02	0.17	0.93	1.02	0.17	0.90
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.26	0.03	0.00	0.26	0.03	0.00	0.26	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.33	0.10	0.00	1.32	0.10	0.00	1.32	0.10	0.00
Current Smoker	0.91	0.10	0.38	0.90	0.10	0.35	0.90	0.10	0.36
Alcohol use Status (Abstainer)									



Former Drinker	0.97	0.09	0.77	0.96	0.09	0.71	0.96	0.09	0.67
Current Drinker	0.94	0.08	0.50	0.94	0.08	0.45	0.93	0.08	0.41
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.05	0.15	0.74	1.05	0.15	0.75	1.06	0.15	0.69
≥ 75 Minutes per Week	0.70	0.05	0.00	0.70	0.05	0.00	0.70	0.06	0.00
Intercept	0.29	0.07	0.00	0.23	0.06	0.00	0.21	0.12	0.01
<hr/>									
<i>N</i> = 16,294									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.02	0.03	0.47	-0.03	0.03	0.42	-	-	-
0	-	-	-	-	-	-	0.01	0.17	0.95
10	-	-	-	-	-	-	0.00	0.14	0.98
20	-	-	-	-	-	-	0.00	0.11	0.98
30	-	-	-	-	-	-	-0.01	0.08	0.91
40	-	-	-	-	-	-	-0.02	0.06	0.77
50	-	-	-	-	-	-	-0.02	0.04	0.53
East Asia	-0.03	0.04	0.53	-0.03	0.04	0.55	-	-	-
0	-	-	-	-	-	-	0.14	0.28	0.62
10	-	-	-	-	-	-	0.11	0.23	0.64
20	-	-	-	-	-	-	0.08	0.18	0.67
30	-	-	-	-	-	-	0.04	0.13	0.72
40	-	-	-	-	-	-	0.01	0.08	0.87
50	-	-	-	-	-	-	-0.02	0.05	0.69
Southeast Asia	0.05	0.04	0.27	0.06	0.04	0.20	-	-	-
0	-	-	-	-	-	-	0.01	0.33	0.98
10	-	-	-	-	-	-	0.02	0.27	0.94
20	-	-	-	-	-	-	0.03	0.21	0.89
30	-	-	-	-	-	-	0.04	0.15	0.79
40	-	-	-	-	-	-	0.05	0.09	0.57
50	-	-	-	-	-	-	0.06	0.05	0.20
Southwest Asia	0.16	0.09	0.07	0.17	0.09	0.05	-	-	-
0	-	-	-	-	-	-	-0.12	0.63	0.85
10	-	-	-	-	-	-	-0.07	0.58	0.91
20	-	-	-	-	-	-	-0.01	0.47	0.99
30	-	-	-	-	-	-	0.06	0.33	0.86
40	-	-	-	-	-	-	0.12	0.19	0.51
50	-	-	-	-	-	-	0.18	0.08	0.03
China/Hong Kong	-0.09	0.05	0.06	-0.09	0.05	0.08	-	-	-
0	-	-	-	-	-	-	0.05	0.32	0.87
10	-	-	-	-	-	-	0.03	0.26	0.92

20	-	-	-	-	-	-	0.00	0.20	1.00
30	-	-	-	-	-	-	-0.03	0.15	0.86
40	-	-	-	-	-	-	-0.05	0.10	0.58
50	-	-	-	-	-	-	-0.08	0.06	0.15
Middle East	-0.12	0.06	0.05	-0.12	0.06	0.07	-	-	-
0	-	-	-	-	-	-	-0.34	0.15	0.02
10	-	-	-	-	-	-	-0.34	0.15	0.03
20	-	-	-	-	-	-	-0.32	0.15	0.04
30	-	-	-	-	-	-	-0.28	0.15	0.06
40	-	-	-	-	-	-	-0.22	0.11	0.05
50	-	-	-	-	-	-	-0.13	0.07	0.05
Europe	-0.03	0.02	0.16	-0.03	0.02	0.18	-	-	-
0	-	-	-	-	-	-	-0.04	0.13	0.74
10	-	-	-	-	-	-	-0.04	0.11	0.70
20	-	-	-	-	-	-	-0.04	0.09	0.64
30	-	-	-	-	-	-	-0.04	0.06	0.54
40	-	-	-	-	-	-	-0.04	0.04	0.36
50	-	-	-	-	-	-	-0.04	0.03	0.17
Central America	0.09	0.05	0.08	0.09	0.05	0.07	-	-	-
0	-	-	-	-	-	-	0.17	0.30	0.58
10	-	-	-	-	-	-	0.15	0.24	0.53
20	-	-	-	-	-	-	0.14	0.19	0.46
30	-	-	-	-	-	-	0.12	0.13	0.35
40	-	-	-	-	-	-	0.11	0.08	0.19
50	-	-	-	-	-	-	0.09	0.05	0.07
South America	-0.18	0.11	0.09	-0.18	0.11	0.10	-	-	-
0	-	-	-	-	-	-	-0.28	0.30	0.36
10	-	-	-	-	-	-	-0.27	0.29	0.36
20	-	-	-	-	-	-	-0.26	0.27	0.34
30	-	-	-	-	-	-	-0.24	0.23	0.29
40	-	-	-	-	-	-	-0.22	0.17	0.20
50	-	-	-	-	-	-	-0.19	0.11	0.10
Caribbean	0.01	0.03	0.74	0.02	0.03	0.56	-	-	-
0	-	-	-	-	-	-	0.02	0.18	0.92
10	-	-	-	-	-	-	0.02	0.15	0.91
20	-	-	-	-	-	-	0.02	0.11	0.88
30	-	-	-	-	-	-	0.02	0.08	0.82
40	-	-	-	-	-	-	0.02	0.05	0.70
50	-	-	-	-	-	-	0.02	0.03	0.55
Sub-Saharan Africa	-0.14	0.12	0.24	-0.13	0.12	0.25	-	-	-
0	-	-	-	-	-	-	-0.38	0.12	0.00
10	-	-	-	-	-	-	-0.40	0.10	0.00
20	-	-	-	-	-	-	-0.42	0.08	0.00

30	-	-	-	-	-	-	-0.44	0.06	0.00
40	-	-	-	-	-	-	-0.42	0.10	0.00
50	-	-	-	-	-	-	-0.23	0.16	0.15
North Africa	-0.06	0.10	0.51	-0.06	0.10	0.53	-	-	-
0	-	-	-	-	-	-	-0.26	0.31	0.40
10	-	-	-	-	-	-	-0.24	0.31	0.44
20	-	-	-	-	-	-	-0.21	0.29	0.47
30	-	-	-	-	-	-	-0.17	0.24	0.48
40	-	-	-	-	-	-	-0.12	0.17	0.47
50	-	-	-	-	-	-	-0.07	0.11	0.51
Other Foreign-Born	0.02	0.03	0.52	0.02	0.03	0.53	-	-	-
0	-	-	-	-	-	-	0.11	0.15	0.47
10	-	-	-	-	-	-	0.09	0.13	0.46
20	-	-	-	-	-	-	0.08	0.10	0.44
30	-	-	-	-	-	-	0.06	0.07	0.40
40	-	-	-	-	-	-	0.04	0.04	0.35
50	-	-	-	-	-	-	0.02	0.03	0.38

## Panel B. 1965-1984

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.77	0.13	0.13	0.77	0.13	0.14	1.56	1.09	0.52
East Asia	0.88	0.10	0.24	0.91	0.10	0.39	1.23	0.54	0.64
Southeast Asia	1.17	0.09	0.05	1.24	0.10	0.01	1.67	0.53	0.11
Southwest Asia	0.88	0.11	0.30	0.94	0.11	0.63	1.47	0.76	0.46
China/Hong Kong	0.86	0.14	0.34	0.91	0.14	0.57	0.74	0.56	0.69
Middle East	0.90	0.15	0.55	0.96	0.16	0.80	0.21	0.17	0.05
Europe	0.95	0.08	0.51	0.95	0.08	0.54	1.37	0.45	0.33
Central America	1.10	0.11	0.34	1.15	0.11	0.15	1.43	0.58	0.38
South America	0.67	0.18	0.13	0.70	0.18	0.17	0.20	0.26	0.21
Caribbean	1.10	0.08	0.19	1.13	0.08	0.09	3.46	1.08	0.00
Sub-Saharan Africa	1.75	0.29	0.00	1.90	0.32	0.00	1.42	0.99	0.62
North Africa	0.50	0.16	0.03	0.54	0.18	0.06	11.72	14.47	0.05
Other Foreign-Born	0.98	0.07	0.78	1.00	0.07	0.97	1.63	0.50	0.12
Female (Male)	0.89	0.04	0.02	0.88	0.04	0.01	0.88	0.04	0.01
Age (Centered at 18)	1.06	0.00	0.00	1.06	0.00	0.00	1.06	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.00	0.00	1.03	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.97	0.05	0.61	0.93	0.05	0.19	0.93	0.05	0.17
College Degree or Higher (Less than a College Degree)	0.77	0.04	0.00	0.76	0.04	0.00	0.76	0.04	0.00

Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.74	0.05	0.00	0.73	0.05	0.00	0.73	0.05	0.00
≥ 2.00	0.64	0.04	0.00	0.63	0.04	0.00	0.63	0.04	0.00
Insured (Uninsured)									
Insured (Uninsured)	0.99	0.07	0.85	0.96	0.06	0.57	0.96	0.06	0.54
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.25	0.02	0.00	0.25	0.02	0.00	0.25	0.02	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.20	0.07	0.00	1.20	0.07	0.00	1.20	0.07	0.00
Current Smoker	0.95	0.07	0.42	0.94	0.07	0.38	0.94	0.07	0.41
Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.06	0.35	1.04	0.06	0.51	1.04	0.06	0.51
Current Drinker	0.92	0.05	0.15	0.90	0.05	0.07	0.91	0.05	0.07
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.99	0.08	0.92	0.98	0.08	0.78	0.97	0.08	0.69
≥ 75 Minutes per Week	0.82	0.04	0.00	0.80	0.04	0.00	0.80	0.04	0.00
Intercept	0.10	0.01	0.00	0.07	0.01	0.00	0.05	0.01	0.00

$N = 61,661$

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.04	0.03	0.12	-0.04	0.03	0.13	-	-	-
0	-	-	-	-	-	-	0.06	0.10	0.56
10	-	-	-	-	-	-	0.04	0.08	0.64
20	-	-	-	-	-	-	0.01	0.05	0.87
30	-	-	-	-	-	-	-0.02	0.03	0.44
40	-	-	-	-	-	-	-0.06	0.03	0.07
50	-	-	-	-	-	-	-0.10	0.06	0.10
East Asia	-0.02	0.02	0.24	-0.02	0.02	0.39	-	-	-
0	-	-	-	-	-	-	0.03	0.06	0.65
10	-	-	-	-	-	-	0.02	0.05	0.71
20	-	-	-	-	-	-	0.00	0.03	0.88
30	-	-	-	-	-	-	-0.01	0.02	0.61
40	-	-	-	-	-	-	-0.03	0.02	0.28
50	-	-	-	-	-	-	-0.04	0.04	0.31
Southeast Asia	0.03	0.01	0.05	0.04	0.01	0.01	-	-	-
0	-	-	-	-	-	-	0.07	0.04	0.12
10	-	-	-	-	-	-	0.06	0.04	0.07
20	-	-	-	-	-	-	0.06	0.02	0.02

30	-	-	-	-	-	-	0.04	0.02	0.00
40	-	-	-	-	-	-	0.03	0.02	0.10
50	-	-	-	-	-	-	0.02	0.03	0.65
Southwest Asia	-0.02	0.02	0.29	-0.01	0.02	0.63	-	-	-
0	-	-	-	-	-	-	0.05	0.07	0.49
10	-	-	-	-	-	-	0.04	0.06	0.51
20	-	-	-	-	-	-	0.02	0.04	0.61
30	-	-	-	-	-	-	0.00	0.02	0.97
40	-	-	-	-	-	-	-0.02	0.03	0.36
50	-	-	-	-	-	-	-0.05	0.05	0.31
China/Hong Kong	-0.03	0.03	0.33	-0.02	0.03	0.56	-	-	-
0	-	-	-	-	-	-	-0.03	0.08	0.66
10	-	-	-	-	-	-	-0.03	0.07	0.63
20	-	-	-	-	-	-	-0.03	0.05	0.58
30	-	-	-	-	-	-	-0.02	0.03	0.48
40	-	-	-	-	-	-	-0.01	0.04	0.74
50	-	-	-	-	-	-	0.00	0.07	0.99
Middle East	-0.02	0.03	0.54	-0.01	0.03	0.79	-	-	-
0	-	-	-	-	-	-	-0.12	0.04	0.00
10	-	-	-	-	-	-	-0.11	0.04	0.01
20	-	-	-	-	-	-	-0.09	0.04	0.04
30	-	-	-	-	-	-	-0.04	0.03	0.23
40	-	-	-	-	-	-	0.04	0.04	0.30
50	-	-	-	-	-	-	0.13	0.07	0.08
Europe	-0.01	0.01	0.51	-0.01	0.01	0.54	-	-	-
0	-	-	-	-	-	-	0.04	0.04	0.35
10	-	-	-	-	-	-	0.03	0.04	0.39
20	-	-	-	-	-	-	0.02	0.02	0.51
30	-	-	-	-	-	-	0.00	0.02	0.98
40	-	-	-	-	-	-	-0.02	0.02	0.24
50	-	-	-	-	-	-	-0.04	0.03	0.18
Central America	0.02	0.02	0.35	0.02	0.02	0.15	-	-	-
0	-	-	-	-	-	-	0.05	0.06	0.40
10	-	-	-	-	-	-	0.04	0.04	0.32
20	-	-	-	-	-	-	0.04	0.03	0.18
30	-	-	-	-	-	-	0.03	0.02	0.08
40	-	-	-	-	-	-	0.02	0.03	0.46
50	-	-	-	-	-	-	0.01	0.05	0.86
South America	-0.07	0.04	0.10	-0.06	0.04	0.15	-	-	-
0	-	-	-	-	-	-	-0.12	0.06	0.03
10	-	-	-	-	-	-	-0.13	0.06	0.04
20	-	-	-	-	-	-	-0.12	0.06	0.05
30	-	-	-	-	-	-	-0.09	0.04	0.04

40	-	-	-	-	-	-	-0.04	0.06	0.45
50	-	-	-	-	-	-	0.02	0.12	0.87
Caribbean	0.02	0.01	0.19	0.02	0.01	0.09	-	-	-
0	-	-	-	-	-	-	0.20	0.05	0.00
10	-	-	-	-	-	-	0.15	0.04	0.00
20	-	-	-	-	-	-	0.10	0.02	0.00
30	-	-	-	-	-	-	0.05	0.01	0.00
40	-	-	-	-	-	-	-0.01	0.02	0.57
50	-	-	-	-	-	-	-0.07	0.03	0.03
Sub-Saharan Africa	0.10	0.03	0.00	0.12	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.05	0.10	0.64
10	-	-	-	-	-	-	0.07	0.08	0.40
20	-	-	-	-	-	-	0.09	0.05	0.09
30	-	-	-	-	-	-	0.12	0.03	0.00
40	-	-	-	-	-	-	0.14	0.05	0.00
50	-	-	-	-	-	-	0.16	0.08	0.05
North Africa	-0.11	0.04	0.02	-0.10	0.05	0.03	-	-	-
0	-	-	-	-	-	-	0.44	0.24	0.07
10	-	-	-	-	-	-	0.28	0.18	0.12
20	-	-	-	-	-	-	0.12	0.11	0.29
30	-	-	-	-	-	-	-0.04	0.05	0.50
40	-	-	-	-	-	-	-0.17	0.04	0.00
50	-	-	-	-	-	-	-0.28	0.05	0.00
Other Foreign-Born	0.00	0.01	0.78	0.00	0.01	0.97	-	-	-
0	-	-	-	-	-	-	0.07	0.04	0.13
10	-	-	-	-	-	-	0.05	0.03	0.13
20	-	-	-	-	-	-	0.03	0.02	0.16
30	-	-	-	-	-	-	0.01	0.01	0.46
40	-	-	-	-	-	-	-0.01	0.02	0.37
50	-	-	-	-	-	-	-0.04	0.03	0.16

### Panel C. 1985-1999

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.94	0.25	0.82	1.03	0.28	0.90	0.75	0.41	0.59
East Asia	0.95	0.15	0.72	0.99	0.15	0.97	0.39	0.14	0.01
Southeast Asia	1.15	0.10	0.10	1.21	0.10	0.03	1.20	0.28	0.43
Southwest Asia	0.93	0.11	0.55	0.99	0.12	0.93	0.90	0.27	0.74
China/Hong Kong	0.47	0.07	0.00	0.51	0.07	0.00	0.69	0.25	0.31
Middle East	0.68	0.11	0.02	0.71	0.12	0.04	0.62	0.31	0.34
Europe	0.92	0.08	0.34	0.99	0.09	0.95	1.11	0.25	0.64

Central America	0.91	0.08	0.27	0.91	0.08	0.28	1.00	0.26	1.00
South America	0.70	0.26	0.35	0.76	0.29	0.47	0.67	0.69	0.70
Caribbean	1.31	0.09	0.00	1.37	0.10	0.00	1.06	0.21	0.75
Sub-Saharan Africa	1.11	0.15	0.42	1.20	0.16	0.18	0.56	0.21	0.12
North Africa	0.81	0.25	0.50	0.87	0.27	0.66	0.45	0.30	0.24
Other Foreign-Born	0.85	0.07	0.04	0.89	0.07	0.13	1.13	0.24	0.56
Female (Male)	0.87	0.04	0.00	0.86	0.04	0.00	0.86	0.04	0.00
Age (Centered at 18)	1.08	0.00	0.00	1.07	0.00	0.00	1.07	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.00	0.00	1.02	0.01	0.00
Origin * Time in the United States (Centered at 0 years)								<i>Included</i>	
English Interview (Non-English Interview)	1.07	0.06	0.20	1.04	0.06	0.50	1.04	0.06	0.49
College Degree or Higher (Less than a College Degree)	0.88	0.06	0.05	0.89	0.06	0.06	0.89	0.06	0.05
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.92	0.06	0.20	0.91	0.06	0.15	0.91	0.06	0.15
≥ 2.00	0.76	0.05	0.00	0.75	0.05	0.00	0.75	0.05	0.00
Insured (Uninsured)	1.09	0.06	0.13	1.05	0.06	0.41	1.05	0.06	0.44
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.32	0.02	0.00	0.32	0.02	0.00	0.32	0.02	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.20	0.08	0.01	1.21	0.08	0.00	1.21	0.08	0.00
Current Smoker	1.15	0.08	0.07	1.16	0.09	0.04	1.16	0.09	0.04
Alcohol use Status (Abstainer)									
Former Drinker	1.08	0.07	0.25	1.06	0.07	0.37	1.06	0.07	0.39
Current Drinker	0.99	0.05	0.91	0.97	0.05	0.52	0.96	0.05	0.48
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.01	0.08	0.89	0.99	0.08	0.94	0.99	0.08	0.91
≥ 75 Minutes per Week	0.79	0.04	0.00	0.77	0.04	0.00	0.77	0.04	0.00
Intercept	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.00	0.00

*N* = 97,525

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.01	0.03	0.81	0.00	0.03	0.91	-	-	-
0	-	-	-	-	-	-	-0.03	0.04	0.57
10	-	-	-	-	-	-	-0.01	0.03	0.66
20	-	-	-	-	-	-	0.01	0.04	0.84
30	-	-	-	-	-	-	0.03	0.09	0.71

40	-	-	-	-	-	-	0.06	0.15	0.68
50	-	-	-	-	-	-	0.10	0.23	0.67
East Asia	-0.01	0.02	0.72	0.00	0.02	0.97	-	-	-
0	-	-	-	-	-	-	-0.07	0.02	0.00
10	-	-	-	-	-	-	-0.04	0.02	0.02
20	-	-	-	-	-	-	0.00	0.02	0.94
30	-	-	-	-	-	-	0.07	0.04	0.06
40	-	-	-	-	-	-	0.16	0.07	0.03
50	-	-	-	-	-	-	0.26	0.11	0.02
Southeast Asia	0.02	0.01	0.10	0.02	0.01	0.03	-	-	-
0	-	-	-	-	-	-	0.02	0.02	0.44
10	-	-	-	-	-	-	0.02	0.02	0.18
20	-	-	-	-	-	-	0.02	0.01	0.03
30	-	-	-	-	-	-	0.03	0.02	0.17
40	-	-	-	-	-	-	0.03	0.03	0.41
50	-	-	-	-	-	-	0.03	0.05	0.55
Southwest Asia	-0.01	0.01	0.55	0.00	0.01	0.93	-	-	-
0	-	-	-	-	-	-	-0.01	0.03	0.73
10	-	-	-	-	-	-	-0.01	0.02	0.75
20	-	-	-	-	-	-	0.00	0.02	0.98
30	-	-	-	-	-	-	0.01	0.03	0.85
40	-	-	-	-	-	-	0.01	0.06	0.81
50	-	-	-	-	-	-	0.02	0.09	0.80
China/Hong Kong	-0.07	0.01	0.00	-0.07	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.03	0.03	0.27
10	-	-	-	-	-	-	-0.05	0.02	0.01
20	-	-	-	-	-	-	-0.07	0.01	0.00
30	-	-	-	-	-	-	-0.09	0.02	0.00
40	-	-	-	-	-	-	-0.11	0.04	0.00
50	-	-	-	-	-	-	-0.14	0.05	0.01
Middle East	-0.04	0.02	0.01	-0.04	0.02	0.03	-	-	-
0	-	-	-	-	-	-	-0.04	0.04	0.27
10	-	-	-	-	-	-	-0.04	0.02	0.11
20	-	-	-	-	-	-	-0.04	0.02	0.03
30	-	-	-	-	-	-	-0.03	0.03	0.36
40	-	-	-	-	-	-	-0.02	0.07	0.71
50	-	-	-	-	-	-	-0.02	0.11	0.88
Europe	-0.01	0.01	0.33	0.00	0.01	0.95	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.65
10	-	-	-	-	-	-	0.00	0.01	0.74
20	-	-	-	-	-	-	0.00	0.01	0.84
30	-	-	-	-	-	-	-0.01	0.02	0.63
40	-	-	-	-	-	-	-0.02	0.04	0.60



50	-	-	-	-	-	-	-0.03	0.05	0.59
Central America	-0.01	0.01	0.26	-0.01	0.01	0.28	-	-	-
0	-	-	-	-	-	-	0.00	0.03	1.00
10	-	-	-	-	-	-	-0.01	0.01	0.73
20	-	-	-	-	-	-	-0.01	0.01	0.28
30	-	-	-	-	-	-	-0.02	0.02	0.43
40	-	-	-	-	-	-	-0.03	0.04	0.53
50	-	-	-	-	-	-	-0.03	0.06	0.58
South America	-0.04	0.04	0.31	-0.03	0.04	0.44	-	-	-
0	-	-	-	-	-	-	-0.03	0.08	0.66
10	-	-	-	-	-	-	-0.03	0.05	0.54
20	-	-	-	-	-	-	-0.03	0.04	0.47
30	-	-	-	-	-	-	-0.02	0.08	0.77
40	-	-	-	-	-	-	-0.02	0.15	0.91
50	-	-	-	-	-	-	-0.01	0.24	0.97
Caribbean	0.03	0.01	0.00	0.04	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.76
10	-	-	-	-	-	-	0.02	0.01	0.07
20	-	-	-	-	-	-	0.04	0.01	0.00
30	-	-	-	-	-	-	0.06	0.02	0.00
40	-	-	-	-	-	-	0.09	0.04	0.03
50	-	-	-	-	-	-	0.12	0.06	0.06
Sub-Saharan Africa	0.01	0.02	0.43	0.02	0.02	0.19	-	-	-
0	-	-	-	-	-	-	-0.05	0.03	0.08
10	-	-	-	-	-	-	-0.02	0.02	0.38
20	-	-	-	-	-	-	0.03	0.02	0.10
30	-	-	-	-	-	-	0.10	0.05	0.05
40	-	-	-	-	-	-	0.18	0.09	0.05
50	-	-	-	-	-	-	0.27	0.13	0.05
North Africa	-0.02	0.03	0.47	-0.02	0.03	0.65	-	-	-
0	-	-	-	-	-	-	-0.06	0.04	0.13
10	-	-	-	-	-	-	-0.04	0.03	0.22
20	-	-	-	-	-	-	0.00	0.04	0.91
30	-	-	-	-	-	-	0.05	0.09	0.61
40	-	-	-	-	-	-	0.11	0.17	0.50
50	-	-	-	-	-	-	0.19	0.26	0.46
Other Foreign-Born	-0.02	0.01	0.04	-0.01	0.01	0.13	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.56
10	-	-	-	-	-	-	0.00	0.01	0.97
20	-	-	-	-	-	-	-0.01	0.01	0.10
30	-	-	-	-	-	-	-0.03	0.02	0.10
40	-	-	-	-	-	-	-0.05	0.03	0.13
50	-	-	-	-	-	-	-0.07	0.05	0.15

## Panel D. 2000-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.65	0.19	0.14	0.67	0.20	0.18	0.61	0.29	0.30
East Asia	0.62	0.13	0.03	0.64	0.14	0.04	0.47	0.19	0.06
Southeast Asia	1.24	0.17	0.12	1.28	0.18	0.08	1.23	0.30	0.38
Southwest Asia	1.08	0.16	0.60	1.11	0.16	0.48	1.00	0.25	0.99
China/Hong Kong	0.53	0.10	0.00	0.55	0.10	0.00	0.38	0.12	0.00
Middle East	0.89	0.19	0.60	0.93	0.20	0.72	0.58	0.22	0.15
Europe	1.08	0.18	0.64	1.11	0.18	0.52	0.74	0.26	0.39
Central America	1.30	0.20	0.09	1.31	0.20	0.09	1.27	0.35	0.39
South America	0.86	0.40	0.74	0.86	0.40	0.75	0.39	0.34	0.28
Caribbean	1.37	0.17	0.01	1.40	0.17	0.01	1.39	0.35	0.20
Sub-Saharan Africa	1.31	0.19	0.06	1.35	0.20	0.05	0.97	0.24	0.90
North Africa	1.85	0.49	0.02	1.89	0.51	0.02	3.01	1.22	0.01
Other Foreign-Born	0.94	0.11	0.58	0.96	0.11	0.71	0.99	0.21	0.95
Female (Male)	0.78	0.05	0.00	0.77	0.05	0.00	0.77	0.05	0.00
Age (Centered at 18)	1.09	0.00	0.00	1.08	0.00	0.00	1.08	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.01	0.19	1.00	0.01	0.87
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.01	0.09	0.92	1.00	0.09	0.98	1.01	0.09	0.87
College Degree or Higher (Less than a College Degree)	0.87	0.07	0.09	0.88	0.07	0.12	0.88	0.07	0.12
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.98	0.08	0.81	0.97	0.08	0.71	0.97	0.08	0.72
≥ 2.00	0.66	0.05	0.00	0.65	0.05	0.00	0.64	0.05	0.00
Insured (Uninsured)	1.07	0.08	0.36	1.06	0.08	0.46	1.07	0.09	0.38
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.37	0.03	0.00	0.38	0.03	0.00	0.37	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.38	0.14	0.00	1.38	0.14	0.00	1.38	0.14	0.00
Current Smoker	1.14	0.12	0.24	1.14	0.12	0.23	1.14	0.12	0.22
Alcohol use Status (Abstainer)									
Former Drinker	1.08	0.10	0.41	1.08	0.10	0.41	1.08	0.10	0.42
Current Drinker	0.99	0.08	0.88	0.99	0.08	0.87	0.98	0.08	0.84
Vigorous Exercise Status (None)									

< 75 Minutes per Week	1.20	0.16	0.16	1.19	0.16	0.18	1.20	0.16	0.16
≥ 75 Minutes per Week	0.96	0.08	0.61	0.95	0.08	0.54	0.95	0.08	0.55
Intercept	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.01	0.00
<i>N</i> = 67,651									
	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.03	0.02	0.10	-0.03	0.02	0.14	-	-	-
0	-	-	-	-	-	-	-0.03	0.03	0.24
10	-	-	-	-	-	-	-0.03	0.02	0.17
20	-	-	-	-	-	-	-0.02	0.04	0.64
30	-	-	-	-	-	-	-0.01	0.08	0.85
40	-	-	-	-	-	-	-0.01	0.11	0.95
50	-	-	-	-	-	-	0.00	0.15	1.00
East Asia	-0.03	0.01	0.01	-0.03	0.01	0.02	-	-	-
0	-	-	-	-	-	-	-0.05	0.02	0.03
10	-	-	-	-	-	-	-0.03	0.02	0.12
20	-	-	-	-	-	-	0.00	0.05	0.98
30	-	-	-	-	-	-	0.03	0.10	0.74
40	-	-	-	-	-	-	0.07	0.18	0.68
50	-	-	-	-	-	-	0.12	0.27	0.66
Southeast Asia	0.02	0.01	0.13	0.02	0.01	0.09	-	-	-
0	-	-	-	-	-	-	0.02	0.02	0.39
10	-	-	-	-	-	-	0.02	0.01	0.16
20	-	-	-	-	-	-	0.02	0.03	0.51
30	-	-	-	-	-	-	0.02	0.05	0.68
40	-	-	-	-	-	-	0.02	0.07	0.76
50	-	-	-	-	-	-	0.02	0.09	0.81
Southwest Asia	0.01	0.01	0.60	0.01	0.01	0.48	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.99
10	-	-	-	-	-	-	0.01	0.01	0.52
20	-	-	-	-	-	-	0.02	0.03	0.57
30	-	-	-	-	-	-	0.03	0.05	0.62
40	-	-	-	-	-	-	0.04	0.08	0.65
50	-	-	-	-	-	-	0.05	0.11	0.67
China/Hong Kong	-0.04	0.01	0.00	-0.04	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.06	0.02	0.00
10	-	-	-	-	-	-	-0.03	0.01	0.01
20	-	-	-	-	-	-	-0.01	0.04	0.89
30	-	-	-	-	-	-	0.03	0.08	0.69
40	-	-	-	-	-	-	0.08	0.14	0.58
50	-	-	-	-	-	-	0.14	0.22	0.54

Middle East	-0.01	0.02	0.59	-0.01	0.02	0.72	-	-	-
0	-	-	-	-	-	-	-0.04	0.02	0.11
10	-	-	-	-	-	-	0.01	0.02	0.60
20	-	-	-	-	-	-	0.08	0.07	0.26
30	-	-	-	-	-	-	0.17	0.16	0.27
40	-	-	-	-	-	-	0.29	0.27	0.28
50	-	-	-	-	-	-	0.42	0.37	0.26
Europe	0.01	0.01	0.64	0.01	0.01	0.53	-	-	-
0	-	-	-	-	-	-	-0.02	0.02	0.36
10	-	-	-	-	-	-	0.02	0.01	0.26
20	-	-	-	-	-	-	0.07	0.04	0.14
30	-	-	-	-	-	-	0.13	0.10	0.20
40	-	-	-	-	-	-	0.20	0.17	0.23
50	-	-	-	-	-	-	0.29	0.25	0.25
Central America	0.02	0.01	0.11	0.02	0.01	0.10	-	-	-
0	-	-	-	-	-	-	0.02	0.02	0.41
10	-	-	-	-	-	-	0.02	0.01	0.14
20	-	-	-	-	-	-	0.02	0.04	0.49
30	-	-	-	-	-	-	0.03	0.06	0.66
40	-	-	-	-	-	-	0.03	0.09	0.74
50	-	-	-	-	-	-	0.03	0.11	0.78
South America	-0.01	0.03	0.73	-0.01	0.03	0.74	-	-	-
0	-	-	-	-	-	-	-0.06	0.04	0.15
10	-	-	-	-	-	-	-0.01	0.03	0.74
20	-	-	-	-	-	-	0.06	0.10	0.54
30	-	-	-	-	-	-	0.16	0.24	0.51
40	-	-	-	-	-	-	0.29	0.44	0.50
50	-	-	-	-	-	-	0.45	0.61	0.47
Caribbean	0.03	0.01	0.01	0.03	0.01	0.01	-	-	-
0	-	-	-	-	-	-	0.03	0.02	0.22
10	-	-	-	-	-	-	0.03	0.01	0.02
20	-	-	-	-	-	-	0.03	0.03	0.39
30	-	-	-	-	-	-	0.02	0.05	0.64
40	-	-	-	-	-	-	0.02	0.07	0.76
50	-	-	-	-	-	-	0.02	0.09	0.82
Sub-Saharan Africa	0.02	0.01	0.07	0.02	0.01	0.05	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.90
10	-	-	-	-	-	-	0.03	0.02	0.04
20	-	-	-	-	-	-	0.07	0.04	0.08
30	-	-	-	-	-	-	0.12	0.08	0.14
40	-	-	-	-	-	-	0.18	0.13	0.18
50	-	-	-	-	-	-	0.25	0.19	0.20
North Africa	0.06	0.03	0.05	0.06	0.03	0.04	-	-	-

0	-	-	-	-	-	-	0.12	0.05	0.03
10	-	-	-	-	-	-	0.03	0.03	0.33
20	-	-	-	-	-	-	-0.02	0.05	0.62
30	-	-	-	-	-	-	-0.06	0.05	0.25
40	-	-	-	-	-	-	-0.08	0.05	0.10
50	-	-	-	-	-	-	-0.09	0.05	0.06
Other Foreign-Born	0.00	0.01	0.58	0.00	0.01	0.71	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.95
10	-	-	-	-	-	-	-0.01	0.01	0.54
20	-	-	-	-	-	-	-0.01	0.02	0.63
30	-	-	-	-	-	-	-0.01	0.03	0.69
40	-	-	-	-	-	-	-0.02	0.05	0.71
50	-	-	-	-	-	-	-0.02	0.06	0.73

*Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file*

*\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$*

**Appendix Table 2.3** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for BMI in the Overweight or Obese Range by National Origin for Pre-1965 (Panel A), 1965-1984 (Panel B), 1985-1999 (Panel C), and 2000-2018 (Panel D) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.69	0.11	0.02	0.69	0.11	0.02	1.39	1.19	0.70
East Asia	0.33	0.06	0.00	0.33	0.06	0.00	1.00	1.09	1.00
Southeast Asia	0.36	0.08	0.00	0.36	0.08	0.00	0.35	0.46	0.42
Southwest Asia	0.51	0.23	0.13	0.50	0.22	0.12	5.62	18.50	0.60
China/Hong Kong	0.11	0.03	0.00	0.11	0.03	0.00	0.03	0.05	0.01
Middle East	0.63	0.22	0.18	0.63	0.22	0.17	0.33	0.74	0.62
Europe	0.62	0.07	0.00	0.62	0.07	0.00	1.38	0.98	0.65
Central America	1.07	0.25	0.77	1.06	0.25	0.79	2.30	3.73	0.61
South America	0.79	0.40	0.65	0.79	0.40	0.64	13.86	36.03	0.31
Caribbean	0.67	0.09	0.00	0.66	0.09	0.00	2.40	2.20	0.34
Sub-Saharan Africa	0.40	0.19	0.05	0.40	0.19	0.05	0.04	0.15	0.40
North Africa	1.07	0.47	0.88	1.07	0.47	0.89	1.73	5.51	0.86
Other Foreign-Born	0.73	0.09	0.01	0.73	0.09	0.01	2.45	1.96	0.26
Female (Male)	0.49	0.03	0.00	0.49	0.03	0.00	0.49	0.03	0.00
Age (Centered at 18)	0.97	0.00	0.00	0.97	0.00	0.00	0.97	0.00	0.00
Time in the United States (Centered at 0 years)				1.00	0.00	0.48	1.01	0.01	0.35
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.83	0.09	0.08	0.84	0.09	0.11	0.84	0.09	0.12
College Degree or Higher (Less than a College Degree)	0.80	0.07	0.01	0.80	0.07	0.01	0.80	0.07	0.01
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	1.13	0.13	0.29	1.13	0.13	0.30	1.13	0.13	0.27
≥ 2.00	1.02	0.11	0.85	1.02	0.11	0.84	1.03	0.11	0.82
Insured (Uninsured)	0.95	0.15	0.75	0.95	0.15	0.74	0.94	0.15	0.71
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.66	0.08	0.00	0.66	0.08	0.00	0.66	0.07	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.16	0.09	0.05	1.16	0.09	0.05	1.16	0.09	0.05
Current Smoker	0.68	0.08	0.00	0.69	0.08	0.00	0.68	0.08	0.00
Alcohol use Status (Abstainer)									

Former Drinker	1.02	0.10	0.84	1.02	0.10	0.81	1.02	0.10	0.85
Current Drinker	0.83	0.07	0.03	0.83	0.07	0.04	0.83	0.07	0.03
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.86	0.13	0.32	0.86	0.13	0.32	0.87	0.13	0.34
≥ 75 Minutes per Week	0.67	0.05	0.00	0.67	0.05	0.00	0.67	0.06	0.00
Intercept	29.05	7.23	0.00	31.46	8.83	0.00	14.90	9.55	0.00
<i>N</i> = 16,032									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.07	0.03	0.02	-0.07	0.03	0.02	-	-	-
0	-	-	-	-	-	-	0.07	0.18	0.70
10	-	-	-	-	-	-	0.04	0.15	0.78
20	-	-	-	-	-	-	0.01	0.12	0.91
30	-	-	-	-	-	-	-0.01	0.09	0.87
40	-	-	-	-	-	-	-0.04	0.06	0.48
50	-	-	-	-	-	-	-0.07	0.04	0.07
East Asia	-0.24	0.04	0.00	-0.24	0.04	0.00	-	-	-
0	-	-	-	-	-	-	0.00	0.24	1.00
10	-	-	-	-	-	-	-0.05	0.20	0.81
20	-	-	-	-	-	-	-0.09	0.15	0.54
30	-	-	-	-	-	-	-0.14	0.11	0.21
40	-	-	-	-	-	-	-0.19	0.07	0.01
50	-	-	-	-	-	-	-0.23	0.04	0.00
Southeast Asia	-0.22	0.05	0.00	-0.22	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.24	0.29	0.40
10	-	-	-	-	-	-	-0.24	0.24	0.31
20	-	-	-	-	-	-	-0.24	0.18	0.20
30	-	-	-	-	-	-	-0.23	0.13	0.08
40	-	-	-	-	-	-	-0.23	0.08	0.00
50	-	-	-	-	-	-	-0.22	0.05	0.00
Southwest Asia	-0.14	0.10	0.16	-0.14	0.10	0.15	-	-	-
0	-	-	-	-	-	-	0.28	0.33	0.40
10	-	-	-	-	-	-	0.21	0.33	0.52
20	-	-	-	-	-	-	0.14	0.31	0.65
30	-	-	-	-	-	-	0.06	0.26	0.83
40	-	-	-	-	-	-	-0.04	0.18	0.84
50	-	-	-	-	-	-	-0.14	0.10	0.18
China/Hong Kong	-0.48	0.05	0.00	-0.48	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.56	0.16	0.00
10	-	-	-	-	-	-	-0.56	0.13	0.00

20	-	-	-	-	-	-	-0.56	0.11	0.00
30	-	-	-	-	-	-	-0.55	0.09	0.00
40	-	-	-	-	-	-	-0.53	0.06	0.00
50	-	-	-	-	-	-	-0.50	0.05	0.00
Middle East	-0.09	0.07	0.21	-0.09	0.07	0.20	-	-	-
0	-	-	-	-	-	-	-0.25	0.49	0.60
10	-	-	-	-	-	-	-0.22	0.41	0.59
20	-	-	-	-	-	-	-0.19	0.32	0.56
30	-	-	-	-	-	-	-0.16	0.23	0.49
40	-	-	-	-	-	-	-0.12	0.14	0.36
50	-	-	-	-	-	-	-0.09	0.07	0.22
Europe	-0.10	0.02	0.00	-0.10	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.07	0.16	0.66
10	-	-	-	-	-	-	0.04	0.13	0.77
20	-	-	-	-	-	-	0.00	0.10	0.96
30	-	-	-	-	-	-	-0.03	0.07	0.70
40	-	-	-	-	-	-	-0.06	0.04	0.18
50	-	-	-	-	-	-	-0.09	0.02	0.00
Central America	0.01	0.04	0.77	0.01	0.04	0.79	-	-	-
0	-	-	-	-	-	-	0.16	0.28	0.56
10	-	-	-	-	-	-	0.13	0.23	0.57
20	-	-	-	-	-	-	0.10	0.18	0.57
30	-	-	-	-	-	-	0.07	0.13	0.57
40	-	-	-	-	-	-	0.05	0.08	0.57
50	-	-	-	-	-	-	0.02	0.05	0.67
South America	-0.04	0.10	0.66	-0.05	0.10	0.65	-	-	-
0	-	-	-	-	-	-	0.34	0.18	0.06
10	-	-	-	-	-	-	0.29	0.17	0.09
20	-	-	-	-	-	-	0.23	0.16	0.16
30	-	-	-	-	-	-	0.17	0.15	0.27
40	-	-	-	-	-	-	0.09	0.13	0.49
50	-	-	-	-	-	-	-0.01	0.10	0.94
Caribbean	-0.08	0.03	0.00	-0.08	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.17	0.18	0.33
10	-	-	-	-	-	-	0.12	0.14	0.40
20	-	-	-	-	-	-	0.07	0.11	0.51
30	-	-	-	-	-	-	0.03	0.08	0.75
40	-	-	-	-	-	-	-0.02	0.05	0.61
50	-	-	-	-	-	-	-0.07	0.03	0.01
Sub-Saharan Africa	-0.19	0.11	0.07	-0.20	0.11	0.07	-	-	-
0	-	-	-	-	-	-	-0.55	0.27	0.04
10	-	-	-	-	-	-	-0.53	0.31	0.09
20	-	-	-	-	-	-	-0.49	0.34	0.15



30	-	-	-	-	-	-	-0.42	0.31	0.17
40	-	-	-	-	-	-	-0.32	0.21	0.12
50	-	-	-	-	-	-	-0.21	0.11	0.05
North Africa	0.01	0.08	0.88	0.01	0.08	0.88	-	-	-
0	-	-	-	-	-	-	0.11	0.60	0.85
10	-	-	-	-	-	-	0.09	0.49	0.85
20	-	-	-	-	-	-	0.07	0.37	0.84
30	-	-	-	-	-	-	0.05	0.26	0.84
40	-	-	-	-	-	-	0.04	0.16	0.82
50	-	-	-	-	-	-	0.02	0.08	0.83
Other Foreign-Born	-0.06	0.02	0.01	-0.06	0.02	0.01	-	-	-
0	-	-	-	-	-	-	0.17	0.16	0.28
10	-	-	-	-	-	-	0.13	0.13	0.32
20	-	-	-	-	-	-	0.09	0.10	0.39
30	-	-	-	-	-	-	0.04	0.07	0.55
40	-	-	-	-	-	-	0.00	0.04	0.96
50	-	-	-	-	-	-	-0.05	0.02	0.06

## Panel B. 1965-1984

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.45	0.06	0.00	0.45	0.06	0.00	0.46	0.26	0.17
East Asia	0.23	0.02	0.00	0.23	0.02	0.00	0.20	0.08	0.00
Southeast Asia	0.23	0.02	0.00	0.25	0.02	0.00	0.26	0.07	0.00
Southwest Asia	0.35	0.04	0.00	0.38	0.05	0.00	0.50	0.24	0.15
China/Hong Kong	0.14	0.02	0.00	0.15	0.02	0.00	0.22	0.16	0.03
Middle East	0.71	0.12	0.04	0.77	0.13	0.13	0.54	0.29	0.25
Europe	0.57	0.04	0.00	0.57	0.04	0.00	0.48	0.14	0.01
Central America	0.80	0.07	0.01	0.87	0.08	0.10	0.72	0.26	0.37
South America	0.45	0.13	0.01	0.48	0.14	0.01	0.04	0.05	0.02
Caribbean	0.65	0.04	0.00	0.68	0.04	0.00	1.16	0.32	0.58
Sub-Saharan Africa	0.72	0.11	0.04	0.81	0.13	0.19	0.98	0.66	0.98
North Africa	0.31	0.09	0.00	0.34	0.10	0.00	3.76	4.37	0.25
Other Foreign-Born	0.66	0.05	0.00	0.68	0.05	0.00	0.76	0.21	0.32
Female (Male)	0.52	0.02	0.00	0.50	0.02	0.00	0.51	0.02	0.00
Age (Centered at 18)	1.00	0.00	0.71	0.99	0.00	0.00	0.99	0.00	0.00
Time in the United States (Centered at 0 years)				1.03	0.00	0.00	1.03	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.97	0.05	0.58	0.90	0.05	0.06	0.90	0.05	0.04
College Degree or Higher (Less than a College Degree)	0.72	0.04	0.00	0.71	0.04	0.00	0.71	0.04	0.00

Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.90	0.06	0.13	0.90	0.06	0.10	0.90	0.06	0.11
≥ 2.00	0.87	0.05	0.02	0.85	0.05	0.01	0.85	0.05	0.01
Insured (Uninsured)									
1.04	0.06	0.47	1.01	0.06	0.88	1.01	0.06	0.88	
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.84	0.05	0.00	0.84	0.05	0.00	0.84	0.05	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.12	0.06	0.04	1.13	0.06	0.03	1.13	0.06	0.03
Current Smoker	0.81	0.05	0.00	0.80	0.05	0.00	0.81	0.05	0.00
Alcohol use Status (Abstainer)									
Former Drinker	1.05	0.06	0.41	1.02	0.06	0.73	1.02	0.06	0.74
Current Drinker	0.98	0.05	0.73	0.94	0.05	0.26	0.94	0.05	0.28
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.12	0.09	0.15	1.10	0.09	0.26	1.09	0.09	0.28
≥ 75 Minutes per Week	0.78	0.03	0.00	0.76	0.03	0.00	0.76	0.03	0.00
Intercept	6.28	0.67	0.00	3.73	0.45	0.00	3.54	0.66	0.00

N = 61,028

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.16	0.03	0.00	-0.16	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.18	0.13	0.15
10	-	-	-	-	-	-	-0.19	0.10	0.06
20	-	-	-	-	-	-	-0.18	0.07	0.01
30	-	-	-	-	-	-	-0.17	0.04	0.00
40	-	-	-	-	-	-	-0.15	0.03	0.00
50	-	-	-	-	-	-	-0.14	0.05	0.01
East Asia	-0.33	0.02	0.00	-0.32	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.35	0.07	0.00
10	-	-	-	-	-	-	-0.36	0.06	0.00
20	-	-	-	-	-	-	-0.35	0.04	0.00
30	-	-	-	-	-	-	-0.33	0.02	0.00
40	-	-	-	-	-	-	-0.30	0.03	0.00
50	-	-	-	-	-	-	-0.26	0.05	0.00
Southeast Asia	-0.32	0.02	0.00	-0.30	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.30	0.06	0.00
10	-	-	-	-	-	-	-0.31	0.04	0.00
20	-	-	-	-	-	-	-0.31	0.03	0.00

30	-	-	-	-	-	-	-0.31	0.02	0.00
40	-	-	-	-	-	-	-0.29	0.02	0.00
50	-	-	-	-	-	-	-0.26	0.04	0.00
Southwest Asia	-0.22	0.03	0.00	-0.20	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.16	0.11	0.13
10	-	-	-	-	-	-	-0.18	0.08	0.02
20	-	-	-	-	-	-	-0.19	0.05	0.00
30	-	-	-	-	-	-	-0.20	0.03	0.00
40	-	-	-	-	-	-	-0.20	0.04	0.00
50	-	-	-	-	-	-	-0.19	0.06	0.00
China/Hong Kong	-0.44	0.03	0.00	-0.42	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.33	0.12	0.01
10	-	-	-	-	-	-	-0.37	0.09	0.00
20	-	-	-	-	-	-	-0.40	0.06	0.00
30	-	-	-	-	-	-	-0.42	0.03	0.00
40	-	-	-	-	-	-	-0.43	0.05	0.00
50	-	-	-	-	-	-	-0.43	0.10	0.00
Middle East	-0.07	0.03	0.05	-0.05	0.03	0.15	-	-	-
0	-	-	-	-	-	-	-0.15	0.12	0.24
10	-	-	-	-	-	-	-0.12	0.09	0.19
20	-	-	-	-	-	-	-0.09	0.05	0.11
30	-	-	-	-	-	-	-0.05	0.03	0.11
40	-	-	-	-	-	-	-0.03	0.04	0.51
50	-	-	-	-	-	-	-0.01	0.05	0.89
Europe	-0.11	0.02	0.00	-0.11	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.17	0.07	0.01
10	-	-	-	-	-	-	-0.16	0.05	0.00
20	-	-	-	-	-	-	-0.14	0.03	0.00
30	-	-	-	-	-	-	-0.12	0.02	0.00
40	-	-	-	-	-	-	-0.10	0.02	0.00
50	-	-	-	-	-	-	-0.07	0.03	0.00
Central America	-0.04	0.02	0.02	-0.03	0.02	0.11	-	-	-
0	-	-	-	-	-	-	-0.08	0.09	0.36
10	-	-	-	-	-	-	-0.06	0.06	0.29
20	-	-	-	-	-	-	-0.04	0.03	0.16
30	-	-	-	-	-	-	-0.03	0.02	0.11
40	-	-	-	-	-	-	-0.01	0.03	0.63
50	-	-	-	-	-	-	0.00	0.04	0.96
South America	-0.16	0.07	0.02	-0.15	0.07	0.02	-	-	-
0	-	-	-	-	-	-	-0.50	0.07	0.00
10	-	-	-	-	-	-	-0.49	0.11	0.00
20	-	-	-	-	-	-	-0.38	0.12	0.00
30	-	-	-	-	-	-	-0.20	0.07	0.01

40	-	-	-	-	-	-	-0.03	0.07	0.66
50	-	-	-	-	-	-	0.06	0.06	0.35
Caribbean	-0.08	0.01	0.00	-0.07	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.04	0.06	0.58
10	-	-	-	-	-	-	0.00	0.04	0.96
20	-	-	-	-	-	-	-0.04	0.02	0.14
30	-	-	-	-	-	-	-0.07	0.01	0.00
40	-	-	-	-	-	-	-0.09	0.02	0.00
50	-	-	-	-	-	-	-0.10	0.03	0.00
Sub-Saharan Africa	-0.06	0.03	0.05	-0.04	0.03	0.20	-	-	-
0	-	-	-	-	-	-	0.00	0.16	0.98
10	-	-	-	-	-	-	-0.02	0.11	0.87
20	-	-	-	-	-	-	-0.03	0.06	0.62
30	-	-	-	-	-	-	-0.04	0.03	0.22
40	-	-	-	-	-	-	-0.04	0.05	0.35
50	-	-	-	-	-	-	-0.05	0.07	0.52
North Africa	-0.25	0.07	0.00	-0.23	0.07	0.00	-	-	-
0	-	-	-	-	-	-	0.26	0.17	0.13
10	-	-	-	-	-	-	0.13	0.15	0.40
20	-	-	-	-	-	-	-0.02	0.11	0.88
30	-	-	-	-	-	-	-0.17	0.07	0.02
40	-	-	-	-	-	-	-0.31	0.08	0.00
50	-	-	-	-	-	-	-0.45	0.14	0.00
Other Foreign-Born	-0.08	0.01	0.00	-0.07	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.06	0.06	0.32
10	-	-	-	-	-	-	-0.07	0.04	0.11
20	-	-	-	-	-	-	-0.07	0.03	0.00
30	-	-	-	-	-	-	-0.07	0.01	0.00
40	-	-	-	-	-	-	-0.07	0.02	0.00
50	-	-	-	-	-	-	-0.07	0.03	0.02

### Panel C. 1985-1999

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.47	0.06	0.00	0.52	0.07	0.00	1.06	0.33	0.85
East Asia	0.20	0.02	0.00	0.21	0.02	0.00	0.13	0.04	0.00
Southeast Asia	0.22	0.02	0.00	0.23	0.02	0.00	0.36	0.07	0.00
Southwest Asia	0.38	0.04	0.00	0.41	0.04	0.00	0.46	0.09	0.00
China/Hong Kong	0.10	0.01	0.00	0.10	0.01	0.00	0.21	0.06	0.00
Middle East	0.50	0.06	0.00	0.53	0.06	0.00	0.57	0.14	0.03
Europe	0.49	0.03	0.00	0.53	0.04	0.00	0.72	0.11	0.03

Central America	0.89	0.06	0.06	0.90	0.06	0.10	0.98	0.17	0.91
South America	0.53	0.14	0.01	0.59	0.16	0.05	0.59	0.32	0.33
Caribbean	0.73	0.04	0.00	0.76	0.05	0.00	1.08	0.18	0.64
Sub-Saharan Africa	0.71	0.06	0.00	0.79	0.07	0.01	0.80	0.18	0.33
North Africa	0.80	0.19	0.35	0.88	0.21	0.59	0.82	0.50	0.75
Other Foreign-Born	0.60	0.04	0.00	0.63	0.04	0.00	0.86	0.12	0.30
Female (Male)	0.56	0.02	0.00	0.55	0.02	0.00	0.55	0.02	0.00
Age (Centered at 18)	1.02	0.00	0.00	1.02	0.00	0.00	1.02	0.00	0.00
Time in the United States (Centered at 0 years)				1.03	0.00	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)								<i>Included</i>	
English Interview (Non-English Interview)	0.99	0.04	0.79	0.93	0.04	0.06	0.92	0.04	0.04
College Degree or Higher (Less than a College Degree)	0.73	0.03	0.00	0.73	0.03	0.00	0.74	0.03	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.93	0.04	0.13	0.93	0.04	0.10	0.92	0.04	0.09
≥ 2.00	0.86	0.04	0.00	0.85	0.04	0.00	0.85	0.04	0.00
Insured (Uninsured)	1.02	0.04	0.65	0.96	0.04	0.36	0.96	0.04	0.24
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.89	0.04	0.01	0.90	0.04	0.01	0.90	0.04	0.01
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.31	0.07	0.00	1.34	0.07	0.00	1.33	0.07	0.00
Current Smoker	1.04	0.06	0.48	1.07	0.06	0.27	1.06	0.06	0.28
Alcohol use Status (Abstainer)									
Former Drinker	1.14	0.06	0.02	1.11	0.06	0.06	1.10	0.06	0.08
Current Drinker	1.06	0.04	0.14	1.01	0.04	0.76	1.01	0.04	0.85
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.94	0.06	0.28	0.92	0.05	0.15	0.91	0.05	0.14
≥ 75 Minutes per Week	0.92	0.04	0.04	0.88	0.04	0.00	0.88	0.04	0.00
Intercept	2.43	0.16	0.00	1.79	0.12	0.00	1.51	0.13	0.00

*N* = 96,264

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.17	0.03	0.00	-0.14	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.01	0.07	0.85
10	-	-	-	-	-	-	-0.08	0.04	0.04
20	-	-	-	-	-	-	-0.17	0.04	0.00
30	-	-	-	-	-	-	-0.24	0.07	0.00

40	-	-	-	-	-	-	-0.30	0.11	0.01
50	-	-	-	-	-	-	-0.34	0.15	0.02
East Asia	-0.37	0.03	0.00	-0.36	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.41	0.04	0.00
10	-	-	-	-	-	-	-0.40	0.03	0.00
20	-	-	-	-	-	-	-0.35	0.03	0.00
30	-	-	-	-	-	-	-0.27	0.06	0.00
40	-	-	-	-	-	-	-0.17	0.08	0.03
50	-	-	-	-	-	-	-0.09	0.08	0.25
Southeast Asia	-0.34	0.02	0.00	-0.33	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.24	0.04	0.00
10	-	-	-	-	-	-	-0.30	0.02	0.00
20	-	-	-	-	-	-	-0.34	0.02	0.00
30	-	-	-	-	-	-	-0.38	0.03	0.00
40	-	-	-	-	-	-	-0.39	0.05	0.00
50	-	-	-	-	-	-	-0.40	0.07	0.00
Southwest Asia	-0.22	0.02	0.00	-0.19	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.18	0.05	0.00
10	-	-	-	-	-	-	-0.19	0.03	0.00
20	-	-	-	-	-	-	-0.20	0.02	0.00
30	-	-	-	-	-	-	-0.19	0.04	0.00
40	-	-	-	-	-	-	-0.17	0.06	0.00
50	-	-	-	-	-	-	-0.14	0.07	0.04
China/Hong Kong	-0.50	0.02	0.00	-0.49	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.34	0.05	0.00
10	-	-	-	-	-	-	-0.43	0.03	0.00
20	-	-	-	-	-	-	-0.51	0.02	0.00
30	-	-	-	-	-	-	-0.58	0.04	0.00
40	-	-	-	-	-	-	-0.63	0.07	0.00
50	-	-	-	-	-	-	-0.67	0.09	0.00
Middle East	-0.15	0.03	0.00	-0.14	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.13	0.06	0.02
10	-	-	-	-	-	-	-0.14	0.03	0.00
20	-	-	-	-	-	-	-0.14	0.03	0.00
30	-	-	-	-	-	-	-0.12	0.05	0.01
40	-	-	-	-	-	-	-0.11	0.07	0.11
50	-	-	-	-	-	-	-0.09	0.07	0.24
Europe	-0.15	0.02	0.00	-0.14	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.08	0.04	0.03
10	-	-	-	-	-	-	-0.12	0.02	0.00
20	-	-	-	-	-	-	-0.14	0.02	0.00
30	-	-	-	-	-	-	-0.16	0.03	0.00
40	-	-	-	-	-	-	-0.16	0.04	0.00

50	-	-	-	-	-	-	-0.16	0.05	0.00
Central America	-0.02	0.01	0.07	-0.02	0.01	0.11	-	-	-
0	-	-	-	-	-	-	0.00	0.04	0.91
10	-	-	-	-	-	-	-0.02	0.02	0.39
20	-	-	-	-	-	-	-0.02	0.02	0.12
30	-	-	-	-	-	-	-0.03	0.03	0.28
40	-	-	-	-	-	-	-0.03	0.03	0.39
50	-	-	-	-	-	-	-0.03	0.04	0.46
South America	-0.14	0.06	0.02	-0.11	0.06	0.06	-	-	-
0	-	-	-	-	-	-	-0.13	0.13	0.32
10	-	-	-	-	-	-	-0.12	0.07	0.09
20	-	-	-	-	-	-	-0.10	0.07	0.15
30	-	-	-	-	-	-	-0.08	0.11	0.46
40	-	-	-	-	-	-	-0.06	0.14	0.65
50	-	-	-	-	-	-	-0.05	0.15	0.75
Caribbean	-0.07	0.01	0.00	-0.06	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.02	0.04	0.64
10	-	-	-	-	-	-	-0.03	0.02	0.14
20	-	-	-	-	-	-	-0.07	0.01	0.00
30	-	-	-	-	-	-	-0.09	0.03	0.00
40	-	-	-	-	-	-	-0.11	0.04	0.00
50	-	-	-	-	-	-	-0.11	0.05	0.01
Sub-Saharan Africa	-0.07	0.02	0.00	-0.05	0.02	0.01	-	-	-
0	-	-	-	-	-	-	-0.05	0.06	0.33
10	-	-	-	-	-	-	-0.05	0.03	0.05
20	-	-	-	-	-	-	-0.04	0.02	0.07
30	-	-	-	-	-	-	-0.04	0.04	0.37
40	-	-	-	-	-	-	-0.03	0.05	0.58
50	-	-	-	-	-	-	-0.02	0.05	0.69
North Africa	-0.05	0.05	0.36	-0.03	0.05	0.60	-	-	-
0	-	-	-	-	-	-	-0.05	0.15	0.75
10	-	-	-	-	-	-	-0.03	0.07	0.66
20	-	-	-	-	-	-	-0.02	0.06	0.80
30	-	-	-	-	-	-	0.00	0.09	0.97
40	-	-	-	-	-	-	0.00	0.11	0.97
50	-	-	-	-	-	-	0.01	0.11	0.95
Other Foreign-Born	-0.11	0.01	0.00	-0.10	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.04	0.03	0.30
10	-	-	-	-	-	-	-0.08	0.02	0.00
20	-	-	-	-	-	-	-0.11	0.01	0.00
30	-	-	-	-	-	-	-0.13	0.02	0.00
40	-	-	-	-	-	-	-0.14	0.03	0.00
50	-	-	-	-	-	-	-0.13	0.04	0.00

## Panel D. 2000-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.38	0.06	0.00	0.44	0.07	0.00	0.61	0.15	0.05
East Asia	0.13	0.02	0.00	0.14	0.02	0.00	0.14	0.03	0.00
Southeast Asia	0.25	0.03	0.00	0.27	0.03	0.00	0.26	0.04	0.00
Southwest Asia	0.47	0.04	0.00	0.53	0.05	0.00	0.61	0.08	0.00
China/Hong Kong	0.13	0.02	0.00	0.14	0.02	0.00	0.19	0.04	0.00
Middle East	0.48	0.06	0.00	0.55	0.07	0.00	0.51	0.10	0.00
Europe	0.39	0.04	0.00	0.43	0.04	0.00	0.37	0.06	0.00
Central America	0.83	0.07	0.02	0.84	0.07	0.03	0.80	0.12	0.14
South America	0.51	0.15	0.02	0.52	0.16	0.03	1.30	0.58	0.56
Caribbean	0.76	0.07	0.00	0.83	0.07	0.02	0.79	0.13	0.16
Sub-Saharan Africa	0.57	0.06	0.00	0.63	0.06	0.00	0.56	0.10	0.00
North Africa	0.77	0.17	0.24	0.85	0.19	0.49	0.86	0.33	0.71
Other Foreign-Born	0.54	0.04	0.00	0.59	0.04	0.00	0.63	0.08	0.00
Female (Male)	0.61	0.03	0.00	0.61	0.03	0.00	0.60	0.03	0.00
Age (Centered at 18)	1.03	0.00	0.00	1.03	0.00	0.00	1.03	0.00	0.00
Time in the United States (Centered at 0 years)				1.04	0.01	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.06	0.06	0.33	1.02	0.06	0.77	1.01	0.06	0.82
College Degree or Higher (Less than a College Degree)	0.91	0.05	0.09	0.96	0.05	0.43	0.96	0.05	0.40
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	1.09	0.06	0.12	1.06	0.06	0.32	1.06	0.06	0.31
≥ 2.00	0.90	0.05	0.04	0.85	0.04	0.00	0.85	0.04	0.00
Insured (Uninsured)	1.06	0.05	0.26	1.02	0.05	0.76	1.01	0.05	0.83
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.91	0.04	0.04	0.91	0.04	0.05	0.91	0.04	0.05
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.28	0.09	0.00	1.30	0.10	0.00	1.29	0.09	0.00
Current Smoker	1.05	0.08	0.50	1.08	0.08	0.32	1.07	0.08	0.35
Alcohol use Status (Abstainer)									
Former Drinker	1.08	0.08	0.28	1.07	0.07	0.32	1.07	0.07	0.31
Current Drinker	1.10	0.05	0.05	1.09	0.05	0.07	1.09	0.05	0.07
Vigorous Exercise Status (None)									



< 75 Minutes per Week	1.10	0.08	0.18	1.07	0.08	0.32	1.08	0.08	0.28
≥ 75 Minutes per Week	0.89	0.04	0.02	0.86	0.04	0.00	0.87	0.04	0.01
Intercept	1.42	0.11	0.00	1.19	0.09	0.03	1.18	0.11	0.09

$N = 66,150$

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.22	0.04	0.00	-0.19	0.04	0.00	-	-	-
0	-	-	-	-	-	-	-0.12	0.06	0.05
10	-	-	-	-	-	-	-0.23	0.05	0.00
20	-	-	-	-	-	-	-0.34	0.11	0.00
30	-	-	-	-	-	-	-0.43	0.17	0.01
40	-	-	-	-	-	-	-0.51	0.23	0.03
50	-	-	-	-	-	-	-0.58	0.29	0.05
East Asia	-0.44	0.02	0.00	-0.42	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.41	0.04	0.00
10	-	-	-	-	-	-	-0.42	0.03	0.00
20	-	-	-	-	-	-	-0.42	0.09	0.00
30	-	-	-	-	-	-	-0.39	0.16	0.01
40	-	-	-	-	-	-	-0.34	0.23	0.13
50	-	-	-	-	-	-	-0.29	0.28	0.30
Southeast Asia	-0.32	0.02	0.00	-0.30	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.31	0.03	0.00
10	-	-	-	-	-	-	-0.29	0.03	0.00
20	-	-	-	-	-	-	-0.25	0.07	0.00
30	-	-	-	-	-	-	-0.20	0.11	0.08
40	-	-	-	-	-	-	-0.15	0.14	0.29
50	-	-	-	-	-	-	-0.10	0.14	0.48
Southwest Asia	-0.17	0.02	0.00	-0.15	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.12	0.03	0.00
10	-	-	-	-	-	-	-0.16	0.02	0.00
20	-	-	-	-	-	-	-0.19	0.05	0.00
30	-	-	-	-	-	-	-0.22	0.08	0.01
40	-	-	-	-	-	-	-0.23	0.11	0.04
50	-	-	-	-	-	-	-0.23	0.13	0.08
China/Hong Kong	-0.44	0.02	0.00	-0.42	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.36	0.03	0.00
10	-	-	-	-	-	-	-0.45	0.03	0.00
20	-	-	-	-	-	-	-0.53	0.06	0.00
30	-	-	-	-	-	-	-0.60	0.09	0.00
40	-	-	-	-	-	-	-0.66	0.12	0.00
50	-	-	-	-	-	-	-0.71	0.15	0.00

Middle East	-0.17	0.03	0.00	-0.14	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.16	0.05	0.00
10	-	-	-	-	-	-	-0.12	0.04	0.00
20	-	-	-	-	-	-	-0.07	0.09	0.43
30	-	-	-	-	-	-	-0.03	0.12	0.79
40	-	-	-	-	-	-	0.00	0.12	0.97
50	-	-	-	-	-	-	0.01	0.11	0.92
Europe	-0.22	0.02	0.00	-0.19	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.23	0.04	0.00
10	-	-	-	-	-	-	-0.17	0.03	0.00
20	-	-	-	-	-	-	-0.11	0.05	0.04
30	-	-	-	-	-	-	-0.05	0.07	0.47
40	-	-	-	-	-	-	-0.01	0.07	0.88
50	-	-	-	-	-	-	0.01	0.06	0.86
Central America	-0.04	0.02	0.02	-0.04	0.02	0.03	-	-	-
0	-	-	-	-	-	-	-0.05	0.04	0.14
10	-	-	-	-	-	-	-0.03	0.02	0.14
20	-	-	-	-	-	-	-0.02	0.05	0.76
30	-	-	-	-	-	-	0.00	0.07	0.98
40	-	-	-	-	-	-	0.01	0.08	0.92
50	-	-	-	-	-	-	0.01	0.07	0.87
South America	-0.15	0.07	0.03	-0.15	0.07	0.04	-	-	-
0	-	-	-	-	-	-	0.06	0.10	0.55
10	-	-	-	-	-	-	-0.17	0.07	0.01
20	-	-	-	-	-	-	-0.39	0.15	0.01
30	-	-	-	-	-	-	-0.58	0.20	0.01
40	-	-	-	-	-	-	-0.72	0.20	0.00
50	-	-	-	-	-	-	-0.81	0.16	0.00
Caribbean	-0.06	0.02	0.00	-0.04	0.02	0.03	-	-	-
0	-	-	-	-	-	-	-0.06	0.04	0.17
10	-	-	-	-	-	-	-0.04	0.02	0.12
20	-	-	-	-	-	-	-0.02	0.05	0.75
30	-	-	-	-	-	-	0.00	0.08	0.97
40	-	-	-	-	-	-	0.01	0.08	0.94
50	-	-	-	-	-	-	0.01	0.08	0.89
Sub-Saharan Africa	-0.13	0.02	0.00	-0.11	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.14	0.04	0.00
10	-	-	-	-	-	-	-0.09	0.03	0.00
20	-	-	-	-	-	-	-0.05	0.07	0.48
30	-	-	-	-	-	-	-0.01	0.09	0.90
40	-	-	-	-	-	-	0.01	0.09	0.90
50	-	-	-	-	-	-	0.02	0.08	0.78
North Africa	-0.06	0.05	0.25	-0.03	0.05	0.49	-	-	-

0	-	-	-	-	-	-	-0.03	0.09	0.71
10	-	-	-	-	-	-	-0.03	0.06	0.61
20	-	-	-	-	-	-	-0.03	0.14	0.83
30	-	-	-	-	-	-	-0.03	0.20	0.90
40	-	-	-	-	-	-	-0.02	0.23	0.92
50	-	-	-	-	-	-	-0.02	0.23	0.94
Other Foreign-Born	-0.14	0.02	0.00	-0.12	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.11	0.03	0.00
10	-	-	-	-	-	-	-0.13	0.02	0.00
20	-	-	-	-	-	-	-0.13	0.05	0.00
30	-	-	-	-	-	-	-0.14	0.07	0.06
40	-	-	-	-	-	-	-0.13	0.09	0.14
50	-	-	-	-	-	-	-0.12	0.10	0.23

---

*Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file*

**Appendix Table 2.4** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health by National Origin for Pre-1965 (Panel A), 1965-1975 (Panel B), 1976-1979 (Panel C), 1980-1989 (Panel D), 1990-2001 (Panel E), and 2002-2018 (Panel F) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.37	0.08	0.00	0.37	0.08	0.00	0.05	0.05	0.00
East Asia	0.51	0.13	0.01	0.51	0.13	0.01	0.16	0.19	0.12
Southeast Asia	0.39	0.11	0.00	0.39	0.11	0.00	0.08	0.18	0.28
Southwest Asia	0.31	0.27	0.18	0.31	0.27	0.18	2.81	8.30	0.73
China/Hong Kong	0.54	0.20	0.09	0.53	0.20	0.09	0.07	0.13	0.14
Middle East	0.25	0.12	0.00	0.25	0.12	0.00	8.92	22.42	0.38
Europe	0.59	0.08	0.00	0.59	0.08	0.00	0.37	0.22	0.10
Central America	0.43	0.11	0.00	0.43	0.11	0.00	2.93	4.91	0.52
South America	0.55	0.30	0.27	0.55	0.30	0.27	0.94	3.11	0.99
Caribbean	0.84	0.12	0.24	0.84	0.12	0.22	0.65	0.57	0.63
Sub-Saharan Africa	0.50	0.43	0.42	0.50	0.43	0.42	76.61	221.29	0.13
North Africa	1.29	0.69	0.64	1.28	0.69	0.64	3.83	10.71	0.63
Other Foreign-Born	0.83	0.11	0.16	0.83	0.11	0.16	1.13	0.78	0.86
Female (Male)	1.02	0.09	0.78	1.02	0.09	0.78	1.02	0.09	0.79
Age (Centered at 18)	1.01	0.00	0.00	1.01	0.00	0.01	1.01	0.00	0.00
Time in the United States (Centered at 0 years)				1.00	0.00	0.66	0.99	0.01	0.30
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.85	0.09	0.12	0.86	0.09	0.15	0.88	0.09	0.22
College Degree or Higher (Less than a College Degree)	0.69	0.08	0.00	0.70	0.08	0.00	0.70	0.08	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.61	0.07	0.00	0.61	0.07	0.00	0.61	0.07	0.00
≥ 2.00	0.32	0.04	0.00	0.32	0.04	0.00	0.32	0.04	0.00
Insured (Uninsured)	1.03	0.20	0.90	1.03	0.20	0.90	1.05	0.21	0.79
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.41	0.07	0.00	0.41	0.07	0.00	0.41	0.07	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.72	0.17	0.00	1.72	0.17	0.00	1.72	0.17	0.00
Current Smoker	1.66	0.22	0.00	1.67	0.22	0.00	1.69	0.22	0.00

Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.12	0.59	1.07	0.12	0.58	1.07	0.12	0.53
Current Drinker	0.64	0.07	0.00	0.64	0.07	0.00	0.64	0.07	0.00
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.45	0.11	0.00	0.45	0.11	0.00	0.45	0.11	0.00
≥ 75 Minutes per Week	0.36	0.05	0.00	0.36	0.05	0.00	0.36	0.05	0.00
Intercept	0.73	0.22	0.30	0.78	0.25	0.43	1.09	0.57	0.86

*N* = 16,297

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.13	0.03	0.00	-0.13	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.32	0.10	0.00
10	-	-	-	-	-	-	-0.29	0.08	0.00
20	-	-	-	-	-	-	-0.26	0.06	0.00
30	-	-	-	-	-	-	-0.23	0.05	0.00
40	-	-	-	-	-	-	-0.20	0.03	0.00
50	-	-	-	-	-	-	-0.16	0.03	0.00
East Asia	-0.10	0.03	0.00	-0.10	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.25	0.13	0.05
10	-	-	-	-	-	-	-0.23	0.11	0.04
20	-	-	-	-	-	-	-0.20	0.09	0.02
30	-	-	-	-	-	-	-0.17	0.07	0.01
40	-	-	-	-	-	-	-0.14	0.05	0.00
50	-	-	-	-	-	-	-0.11	0.03	0.00
Southeast Asia	-0.13	0.03	0.00	-0.13	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.30	0.15	0.05
10	-	-	-	-	-	-	-0.27	0.13	0.04
20	-	-	-	-	-	-	-0.24	0.12	0.04
30	-	-	-	-	-	-	-0.21	0.09	0.03
40	-	-	-	-	-	-	-0.17	0.06	0.01
50	-	-	-	-	-	-	-0.14	0.04	0.00
Southwest Asia	-0.15	0.08	0.06	-0.15	0.08	0.06	-	-	-
0	-	-	-	-	-	-	0.21	0.61	0.73
10	-	-	-	-	-	-	0.12	0.49	0.81
20	-	-	-	-	-	-	0.02	0.35	0.95
30	-	-	-	-	-	-	-0.06	0.21	0.79
40	-	-	-	-	-	-	-0.12	0.12	0.33
50	-	-	-	-	-	-	-0.16	0.08	0.05
China/Hong Kong	-0.09	0.05	0.06	-0.09	0.05	0.05	-	-	-
0	-	-	-	-	-	-	-0.30	0.12	0.01

10	-	-	-	-	-	-	-0.27	0.11	0.01
20	-	-	-	-	-	-	-0.24	0.09	0.01
30	-	-	-	-	-	-	-0.20	0.08	0.01
40	-	-	-	-	-	-	-0.16	0.06	0.01
50	-	-	-	-	-	-	-0.12	0.05	0.02
Middle East	-0.17	0.04	0.00	-0.17	0.04	0.00	-	-	-
0	-	-	-	-	-	-	0.42	0.38	0.27
10	-	-	-	-	-	-	0.30	0.40	0.45
20	-	-	-	-	-	-	0.15	0.32	0.64
30	-	-	-	-	-	-	0.01	0.20	0.97
40	-	-	-	-	-	-	-0.10	0.09	0.27
50	-	-	-	-	-	-	-0.17	0.04	0.00
Europe	-0.08	0.02	0.00	-0.08	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.17	0.11	0.11
10	-	-	-	-	-	-	-0.15	0.09	0.08
20	-	-	-	-	-	-	-0.13	0.07	0.04
30	-	-	-	-	-	-	-0.12	0.05	0.01
40	-	-	-	-	-	-	-0.10	0.03	0.00
50	-	-	-	-	-	-	-0.09	0.02	0.00
Central America	-0.12	0.03	0.00	-0.12	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.22	0.34	0.52
10	-	-	-	-	-	-	0.14	0.28	0.62
20	-	-	-	-	-	-	0.06	0.20	0.77
30	-	-	-	-	-	-	-0.01	0.13	0.92
40	-	-	-	-	-	-	-0.07	0.06	0.27
50	-	-	-	-	-	-	-0.12	0.03	0.00
South America	-0.09	0.07	0.21	-0.09	0.07	0.21	-	-	-
0	-	-	-	-	-	-	-0.01	0.63	0.99
10	-	-	-	-	-	-	-0.03	0.48	0.95
20	-	-	-	-	-	-	-0.05	0.35	0.89
30	-	-	-	-	-	-	-0.06	0.22	0.78
40	-	-	-	-	-	-	-0.08	0.12	0.54
50	-	-	-	-	-	-	-0.09	0.07	0.21
Caribbean	-0.03	0.02	0.24	-0.03	0.02	0.22	-	-	-
0	-	-	-	-	-	-	-0.08	0.16	0.62
10	-	-	-	-	-	-	-0.07	0.12	0.58
20	-	-	-	-	-	-	-0.06	0.09	0.52
30	-	-	-	-	-	-	-0.05	0.06	0.43
40	-	-	-	-	-	-	-0.04	0.04	0.27
50	-	-	-	-	-	-	-0.03	0.02	0.16
Sub-Saharan Africa	-0.10	0.10	0.34	-0.10	0.10	0.34	-	-	-
0	-	-	-	-	-	-	0.61	0.14	0.00
10	-	-	-	-	-	-	0.57	0.21	0.01

20	-	-	-	-	-	-	0.46	0.30	0.12
30	-	-	-	-	-	-	0.28	0.30	0.36
40	-	-	-	-	-	-	0.07	0.21	0.74
50	-	-	-	-	-	-	-0.09	0.11	0.42
North Africa	0.04	0.10	0.65	0.04	0.10	0.65	-	-	-
0	-	-	-	-	-	-	0.27	0.55	0.62
10	-	-	-	-	-	-	0.23	0.47	0.62
20	-	-	-	-	-	-	0.18	0.37	0.62
30	-	-	-	-	-	-	0.13	0.27	0.61
40	-	-	-	-	-	-	0.09	0.17	0.60
50	-	-	-	-	-	-	0.04	0.10	0.65
Other Foreign-Born	-0.03	0.02	0.16	-0.03	0.02	0.16	-	-	-
0	-	-	-	-	-	-	0.02	0.14	0.86
10	-	-	-	-	-	-	0.01	0.11	0.91
20	-	-	-	-	-	-	0.00	0.08	0.99
30	-	-	-	-	-	-	-0.01	0.06	0.88
40	-	-	-	-	-	-	-0.02	0.04	0.61
50	-	-	-	-	-	-	-0.03	0.02	0.23

## Panel B. 1965-1975

Table B: 1965-1972

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.41	0.14	0.01	0.40	0.14	0.01	4.42	7.89	0.41
East Asia	0.35	0.07	0.00	0.35	0.08	0.00	3.88	4.40	0.23
Southeast Asia	0.62	0.10	0.00	0.63	0.11	0.01	4.14	3.69	0.11
Southwest Asia	0.64	0.19	0.14	0.65	0.20	0.16	2.00	3.82	0.72
China/Hong Kong	0.64	0.20	0.16	0.65	0.21	0.18	0.16	0.34	0.39
Middle East	0.84	0.25	0.56	0.85	0.26	0.60	16.32	26.24	0.08
Europe	0.56	0.07	0.00	0.56	0.07	0.00	0.76	0.58	0.72
Central America	0.83	0.16	0.33	0.84	0.16	0.35	13.74	16.22	0.03
South America	0.38	0.23	0.12	0.39	0.24	0.13	0.00	0.01	0.20
Caribbean	0.60	0.06	0.00	0.61	0.06	0.00	2.52	1.57	0.14
Sub-Saharan Africa	0.66	0.30	0.36	0.67	0.31	0.38	522.10	1978.58	0.10
North Africa	0.44	0.22	0.10	0.44	0.22	0.11	0.36	1.01	0.72
Other Foreign-Born	0.76	0.09	0.02	0.76	0.09	0.02	1.72	1.21	0.44
Female (Male)	1.04	0.09	0.63	1.04	0.09	0.66	1.02	0.09	0.78
Age (Centered at 18)	1.03	0.00	0.00	1.03	0.00	0.00	1.03	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.01	0.19	1.03	0.01	0.01
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.70	0.06	0.00	0.69	0.06	0.00	0.69	0.06	0.00

College Degree or Higher (Less than a College Degree)	0.61	0.06	0.00	0.61	0.06	0.00	0.61	0.06	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.66	0.07	0.00	0.66	0.07	0.00	0.66	0.07	0.00
≥ 2.00	0.30	0.03	0.00	0.30	0.03	0.00	0.30	0.03	0.00
Insured (Uninsured)	0.86	0.10	0.21	0.85	0.10	0.19	0.83	0.10	0.13
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.35	0.05	0.00	0.35	0.05	0.00	0.35	0.05	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.67	0.16	0.00	1.67	0.16	0.00	1.68	0.16	0.00
Current Smoker	1.63	0.19	0.00	1.63	0.19	0.00	1.62	0.19	0.00
Alcohol use Status (Abstainer)									
Former Drinker	1.20	0.13	0.11	1.19	0.13	0.12	1.18	0.13	0.14
Current Drinker	0.68	0.06	0.00	0.67	0.06	0.00	0.67	0.06	0.00
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.69	0.12	0.03	0.69	0.12	0.03	0.70	0.12	0.03
≥ 75 Minutes per Week	0.45	0.05	0.00	0.45	0.05	0.00	0.44	0.05	0.00
Intercept	0.39	0.08	0.00	0.31	0.09	0.00	0.13	0.06	0.00
<hr/>									
N = 25,394									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.11	0.03	0.00	-0.11	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.17	0.27	0.53
10	-	-	-	-	-	-	0.10	0.19	0.59
20	-	-	-	-	-	-	0.04	0.12	0.77
30	-	-	-	-	-	-	-0.03	0.06	0.61
40	-	-	-	-	-	-	-0.10	0.03	0.00
50	-	-	-	-	-	-	-0.18	0.05	0.00
East Asia	-0.12	0.02	0.00	-0.12	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.15	0.16	0.36
10	-	-	-	-	-	-	0.08	0.11	0.45
20	-	-	-	-	-	-	0.01	0.07	0.83
30	-	-	-	-	-	-	-0.05	0.03	0.11
40	-	-	-	-	-	-	-0.12	0.02	0.00
50	-	-	-	-	-	-	-0.19	0.03	0.00
Southeast Asia	-0.06	0.02	0.00	-0.06	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.16	0.13	0.20
10	-	-	-	-	-	-	0.11	0.09	0.23



20	-	-	-	-	-	-	0.06	0.06	0.35
30	-	-	-	-	-	-	0.00	0.03	0.92
40	-	-	-	-	-	-	-0.07	0.02	0.00
50	-	-	-	-	-	-	-0.13	0.03	0.00
Southwest Asia	-0.06	0.04	0.11	-0.06	0.04	0.13	-	-	-
0	-	-	-	-	-	-	0.06	0.21	0.76
10	-	-	-	-	-	-	0.04	0.16	0.80
20	-	-	-	-	-	-	0.01	0.12	0.91
30	-	-	-	-	-	-	-0.02	0.07	0.77
40	-	-	-	-	-	-	-0.06	0.04	0.09
50	-	-	-	-	-	-	-0.10	0.06	0.08
China/Hong Kong	-0.06	0.04	0.12	-0.06	0.04	0.14	-	-	-
0	-	-	-	-	-	-	-0.07	0.05	0.13
10	-	-	-	-	-	-	-0.08	0.06	0.13
20	-	-	-	-	-	-	-0.09	0.06	0.12
30	-	-	-	-	-	-	-0.09	0.05	0.07
40	-	-	-	-	-	-	-0.06	0.04	0.07
50	-	-	-	-	-	-	-0.03	0.10	0.80
Middle East	-0.02	0.04	0.54	-0.02	0.04	0.59	-	-	-
0	-	-	-	-	-	-	0.41	0.30	0.18
10	-	-	-	-	-	-	0.30	0.22	0.18
20	-	-	-	-	-	-	0.18	0.13	0.18
30	-	-	-	-	-	-	0.07	0.06	0.27
40	-	-	-	-	-	-	-0.04	0.04	0.38
50	-	-	-	-	-	-	-0.14	0.07	0.04
Europe	-0.07	0.02	0.00	-0.07	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.02	0.05	0.71
10	-	-	-	-	-	-	-0.03	0.05	0.52
20	-	-	-	-	-	-	-0.04	0.04	0.25
30	-	-	-	-	-	-	-0.06	0.02	0.02
40	-	-	-	-	-	-	-0.08	0.02	0.00
50	-	-	-	-	-	-	-0.10	0.03	0.00
Central America	-0.03	0.03	0.32	-0.02	0.03	0.34	-	-	-
0	-	-	-	-	-	-	0.38	0.22	0.08
10	-	-	-	-	-	-	0.27	0.15	0.08
20	-	-	-	-	-	-	0.17	0.09	0.07
30	-	-	-	-	-	-	0.07	0.04	0.13
40	-	-	-	-	-	-	-0.03	0.03	0.22
50	-	-	-	-	-	-	-0.13	0.05	0.01
South America	-0.11	0.06	0.04	-0.11	0.06	0.05	-	-	-
0	-	-	-	-	-	-	-0.09	0.03	0.01
10	-	-	-	-	-	-	-0.12	0.03	0.00
20	-	-	-	-	-	-	-0.14	0.03	0.00

30	-	-	-	-	-	-	-0.16	0.03	0.00
40	-	-	-	-	-	-	-0.12	0.05	0.01
50	-	-	-	-	-	-	0.02	0.23	0.93
Caribbean	-0.06	0.01	0.00	-0.06	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.09	0.07	0.17
10	-	-	-	-	-	-	0.06	0.05	0.24
20	-	-	-	-	-	-	0.02	0.04	0.52
30	-	-	-	-	-	-	-0.02	0.02	0.35
40	-	-	-	-	-	-	-0.07	0.01	0.00
50	-	-	-	-	-	-	-0.12	0.03	0.00
Sub-Saharan Africa	-0.06	0.06	0.32	-0.05	0.06	0.34	-	-	-
0	-	-	-	-	-	-	0.86	0.17	0.00
10	-	-	-	-	-	-	0.72	0.33	0.03
20	-	-	-	-	-	-	0.46	0.34	0.18
30	-	-	-	-	-	-	0.14	0.15	0.34
40	-	-	-	-	-	-	-0.10	0.05	0.04
50	-	-	-	-	-	-	-0.24	0.05	0.00
North Africa	-0.10	0.05	0.04	-0.10	0.05	0.05	-	-	-
0	-	-	-	-	-	-	-0.05	0.10	0.60
10	-	-	-	-	-	-	-0.07	0.10	0.52
20	-	-	-	-	-	-	-0.08	0.09	0.39
30	-	-	-	-	-	-	-0.09	0.07	0.19
40	-	-	-	-	-	-	-0.11	0.05	0.03
50	-	-	-	-	-	-	-0.12	0.09	0.18
Other Foreign-Born	-0.04	0.02	0.01	-0.04	0.02	0.02	-	-	-
0	-	-	-	-	-	-	0.05	0.07	0.47
10	-	-	-	-	-	-	0.03	0.05	0.54
20	-	-	-	-	-	-	0.01	0.04	0.72
30	-	-	-	-	-	-	-0.01	0.02	0.67
40	-	-	-	-	-	-	-0.04	0.02	0.01
50	-	-	-	-	-	-	-0.07	0.03	0.03

### Panel C. 1976-1979

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.30	0.22	0.10	0.31	0.22	0.10	10.72	29.02	0.38
East Asia	0.66	0.22	0.20	0.67	0.22	0.22	40.76	88.90	0.09
Southeast Asia	1.01	0.22	0.97	1.03	0.23	0.90	1.24	1.52	0.86
Southwest Asia	0.92	0.44	0.86	0.94	0.45	0.90	0.02	0.05	0.09
China/Hong Kong	0.83	0.44	0.72	0.86	0.46	0.77	2.50	7.55	0.76
Middle East	1.36	0.39	0.29	1.38	0.40	0.27	98.46	142.97	0.00

Europe	0.83	0.19	0.42	0.84	0.19	0.45	2.40	2.57	0.41
Central America	0.96	0.27	0.88	0.97	0.28	0.91	2.97	4.25	0.45
South America	0.57	0.54	0.56	0.59	0.56	0.58	13.01	38.53	0.39
Caribbean	0.97	0.18	0.85	0.98	0.18	0.93	1.61	1.69	0.65
Sub-Saharan Africa	0.63	0.33	0.39	0.65	0.34	0.41	83.10	172.11	0.03
North Africa	2.01	1.28	0.28	2.06	1.32	0.26	0.12	0.54	0.64
Other Foreign-Born	1.14	0.21	0.49	1.15	0.21	0.46	4.38	4.72	0.17
Female (Male)	1.06	0.13	0.63	1.06	0.13	0.65	1.06	0.13	0.62
Age (Centered at 18)	1.03	0.00	0.00	1.03	0.01	0.00	1.03	0.01	0.00
Time in the United States (Centered at 0 years)				1.01	0.01	0.35	1.03	0.02	0.07
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.74	0.09	0.01	0.72	0.09	0.01	0.73	0.09	0.01
College Degree or Higher (Less than a College Degree)	0.67	0.12	0.02	0.66	0.11	0.02	0.66	0.11	0.02
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.50	0.07	0.00	0.49	0.07	0.00	0.50	0.07	0.00
≥ 2.00	0.21	0.03	0.00	0.21	0.03	0.00	0.21	0.03	0.00
Insured (Uninsured)	0.95	0.15	0.75	0.94	0.15	0.70	0.92	0.14	0.58
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.41	0.07	0.00	0.41	0.07	0.00	0.42	0.08	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.43	0.22	0.02	1.44	0.23	0.02	1.50	0.24	0.01
Current Smoker	1.63	0.28	0.00	1.63	0.28	0.00	1.67	0.29	0.00
Alcohol use Status (Abstainer)									
Former Drinker	0.99	0.15	0.93	0.98	0.15	0.90	0.96	0.15	0.81
Current Drinker	0.71	0.11	0.03	0.70	0.11	0.03	0.69	0.11	0.02
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.97	0.21	0.91	0.97	0.21	0.88	1.00	0.22	1.00
≥ 75 Minutes per Week	0.52	0.08	0.00	0.51	0.08	0.00	0.50	0.08	0.00
Intercept	0.32	0.08	0.00	0.25	0.08	0.00	0.12	0.07	0.00

*N* = 12,849

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.09	0.04	0.02	-0.09	0.04	0.02	-	-	-
0	-	-	-	-	-	-	0.27	0.47	0.56
10	-	-	-	-	-	-	0.13	0.26	0.61
20	-	-	-	-	-	-	0.02	0.11	0.88

30	-	-	-	-	-	-	-0.07	0.04	0.09
40	-	-	-	-	-	-	-0.15	0.04	0.00
50	-	-	-	-	-	-	-0.21	0.06	0.00
East Asia	-0.04	0.03	0.17	-0.04	0.03	0.18	-	-	-
0	-	-	-	-	-	-	0.53	0.41	0.20
10	-	-	-	-	-	-	0.33	0.28	0.24
20	-	-	-	-	-	-	0.14	0.12	0.25
30	-	-	-	-	-	-	-0.01	0.03	0.78
40	-	-	-	-	-	-	-0.12	0.05	0.01
50	-	-	-	-	-	-	-0.20	0.06	0.00
Southeast Asia	0.00	0.02	0.97	0.00	0.02	0.90	-	-	-
0	-	-	-	-	-	-	0.01	0.08	0.87
10	-	-	-	-	-	-	0.01	0.06	0.86
20	-	-	-	-	-	-	0.01	0.04	0.84
30	-	-	-	-	-	-	0.00	0.02	0.86
40	-	-	-	-	-	-	0.00	0.05	0.97
50	-	-	-	-	-	-	-0.01	0.11	0.92
Southwest Asia	-0.01	0.05	0.86	-0.01	0.05	0.90	-	-	-
0	-	-	-	-	-	-	-0.06	0.03	0.06
10	-	-	-	-	-	-	-0.08	0.03	0.01
20	-	-	-	-	-	-	-0.09	0.03	0.01
30	-	-	-	-	-	-	-0.05	0.04	0.17
40	-	-	-	-	-	-	0.07	0.09	0.48
50	-	-	-	-	-	-	0.28	0.23	0.23
China/Hong Kong	-0.02	0.05	0.71	-0.02	0.05	0.76	-	-	-
0	-	-	-	-	-	-	0.07	0.29	0.81
10	-	-	-	-	-	-	0.05	0.21	0.82
20	-	-	-	-	-	-	0.02	0.13	0.86
30	-	-	-	-	-	-	-0.01	0.06	0.89
40	-	-	-	-	-	-	-0.05	0.07	0.51
50	-	-	-	-	-	-	-0.09	0.15	0.55
Middle East	0.04	0.04	0.31	0.04	0.04	0.29	-	-	-
0	-	-	-	-	-	-	0.69	0.22	0.00
10	-	-	-	-	-	-	0.49	0.19	0.01
20	-	-	-	-	-	-	0.27	0.11	0.01
30	-	-	-	-	-	-	0.08	0.04	0.06
40	-	-	-	-	-	-	-0.07	0.04	0.11
50	-	-	-	-	-	-	-0.18	0.06	0.00
Europe	-0.02	0.02	0.41	-0.02	0.02	0.44	-	-	-
0	-	-	-	-	-	-	0.07	0.09	0.48
10	-	-	-	-	-	-	0.05	0.07	0.50
20	-	-	-	-	-	-	0.02	0.04	0.62
30	-	-	-	-	-	-	-0.01	0.02	0.68

40	-	-	-	-	-	-	-0.05	0.04	0.23
50	-	-	-	-	-	-	-0.09	0.08	0.23
Central America	0.00	0.03	0.88	0.00	0.03	0.91	-	-	-
0	-	-	-	-	-	-	0.09	0.15	0.56
10	-	-	-	-	-	-	0.07	0.10	0.52
20	-	-	-	-	-	-	0.04	0.06	0.50
30	-	-	-	-	-	-	0.00	0.03	0.88
40	-	-	-	-	-	-	-0.04	0.06	0.55
50	-	-	-	-	-	-	-0.08	0.11	0.45
South America	-0.05	0.08	0.49	-0.05	0.08	0.52	-	-	-
0	-	-	-	-	-	-	0.31	0.54	0.57
10	-	-	-	-	-	-	0.17	0.29	0.55
20	-	-	-	-	-	-	0.05	0.12	0.64
30	-	-	-	-	-	-	-0.04	0.08	0.58
40	-	-	-	-	-	-	-0.13	0.09	0.19
50	-	-	-	-	-	-	-0.20	0.10	0.05
Caribbean	0.00	0.02	0.85	0.00	0.02	0.93	-	-	-
0	-	-	-	-	-	-	0.03	0.07	0.68
10	-	-	-	-	-	-	0.02	0.06	0.67
20	-	-	-	-	-	-	0.02	0.04	0.69
30	-	-	-	-	-	-	0.00	0.02	0.91
40	-	-	-	-	-	-	-0.02	0.04	0.70
50	-	-	-	-	-	-	-0.04	0.09	0.66
Sub-Saharan Africa	-0.04	0.05	0.33	-0.04	0.05	0.36	-	-	-
0	-	-	-	-	-	-	0.66	0.34	0.05
10	-	-	-	-	-	-	0.41	0.28	0.14
20	-	-	-	-	-	-	0.17	0.14	0.23
30	-	-	-	-	-	-	-0.02	0.05	0.73
40	-	-	-	-	-	-	-0.14	0.04	0.00
50	-	-	-	-	-	-	-0.21	0.05	0.00
North Africa	0.09	0.09	0.34	0.09	0.10	0.33	-	-	-
0	-	-	-	-	-	-	-0.06	0.05	0.28
10	-	-	-	-	-	-	-0.06	0.09	0.51
20	-	-	-	-	-	-	-0.03	0.12	0.78
30	-	-	-	-	-	-	0.04	0.09	0.63
40	-	-	-	-	-	-	0.19	0.23	0.39
50	-	-	-	-	-	-	0.38	0.49	0.44
Other Foreign-Born	0.01	0.02	0.49	0.02	0.02	0.47	-	-	-
0	-	-	-	-	-	-	0.13	0.12	0.28
10	-	-	-	-	-	-	0.10	0.08	0.23
20	-	-	-	-	-	-	0.07	0.05	0.17
30	-	-	-	-	-	-	0.03	0.02	0.24
40	-	-	-	-	-	-	-0.02	0.04	0.58

**Panel D. 1980-1989**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.78	0.39	0.62	0.81	0.40	0.67	0.07	0.20	0.32
East Asia	0.83	0.14	0.28	0.87	0.14	0.39	2.27	1.42	0.19
Southeast Asia	1.05	0.12	0.67	1.06	0.12	0.57	1.26	0.57	0.61
Southwest Asia	1.00	0.19	0.99	1.05	0.20	0.81	5.41	3.81	0.02
China/Hong Kong	0.77	0.19	0.29	0.83	0.20	0.43	0.44	0.41	0.38
Middle East	0.97	0.21	0.91	1.03	0.23	0.89	3.30	2.67	0.14
Europe	0.87	0.12	0.34	0.92	0.13	0.55	2.50	1.36	0.09
Central America	1.03	0.13	0.80	1.04	0.13	0.77	1.66	0.77	0.27
South America	0.58	0.34	0.36	0.60	0.36	0.39	0.00	0.00	0.10
Caribbean	0.96	0.10	0.72	0.99	0.10	0.96	2.07	0.83	0.07
Sub-Saharan Africa	0.84	0.20	0.46	0.85	0.21	0.51	4.07	3.25	0.08
North Africa	2.87	1.15	0.01	3.08	1.26	0.01	57.76	83.34	0.01
Other Foreign-Born	0.92	0.10	0.47	0.95	0.10	0.61	1.49	0.62	0.34
Female (Male)	1.09	0.08	0.22	1.09	0.07	0.23	1.09	0.08	0.22
Age (Centered at 18)	1.04	0.00	0.00	1.04	0.00	0.00	1.04	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.01	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.69	0.05	0.00	0.67	0.05	0.00	0.68	0.05	0.00
College Degree or Higher (Less than a College Degree)	0.50	0.05	0.00	0.50	0.05	0.00	0.50	0.05	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.62	0.05	0.00	0.62	0.05	0.00	0.62	0.05	0.00
≥ 2.00	0.34	0.03	0.00	0.34	0.03	0.00	0.33	0.03	0.00
Insured (Uninsured)	0.92	0.07	0.30	0.89	0.07	0.14	0.88	0.07	0.12
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.36	0.03	0.00	0.36	0.03	0.00	0.36	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.43	0.12	0.00	1.44	0.12	0.00	1.45	0.12	0.00
Current Smoker	1.36	0.14	0.00	1.36	0.14	0.00	1.36	0.14	0.00
Alcohol use Status (Abstainer)									
Former Drinker	0.88	0.08	0.17	0.87	0.08	0.12	0.87	0.08	0.12
Current Drinker	0.75	0.06	0.00	0.74	0.06	0.00	0.74	0.06	0.00

Vigorous Exercise Status (None)

< 75 Minutes per Week	0.62	0.08	0.00	0.61	0.08	0.00	0.61	0.08	0.00
≥ 75 Minutes per Week	0.53	0.05	0.00	0.51	0.05	0.00	0.51	0.05	0.00

Intercept	0.19	0.02	0.00	0.13	0.02	0.00	0.09	0.02	0.00
-----------	------	------	------	------	------	------	------	------	------

N = 51,294

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.02	0.04	0.60	-0.02	0.04	0.65	-	-	-
0	-	-	-	-	-	-	-0.06	0.02	0.00
10	-	-	-	-	-	-	-0.07	0.03	0.03
20	-	-	-	-	-	-	-0.06	0.04	0.14
30	-	-	-	-	-	-	-0.01	0.06	0.93
40	-	-	-	-	-	-	0.12	0.22	0.58
50	-	-	-	-	-	-	0.30	0.43	0.48
East Asia	-0.02	0.02	0.26	-0.01	0.02	0.38	-	-	-
0	-	-	-	-	-	-	0.06	0.06	0.29
10	-	-	-	-	-	-	0.04	0.04	0.31
20	-	-	-	-	-	-	0.01	0.02	0.75
30	-	-	-	-	-	-	-0.03	0.02	0.12
40	-	-	-	-	-	-	-0.08	0.04	0.06
50	-	-	-	-	-	-	-0.13	0.07	0.05
Southeast Asia	0.00	0.01	0.68	0.01	0.01	0.57	-	-	-
0	-	-	-	-	-	-	0.01	0.03	0.63
10	-	-	-	-	-	-	0.01	0.02	0.60
20	-	-	-	-	-	-	0.01	0.01	0.58
30	-	-	-	-	-	-	0.00	0.01	0.92
40	-	-	-	-	-	-	-0.01	0.03	0.82
50	-	-	-	-	-	-	-0.02	0.06	0.75
Southwest Asia	0.00	0.02	0.99	0.00	0.02	0.82	-	-	-
0	-	-	-	-	-	-	0.16	0.10	0.09
10	-	-	-	-	-	-	0.10	0.05	0.06
20	-	-	-	-	-	-	0.04	0.02	0.11
30	-	-	-	-	-	-	-0.03	0.02	0.26
40	-	-	-	-	-	-	-0.10	0.04	0.02
50	-	-	-	-	-	-	-0.17	0.06	0.00
China/Hong Kong	-0.02	0.02	0.26	-0.02	0.02	0.41	-	-	-
0	-	-	-	-	-	-	-0.03	0.03	0.24
10	-	-	-	-	-	-	-0.03	0.03	0.22
20	-	-	-	-	-	-	-0.03	0.02	0.15
30	-	-	-	-	-	-	-0.01	0.03	0.73
40	-	-	-	-	-	-	0.02	0.09	0.85

50	-	-	-	-	-	-	0.06	0.17	0.73
Middle East	0.00	0.02	0.91	0.00	0.02	0.89	-	-	-
0	-	-	-	-	-	-	0.10	0.09	0.27
10	-	-	-	-	-	-	0.07	0.05	0.23
20	-	-	-	-	-	-	0.03	0.03	0.32
30	-	-	-	-	-	-	-0.02	0.03	0.49
40	-	-	-	-	-	-	-0.07	0.05	0.17
50	-	-	-	-	-	-	-0.13	0.08	0.10
Europe	-0.01	0.01	0.33	-0.01	0.01	0.55	-	-	-
0	-	-	-	-	-	-	0.07	0.05	0.17
10	-	-	-	-	-	-	0.04	0.03	0.17
20	-	-	-	-	-	-	0.01	0.02	0.47
30	-	-	-	-	-	-	-0.03	0.02	0.13
40	-	-	-	-	-	-	-0.07	0.04	0.04
50	-	-	-	-	-	-	-0.13	0.06	0.03
Central America	0.00	0.01	0.80	0.00	0.01	0.77	-	-	-
0	-	-	-	-	-	-	0.03	0.03	0.33
10	-	-	-	-	-	-	0.03	0.02	0.27
20	-	-	-	-	-	-	0.01	0.01	0.28
30	-	-	-	-	-	-	0.00	0.02	0.79
40	-	-	-	-	-	-	-0.03	0.04	0.49
50	-	-	-	-	-	-	-0.06	0.07	0.41
South America	-0.05	0.04	0.27	-0.04	0.04	0.31	-	-	-
0	-	-	-	-	-	-	-0.07	0.01	0.00
10	-	-	-	-	-	-	-0.09	0.01	0.00
20	-	-	-	-	-	-	-0.11	0.02	0.00
30	-	-	-	-	-	-	-0.02	0.06	0.77
40	-	-	-	-	-	-	0.39	0.24	0.11
50	-	-	-	-	-	-	0.68	0.14	0.00
Caribbean	0.00	0.01	0.72	0.00	0.01	0.96	-	-	-
0	-	-	-	-	-	-	0.05	0.03	0.11
10	-	-	-	-	-	-	0.04	0.02	0.10
20	-	-	-	-	-	-	0.01	0.01	0.23
30	-	-	-	-	-	-	-0.01	0.01	0.31
40	-	-	-	-	-	-	-0.05	0.03	0.10
50	-	-	-	-	-	-	-0.09	0.05	0.07
Sub-Saharan Africa	-0.02	0.02	0.44	-0.02	0.02	0.49	-	-	-
0	-	-	-	-	-	-	0.12	0.10	0.21
10	-	-	-	-	-	-	0.07	0.06	0.20
20	-	-	-	-	-	-	0.02	0.03	0.48
30	-	-	-	-	-	-	-0.04	0.03	0.13
40	-	-	-	-	-	-	-0.10	0.04	0.02
50	-	-	-	-	-	-	-0.17	0.06	0.01



North Africa	0.14	0.06	0.03	0.15	0.07	0.02	-	-	-
0	-	-	-	-	-	-	0.60	0.26	0.02
10	-	-	-	-	-	-	0.40	0.16	0.01
20	-	-	-	-	-	-	0.20	0.07	0.00
30	-	-	-	-	-	-	0.03	0.09	0.71
40	-	-	-	-	-	-	-0.10	0.10	0.32
50	-	-	-	-	-	-	-0.20	0.09	0.02
Other Foreign-Born	-0.01	0.01	0.46	-0.01	0.01	0.61	-	-	-
0	-	-	-	-	-	-	0.03	0.03	0.38
10	-	-	-	-	-	-	0.02	0.02	0.42
20	-	-	-	-	-	-	0.00	0.01	0.76
30	-	-	-	-	-	-	-0.01	0.01	0.32
40	-	-	-	-	-	-	-0.04	0.03	0.23
50	-	-	-	-	-	-	-0.07	0.06	0.23

### Panel E. 1990-2001

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.52	0.21	0.10	0.57	0.22	0.15	2.31	1.33	0.15
East Asia	1.45	0.33	0.11	1.53	0.35	0.06	0.97	0.47	0.96
Southeast Asia	1.15	0.15	0.26	1.20	0.15	0.15	1.53	0.50	0.19
Southwest Asia	0.97	0.17	0.84	1.02	0.18	0.92	1.03	0.45	0.95
China/Hong Kong	0.75	0.14	0.13	0.79	0.15	0.23	0.54	0.29	0.25
Middle East	1.10	0.20	0.60	1.15	0.21	0.44	0.65	0.39	0.47
Europe	1.31	0.16	0.03	1.39	0.17	0.01	1.48	0.43	0.18
Central America	1.12	0.13	0.31	1.12	0.13	0.30	1.18	0.32	0.55
South America	0.23	0.15	0.03	0.25	0.16	0.04	0.20	0.27	0.24
Caribbean	1.33	0.13	0.01	1.37	0.14	0.00	1.58	0.38	0.06
Sub-Saharan Africa	0.74	0.15	0.14	0.78	0.16	0.23	0.96	0.39	0.93
North Africa	1.82	0.65	0.10	1.92	0.68	0.07	4.74	3.74	0.05
Other Foreign-Born	0.78	0.08	0.01	0.82	0.08	0.05	1.37	0.31	0.16
Female (Male)	1.07	0.07	0.33	1.06	0.07	0.38	1.06	0.07	0.41
Age (Centered at 18)	1.05	0.00	0.00	1.05	0.00	0.00	1.05	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.01	0.00	1.03	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.62	0.04	0.00	0.60	0.04	0.00	0.60	0.04	0.00
College Degree or Higher (Less than a College Degree)	0.51	0.04	0.00	0.51	0.04	0.00	0.51	0.04	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.78	0.06	0.00	0.78	0.06	0.00	0.77	0.06	0.00

$\geq 2.00$	0.43	0.03	0.00	0.43	0.03	0.00	0.42	0.03	0.00
Insured (Uninsured)	0.97	0.07	0.64	0.93	0.06	0.29	0.93	0.06	0.31
Last Healthcare Visit < 1 Year ( $\geq 1$ Year)	0.49	0.04	0.00	0.49	0.04	0.00	0.49	0.04	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.37	0.13	0.00	1.38	0.13	0.00	1.38	0.13	0.00
Current Smoker	1.73	0.16	0.00	1.75	0.17	0.00	1.75	0.17	0.00
Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.09	0.49	1.04	0.09	0.64	1.04	0.09	0.67
Current Drinker	0.84	0.06	0.02	0.82	0.06	0.01	0.82	0.06	0.01
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.78	0.09	0.03	0.77	0.09	0.03	0.77	0.09	0.02
$\geq 75$ Minutes per Week	0.59	0.05	0.00	0.57	0.05	0.00	0.57	0.05	0.00
Intercept	0.08	0.01	0.00	0.07	0.01	0.00	0.06	0.01	0.00
$N = 88,997$									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.04	0.02	0.04	-0.03	0.02	0.08	-	-	-
0	-	-	-	-	-	-	0.06	0.05	0.25
10	-	-	-	-	-	-	-0.01	0.02	0.56
20	-	-	-	-	-	-	-0.06	0.02	0.00
30	-	-	-	-	-	-	-0.10	0.02	0.00
40	-	-	-	-	-	-	-0.13	0.02	0.00
50	-	-	-	-	-	-	-0.17	0.04	0.00
East Asia	0.03	0.02	0.14	0.03	0.02	0.10	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.96
10	-	-	-	-	-	-	0.02	0.02	0.27
20	-	-	-	-	-	-	0.05	0.03	0.12
30	-	-	-	-	-	-	0.10	0.08	0.24
40	-	-	-	-	-	-	0.16	0.16	0.31
50	-	-	-	-	-	-	0.24	0.24	0.33
Southeast Asia	0.01	0.01	0.27	0.01	0.01	0.17	-	-	-
0	-	-	-	-	-	-	0.03	0.02	0.23
10	-	-	-	-	-	-	0.02	0.01	0.13
20	-	-	-	-	-	-	0.01	0.01	0.45
30	-	-	-	-	-	-	0.00	0.03	0.89
40	-	-	-	-	-	-	-0.02	0.04	0.67
50	-	-	-	-	-	-	-0.04	0.07	0.57

Southwest Asia	0.00	0.01	0.84	0.00	0.01	0.92	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.95
10	-	-	-	-	-	-	0.00	0.01	0.93
20	-	-	-	-	-	-	0.00	0.02	0.97
30	-	-	-	-	-	-	0.00	0.04	1.00
40	-	-	-	-	-	-	0.00	0.08	0.99
50	-	-	-	-	-	-	0.00	0.12	0.99
China/Hong Kong	-0.02	0.01	0.10	-0.01	0.01	0.20	-	-	-
0	-	-	-	-	-	-	-0.03	0.02	0.16
10	-	-	-	-	-	-	-0.02	0.01	0.11
20	-	-	-	-	-	-	-0.01	0.02	0.61
30	-	-	-	-	-	-	0.01	0.05	0.83
40	-	-	-	-	-	-	0.04	0.11	0.70
50	-	-	-	-	-	-	0.08	0.18	0.65
Middle East	0.01	0.01	0.61	0.01	0.01	0.46	-	-	-
0	-	-	-	-	-	-	-0.02	0.02	0.41
10	-	-	-	-	-	-	0.00	0.02	0.78
20	-	-	-	-	-	-	0.02	0.02	0.24
30	-	-	-	-	-	-	0.07	0.06	0.27
40	-	-	-	-	-	-	0.13	0.13	0.32
50	-	-	-	-	-	-	0.21	0.22	0.34
Europe	0.02	0.01	0.03	0.03	0.01	0.01	-	-	-
0	-	-	-	-	-	-	0.02	0.02	0.21
10	-	-	-	-	-	-	0.02	0.01	0.03
20	-	-	-	-	-	-	0.03	0.01	0.04
30	-	-	-	-	-	-	0.03	0.03	0.36
40	-	-	-	-	-	-	0.02	0.05	0.62
50	-	-	-	-	-	-	0.02	0.08	0.77
Central America	0.01	0.01	0.32	0.01	0.01	0.31	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.56
10	-	-	-	-	-	-	0.01	0.01	0.29
20	-	-	-	-	-	-	0.01	0.01	0.55
30	-	-	-	-	-	-	0.01	0.03	0.84
40	-	-	-	-	-	-	0.00	0.05	0.94
50	-	-	-	-	-	-	0.00	0.08	1.00
South America	-0.06	0.02	0.00	-0.06	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.05	0.02	0.02
10	-	-	-	-	-	-	-0.06	0.01	0.00
20	-	-	-	-	-	-	-0.06	0.03	0.04
30	-	-	-	-	-	-	-0.07	0.08	0.40
40	-	-	-	-	-	-	-0.07	0.17	0.68
50	-	-	-	-	-	-	-0.07	0.30	0.83
Caribbean	0.02	0.01	0.01	0.02	0.01	0.00	-	-	-

0	-	-	-	-	-	-	0.03	0.02	0.08
10	-	-	-	-	-	-	0.03	0.01	0.01
20	-	-	-	-	-	-	0.02	0.01	0.03
30	-	-	-	-	-	-	0.02	0.02	0.46
40	-	-	-	-	-	-	0.01	0.04	0.82
50	-	-	-	-	-	-	0.00	0.06	0.99
Sub-Saharan Africa	-0.02	0.01	0.11	-0.02	0.01	0.19	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.93
10	-	-	-	-	-	-	-0.01	0.01	0.35
20	-	-	-	-	-	-	-0.02	0.02	0.23
30	-	-	-	-	-	-	-0.04	0.04	0.34
40	-	-	-	-	-	-	-0.05	0.06	0.40
50	-	-	-	-	-	-	-0.07	0.09	0.43
North Africa	0.05	0.04	0.16	0.06	0.04	0.12	-	-	-
0	-	-	-	-	-	-	0.14	0.10	0.18
10	-	-	-	-	-	-	0.08	0.04	0.07
20	-	-	-	-	-	-	0.02	0.05	0.69
30	-	-	-	-	-	-	-0.03	0.07	0.63
40	-	-	-	-	-	-	-0.08	0.08	0.32
50	-	-	-	-	-	-	-0.13	0.09	0.14
Other Foreign-Born	-0.02	0.01	0.01	-0.01	0.01	0.04	-	-	-
0	-	-	-	-	-	-	0.02	0.01	0.18
10	-	-	-	-	-	-	0.00	0.01	0.75
20	-	-	-	-	-	-	-0.03	0.01	0.00
30	-	-	-	-	-	-	-0.05	0.02	0.00
40	-	-	-	-	-	-	-0.08	0.03	0.00
50	-	-	-	-	-	-	-0.11	0.04	0.01

## Panel F. 2002-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.40	0.22	0.09	0.45	0.25	0.15	0.43	0.29	0.21
East Asia	0.32	0.13	0.01	0.35	0.15	0.01	0.75	0.36	0.55
Southeast Asia	0.83	0.18	0.38	0.91	0.20	0.65	0.82	0.39	0.67
Southwest Asia	0.95	0.21	0.81	1.05	0.24	0.84	0.96	0.34	0.91
China/Hong Kong	0.63	0.15	0.05	0.68	0.16	0.11	0.52	0.25	0.18
Middle East	0.88	0.25	0.65	0.99	0.29	0.98	1.60	0.57	0.19
Europe	0.81	0.18	0.35	0.87	0.20	0.53	0.41	0.16	0.02
Central America	1.07	0.17	0.68	1.09	0.17	0.58	2.31	0.70	0.01
South America	0.37	0.32	0.25	0.41	0.35	0.29	0.18	0.22	0.16
Caribbean	0.93	0.16	0.69	1.00	0.17	0.99	0.81	0.27	0.52

Sub-Saharan Africa	0.71	0.17	0.16	0.78	0.19	0.31	1.15	0.46	0.73
North Africa	0.87	0.41	0.77	0.95	0.44	0.92	0.64	0.41	0.48
Other Foreign-Born	1.13	0.18	0.44	1.23	0.20	0.19	1.02	0.29	0.94
Female (Male)	1.21	0.13	0.08	1.19	0.13	0.12	1.18	0.13	0.14
Age (Centered at 18)	1.06	0.00	0.00	1.06	0.00	0.00	1.06	0.00	0.00
Time in the United States (Centered at 0 years)				1.04	0.01	0.00	1.04	0.02	0.14
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.57	0.07	0.00	0.56	0.07	0.00	0.55	0.07	0.00
College Degree or Higher (Less than a College Degree)	0.58	0.07	0.00	0.59	0.07	0.00	0.58	0.07	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.59	0.07	0.00	0.57	0.06	0.00	0.58	0.06	0.00
≥ 2.00	0.45	0.05	0.00	0.43	0.05	0.00	0.43	0.05	0.00
Insured (Uninsured)	0.90	0.09	0.29	0.85	0.09	0.13	0.85	0.09	0.14
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.54	0.06	0.00	0.55	0.06	0.00	0.54	0.06	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.26	0.19	0.12	1.26	0.19	0.12	1.24	0.18	0.15
Current Smoker	1.66	0.24	0.00	1.68	0.24	0.00	1.70	0.24	0.00
Alcohol use Status (Abstainer)									
Former Drinker	0.79	0.10	0.06	0.79	0.10	0.06	0.79	0.10	0.06
Current Drinker	0.91	0.11	0.45	0.91	0.11	0.43	0.90	0.11	0.39
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.70	0.11	0.02	0.68	0.11	0.02	0.68	0.11	0.02
≥ 75 Minutes per Week	0.52	0.08	0.00	0.51	0.07	0.00	0.51	0.07	0.00
Intercept	0.08	0.01	0.00	0.06	0.01	0.00	0.06	0.01	0.00

*N* = 67,669

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.04	0.02	0.02	-0.03	0.02	0.06	-	-	-
0	-	-	-	-	-	-	-0.03	0.02	0.11
10	-	-	-	-	-	-	-0.03	0.03	0.19
20	-	-	-	-	-	-	-0.04	0.07	0.62
30	-	-	-	-	-	-	-0.04	0.16	0.82
40	-	-	-	-	-	-	-0.03	0.29	0.91
50	-	-	-	-	-	-	-0.02	0.48	0.96
East Asia	-0.04	0.01	0.00	-0.04	0.01	0.00	-	-	-

0	-	-	-	-	-	-	-0.01	0.02	0.53
10	-	-	-	-	-	-	-0.06	0.01	0.00
20	-	-	-	-	-	-	-0.09	0.03	0.00
30	-	-	-	-	-	-	-0.13	0.05	0.02
40	-	-	-	-	-	-	-0.16	0.09	0.07
50	-	-	-	-	-	-	-0.21	0.14	0.14
Southeast Asia	-0.01	0.01	0.37	-0.01	0.01	0.65	-	-	-
0	-	-	-	-	-	-	-0.01	0.02	0.66
10	-	-	-	-	-	-	0.00	0.02	0.90
20	-	-	-	-	-	-	0.01	0.06	0.86
30	-	-	-	-	-	-	0.03	0.14	0.82
40	-	-	-	-	-	-	0.06	0.26	0.81
50	-	-	-	-	-	-	0.10	0.40	0.80
Southwest Asia	0.00	0.01	0.81	0.00	0.01	0.85	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.91
10	-	-	-	-	-	-	0.01	0.02	0.73
20	-	-	-	-	-	-	0.02	0.07	0.75
30	-	-	-	-	-	-	0.04	0.15	0.76
40	-	-	-	-	-	-	0.08	0.25	0.77
50	-	-	-	-	-	-	0.11	0.39	0.77
China/Hong Kong	-0.02	0.01	0.03	-0.02	0.01	0.08	-	-	-
0	-	-	-	-	-	-	-0.02	0.02	0.12
10	-	-	-	-	-	-	-0.01	0.01	0.36
20	-	-	-	-	-	-	0.01	0.06	0.85
30	-	-	-	-	-	-	0.06	0.16	0.71
40	-	-	-	-	-	-	0.14	0.31	0.66
50	-	-	-	-	-	-	0.23	0.48	0.62
Middle East	-0.01	0.01	0.64	0.00	0.02	0.98	-	-	-
0	-	-	-	-	-	-	0.03	0.02	0.23
10	-	-	-	-	-	-	-0.03	0.02	0.24
20	-	-	-	-	-	-	-0.07	0.04	0.05
30	-	-	-	-	-	-	-0.11	0.06	0.06
40	-	-	-	-	-	-	-0.16	0.09	0.09
50	-	-	-	-	-	-	-0.21	0.14	0.15
Europe	-0.01	0.01	0.33	-0.01	0.01	0.52	-	-	-
0	-	-	-	-	-	-	-0.03	0.01	0.01
10	-	-	-	-	-	-	0.01	0.02	0.72
20	-	-	-	-	-	-	0.11	0.07	0.13
30	-	-	-	-	-	-	0.31	0.18	0.09
40	-	-	-	-	-	-	0.53	0.24	0.03
50	-	-	-	-	-	-	0.67	0.20	0.00
Central America	0.00	0.01	0.68	0.00	0.01	0.59	-	-	-
0	-	-	-	-	-	-	0.05	0.02	0.01

10	-	-	-	-	-	-	-0.02	0.01	0.05
20	-	-	-	-	-	-	-0.07	0.03	0.01
30	-	-	-	-	-	-	-0.12	0.05	0.03
40	-	-	-	-	-	-	-0.16	0.09	0.08
50	-	-	-	-	-	-	-0.21	0.14	0.14
South America	-0.04	0.02	0.09	-0.04	0.02	0.14	-	-	-
0	-	-	-	-	-	-	-0.04	0.02	0.01
10	-	-	-	-	-	-	-0.03	0.03	0.41
20	-	-	-	-	-	-	0.06	0.12	0.63
30	-	-	-	-	-	-	0.26	0.36	0.46
40	-	-	-	-	-	-	0.52	0.49	0.29
50	-	-	-	-	-	-	0.68	0.34	0.05
Caribbean	0.00	0.01	0.68	0.00	0.01	0.99	-	-	-
0	-	-	-	-	-	-	-0.01	0.01	0.51
10	-	-	-	-	-	-	0.01	0.01	0.60
20	-	-	-	-	-	-	0.04	0.05	0.47
30	-	-	-	-	-	-	0.09	0.12	0.47
40	-	-	-	-	-	-	0.16	0.22	0.47
50	-	-	-	-	-	-	0.24	0.32	0.46
Sub-Saharan Africa	-0.02	0.01	0.13	-0.01	0.01	0.28	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.73
10	-	-	-	-	-	-	-0.03	0.01	0.09
20	-	-	-	-	-	-	-0.06	0.03	0.09
30	-	-	-	-	-	-	-0.10	0.06	0.11
40	-	-	-	-	-	-	-0.14	0.10	0.14
50	-	-	-	-	-	-	-0.19	0.14	0.18
North Africa	-0.01	0.02	0.76	0.00	0.02	0.92	-	-	-
0	-	-	-	-	-	-	-0.02	0.02	0.42
10	-	-	-	-	-	-	0.01	0.04	0.76
20	-	-	-	-	-	-	0.08	0.16	0.61
30	-	-	-	-	-	-	0.20	0.37	0.59
40	-	-	-	-	-	-	0.36	0.59	0.55
50	-	-	-	-	-	-	0.50	0.66	0.44
Other Foreign-Born	0.01	0.01	0.44	0.01	0.01	0.20	-	-	-
0	-	-	-	-	-	-	0.00	0.01	0.94
10	-	-	-	-	-	-	0.02	0.02	0.15
20	-	-	-	-	-	-	0.06	0.06	0.30
30	-	-	-	-	-	-	0.11	0.12	0.36
40	-	-	-	-	-	-	0.18	0.21	0.38
50	-	-	-	-	-	-	0.27	0.30	0.38

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

**Appendix Table 2.5** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Hypertension by National Origin for Pre-1965 (Panel A), 1965-1975 (Panel B), 1976-1979 (Panel C), 1980-1989 (Panel D), 1990-2001 (Panel E), and 2002-2018 (Panel F) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.90	0.13	0.47	0.89	0.13	0.42	1.05	0.83	0.95
East Asia	0.88	0.18	0.53	0.89	0.18	0.55	1.85	2.32	0.62
Southeast Asia	1.25	0.26	0.27	1.30	0.26	0.20	1.05	1.58	0.98
Southwest Asia	2.09	0.90	0.09	2.21	0.96	0.07	0.55	1.92	0.86
China/Hong Kong	0.65	0.15	0.07	0.67	0.15	0.08	1.27	1.84	0.87
Middle East	0.57	0.17	0.06	0.58	0.17	0.07	0.06	0.13	0.22
Europe	0.86	0.09	0.16	0.86	0.09	0.18	0.82	0.50	0.74
Central America	1.49	0.35	0.09	1.51	0.35	0.08	2.12	2.87	0.58
South America	0.43	0.23	0.11	0.44	0.23	0.12	0.17	0.53	0.57
Caribbean	1.04	0.13	0.74	1.08	0.14	0.56	1.08	0.92	0.92
Sub-Saharan Africa	0.53	0.30	0.26	0.54	0.30	0.27	0.00	0.00	0.16
North Africa	0.75	0.33	0.52	0.76	0.34	0.54	0.20	0.57	0.57
Other Foreign-Born	1.08	0.12	0.52	1.08	0.12	0.53	1.65	1.16	0.48
Female (Male)	0.97	0.07	0.64	0.97	0.07	0.66	0.97	0.07	0.63
Age (Centered at 18)	1.04	0.00	0.00	1.03	0.00	0.00	1.03	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.00	0.04	1.01	0.01	0.36
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.87	0.09	0.20	0.84	0.09	0.11	0.85	0.09	0.11
College Degree or Higher (Less than a College Degree)	0.87	0.07	0.08	0.86	0.07	0.06	0.86	0.07	0.06
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.93	0.11	0.57	0.94	0.11	0.60	0.94	0.11	0.58
≥ 2.00	0.75	0.09	0.02	0.75	0.09	0.01	0.75	0.09	0.01
Insured (Uninsured)	1.01	0.17	0.93	1.02	0.17	0.93	1.02	0.17	0.90
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.26	0.03	0.00	0.26	0.03	0.00	0.26	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.33	0.10	0.00	1.32	0.10	0.00	1.32	0.10	0.00
Current Smoker	0.91	0.10	0.38	0.90	0.10	0.35	0.90	0.10	0.36



Alcohol use Status (Abstainer)									
Former Drinker	0.97	0.09	0.77	0.96	0.09	0.71	0.96	0.09	0.67
Current Drinker	0.94	0.08	0.50	0.94	0.08	0.45	0.93	0.08	0.41
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.05	0.15	0.74	1.05	0.15	0.75	1.06	0.15	0.69
≥ 75 Minutes per Week	0.70	0.05	0.00	0.70	0.05	0.00	0.70	0.06	0.00
Intercept	0.29	0.07	0.00	0.23	0.06	0.00	0.21	0.12	0.01
<hr/>									
<i>N</i> = 16,294									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.02	0.03	0.47	-0.03	0.03	0.42	-	-	-
0	-	-	-	-	-	-	0.01	0.17	0.95
10	-	-	-	-	-	-	0.00	0.14	0.98
20	-	-	-	-	-	-	0.00	0.11	0.98
30	-	-	-	-	-	-	-0.01	0.08	0.91
40	-	-	-	-	-	-	-0.02	0.06	0.77
50	-	-	-	-	-	-	-0.02	0.04	0.53
East Asia	-0.03	0.04	0.53	-0.03	0.04	0.55	-	-	-
0	-	-	-	-	-	-	0.14	0.28	0.62
10	-	-	-	-	-	-	0.11	0.23	0.64
20	-	-	-	-	-	-	0.08	0.18	0.67
30	-	-	-	-	-	-	0.04	0.13	0.72
40	-	-	-	-	-	-	0.01	0.08	0.87
50	-	-	-	-	-	-	-0.02	0.05	0.69
Southeast Asia	0.05	0.04	0.27	0.06	0.04	0.20	-	-	-
0	-	-	-	-	-	-	0.01	0.33	0.98
10	-	-	-	-	-	-	0.02	0.27	0.94
20	-	-	-	-	-	-	0.03	0.21	0.89
30	-	-	-	-	-	-	0.04	0.15	0.79
40	-	-	-	-	-	-	0.05	0.09	0.57
50	-	-	-	-	-	-	0.06	0.05	0.20
Southwest Asia	0.16	0.09	0.07	0.17	0.09	0.05	-	-	-
0	-	-	-	-	-	-	-0.12	0.63	0.85
10	-	-	-	-	-	-	-0.07	0.58	0.91
20	-	-	-	-	-	-	-0.01	0.47	0.99
30	-	-	-	-	-	-	0.06	0.33	0.86
40	-	-	-	-	-	-	0.12	0.19	0.51
50	-	-	-	-	-	-	0.18	0.08	0.03
China/Hong Kong	-0.09	0.05	0.06	-0.09	0.05	0.08	-	-	-
0	-	-	-	-	-	-	0.05	0.32	0.87

10	-	-	-	-	-	-	0.03	0.26	0.92
20	-	-	-	-	-	-	0.00	0.20	1.00
30	-	-	-	-	-	-	-0.03	0.15	0.86
40	-	-	-	-	-	-	-0.05	0.10	0.58
50	-	-	-	-	-	-	-0.08	0.06	0.15
Middle East	-0.12	0.06	0.05	-0.12	0.06	0.07	-	-	-
0	-	-	-	-	-	-	-0.34	0.15	0.02
10	-	-	-	-	-	-	-0.34	0.15	0.03
20	-	-	-	-	-	-	-0.32	0.15	0.04
30	-	-	-	-	-	-	-0.28	0.15	0.06
40	-	-	-	-	-	-	-0.22	0.11	0.05
50	-	-	-	-	-	-	-0.13	0.07	0.05
Europe	-0.03	0.02	0.16	-0.03	0.02	0.18	-	-	-
0	-	-	-	-	-	-	-0.04	0.13	0.74
10	-	-	-	-	-	-	-0.04	0.11	0.70
20	-	-	-	-	-	-	-0.04	0.09	0.64
30	-	-	-	-	-	-	-0.04	0.06	0.54
40	-	-	-	-	-	-	-0.04	0.04	0.36
50	-	-	-	-	-	-	-0.04	0.03	0.17
Central America	0.09	0.05	0.08	0.09	0.05	0.07	-	-	-
0	-	-	-	-	-	-	0.17	0.30	0.58
10	-	-	-	-	-	-	0.15	0.24	0.53
20	-	-	-	-	-	-	0.14	0.19	0.46
30	-	-	-	-	-	-	0.12	0.13	0.35
40	-	-	-	-	-	-	0.11	0.08	0.19
50	-	-	-	-	-	-	0.09	0.05	0.07
South America	-0.18	0.11	0.09	-0.18	0.11	0.10	-	-	-
0	-	-	-	-	-	-	-0.28	0.30	0.36
10	-	-	-	-	-	-	-0.27	0.29	0.36
20	-	-	-	-	-	-	-0.26	0.27	0.34
30	-	-	-	-	-	-	-0.24	0.23	0.29
40	-	-	-	-	-	-	-0.22	0.17	0.20
50	-	-	-	-	-	-	-0.19	0.11	0.10
Caribbean	0.01	0.03	0.74	0.02	0.03	0.56	-	-	-
0	-	-	-	-	-	-	0.02	0.18	0.92
10	-	-	-	-	-	-	0.02	0.15	0.91
20	-	-	-	-	-	-	0.02	0.11	0.88
30	-	-	-	-	-	-	0.02	0.08	0.82
40	-	-	-	-	-	-	0.02	0.05	0.70
50	-	-	-	-	-	-	0.02	0.03	0.55
Sub-Saharan Africa	-0.14	0.12	0.24	-0.13	0.12	0.25	-	-	-
0	-	-	-	-	-	-	-0.38	0.12	0.00
10	-	-	-	-	-	-	-0.40	0.10	0.00

20	-	-	-	-	-	-	-0.42	0.08	0.00
30	-	-	-	-	-	-	-0.44	0.06	0.00
40	-	-	-	-	-	-	-0.42	0.10	0.00
50	-	-	-	-	-	-	-0.23	0.16	0.15
North Africa	-0.06	0.10	0.51	-0.06	0.10	0.53	-	-	-
0	-	-	-	-	-	-	-0.26	0.31	0.40
10	-	-	-	-	-	-	-0.24	0.31	0.44
20	-	-	-	-	-	-	-0.21	0.29	0.47
30	-	-	-	-	-	-	-0.17	0.24	0.48
40	-	-	-	-	-	-	-0.12	0.17	0.47
50	-	-	-	-	-	-	-0.07	0.11	0.51
Other Foreign-Born	0.02	0.03	0.52	0.02	0.03	0.53	-	-	-
0	-	-	-	-	-	-	0.11	0.15	0.47
10	-	-	-	-	-	-	0.09	0.13	0.46
20	-	-	-	-	-	-	0.08	0.10	0.44
30	-	-	-	-	-	-	0.06	0.07	0.40
40	-	-	-	-	-	-	0.04	0.04	0.35
50	-	-	-	-	-	-	0.02	0.03	0.38

## Panel B. 1965-1975

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.83	0.20	0.44	0.82	0.20	0.43	10.61	13.06	0.06
East Asia	0.86	0.14	0.35	0.89	0.14	0.47	2.64	2.37	0.28
Southeast Asia	1.17	0.15	0.21	1.23	0.15	0.10	3.20	2.37	0.12
Southwest Asia	0.93	0.17	0.71	0.99	0.19	0.95	3.56	4.19	0.28
China/Hong Kong	1.11	0.28	0.68	1.14	0.28	0.58	0.28	0.47	0.45
Middle East	1.64	0.42	0.05	1.70	0.42	0.03	0.26	0.44	0.43
Europe	0.93	0.10	0.52	0.93	0.10	0.50	1.70	1.05	0.39
Central America	1.09	0.17	0.59	1.10	0.18	0.54	5.12	5.89	0.16
South America	1.12	0.40	0.76	1.18	0.42	0.65	1.96	5.18	0.80
Caribbean	0.99	0.10	0.95	1.02	0.11	0.88	2.99	1.95	0.09
Sub-Saharan Africa	1.80	0.54	0.05	1.88	0.56	0.03	276.0	4.07	0.70
North Africa	0.51	0.24	0.16	0.53	0.26	0.19	9	717.76	0.03
Other Foreign-Born	0.96	0.10	0.70	0.97	0.10	0.80	1.71	1.06	0.39
Female (Male)	0.88	0.06	0.05	0.87	0.06	0.03	0.87	0.06	0.04
Age (Centered at 18)	1.06	0.00	0.00	1.05	0.00	0.00	1.05	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.01	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							Included		
English Interview (Non-English Interview)	1.06	0.08	0.48	1.02	0.08	0.85	1.02	0.08	0.81

College Degree or Higher (Less than a College Degree)	0.75	0.06	0.00	0.74	0.06	0.00	0.74	0.06	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.70	0.07	0.00	0.70	0.07	0.00	0.69	0.06	0.00
≥ 2.00	0.60	0.05	0.00	0.59	0.05	0.00	0.58	0.05	0.00
Insured (Uninsured)	0.90	0.09	0.31	0.89	0.09	0.24	0.88	0.09	0.19
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.25	0.03	0.00	0.25	0.03	0.00	0.25	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.19	0.09	0.03	1.19	0.09	0.03	1.18	0.09	0.03
Current Smoker	0.95	0.09	0.58	0.94	0.10	0.58	0.95	0.10	0.60
Alcohol use Status (Abstainer)									
Former Drinker	1.00	0.09	0.99	0.98	0.09	0.84	0.98	0.09	0.80
Current Drinker	0.89	0.07	0.15	0.87	0.07	0.07	0.87	0.07	0.07
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.84	0.10	0.16	0.82	0.10	0.10	0.82	0.10	0.10
≥ 75 Minutes per Week	0.78	0.06	0.00	0.76	0.06	0.00	0.76	0.06	0.00
Intercept	0.16	0.03	0.00	0.08	0.02	0.00	0.05	0.02	0.00
<hr/>									
<i>N</i> = 25,389									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.04	0.05	0.44	-0.04	0.05	0.42	-	-	-
0	-	-	-	-	-	-	0.41	0.24	0.10
10	-	-	-	-	-	-	0.31	0.19	0.10
20	-	-	-	-	-	-	0.21	0.13	0.11
30	-	-	-	-	-	-	0.09	0.07	0.20
40	-	-	-	-	-	-	-0.03	0.04	0.51
50	-	-	-	-	-	-	-0.15	0.07	0.04
East Asia	-0.03	0.03	0.34	-0.02	0.03	0.46	-	-	-
0	-	-	-	-	-	-	0.13	0.14	0.35
10	-	-	-	-	-	-	0.11	0.11	0.35
20	-	-	-	-	-	-	0.07	0.08	0.38
30	-	-	-	-	-	-	0.03	0.05	0.59
40	-	-	-	-	-	-	-0.03	0.03	0.39
50	-	-	-	-	-	-	-0.08	0.06	0.16
Southeast Asia	0.03	0.02	0.21	0.04	0.02	0.10	-	-	-
0	-	-	-	-	-	-	0.17	0.12	0.17
10	-	-	-	-	-	-	0.15	0.10	0.13

20	-	-	-	-	-	-	0.12	0.07	0.09
30	-	-	-	-	-	-	0.08	0.04	0.05
40	-	-	-	-	-	-	0.04	0.03	0.15
50	-	-	-	-	-	-	-0.01	0.05	0.79
Southwest Asia	-0.01	0.04	0.71	0.00	0.04	0.95	-	-	-
0	-	-	-	-	-	-	0.19	0.21	0.38
10	-	-	-	-	-	-	0.15	0.16	0.35
20	-	-	-	-	-	-	0.11	0.11	0.34
30	-	-	-	-	-	-	0.05	0.06	0.40
40	-	-	-	-	-	-	-0.01	0.04	0.86
50	-	-	-	-	-	-	-0.07	0.07	0.32
China/Hong Kong	0.02	0.05	0.68	0.03	0.05	0.59	-	-	-
0	-	-	-	-	-	-	-0.09	0.08	0.25
10	-	-	-	-	-	-	-0.09	0.10	0.33
20	-	-	-	-	-	-	-0.08	0.10	0.43
30	-	-	-	-	-	-	-0.05	0.08	0.57
40	-	-	-	-	-	-	0.02	0.05	0.75
50	-	-	-	-	-	-	0.09	0.10	0.39
Middle East	0.10	0.05	0.06	0.11	0.05	0.04	-	-	-
0	-	-	-	-	-	-	-0.09	0.07	0.23
10	-	-	-	-	-	-	-0.09	0.10	0.39
20	-	-	-	-	-	-	-0.05	0.12	0.64
30	-	-	-	-	-	-	0.02	0.09	0.83
40	-	-	-	-	-	-	0.12	0.05	0.02
50	-	-	-	-	-	-	0.22	0.09	0.02
Europe	-0.01	0.02	0.52	-0.01	0.02	0.50	-	-	-
0	-	-	-	-	-	-	0.06	0.08	0.42
10	-	-	-	-	-	-	0.05	0.07	0.44
20	-	-	-	-	-	-	0.04	0.05	0.50
30	-	-	-	-	-	-	0.01	0.03	0.72
40	-	-	-	-	-	-	-0.02	0.02	0.43
50	-	-	-	-	-	-	-0.05	0.04	0.22
Central America	0.02	0.03	0.59	0.02	0.03	0.54	-	-	-
0	-	-	-	-	-	-	0.26	0.22	0.25
10	-	-	-	-	-	-	0.21	0.17	0.21
20	-	-	-	-	-	-	0.15	0.11	0.17
30	-	-	-	-	-	-	0.09	0.06	0.13
40	-	-	-	-	-	-	0.01	0.03	0.65
50	-	-	-	-	-	-	-0.06	0.08	0.40
South America	0.02	0.07	0.76	0.03	0.07	0.65	-	-	-
0	-	-	-	-	-	-	0.09	0.39	0.83
10	-	-	-	-	-	-	0.08	0.33	0.81
20	-	-	-	-	-	-	0.07	0.24	0.77

30	-	-	-	-	-	-	0.05	0.14	0.71
40	-	-	-	-	-	-	0.03	0.07	0.68
50	-	-	-	-	-	-	0.00	0.16	0.98
Caribbean	0.00	0.02	0.95	0.00	0.02	0.88	-	-	-
0	-	-	-	-	-	-	0.15	0.10	0.13
10	-	-	-	-	-	-	0.13	0.08	0.11
20	-	-	-	-	-	-	0.09	0.06	0.10
30	-	-	-	-	-	-	0.05	0.03	0.12
40	-	-	-	-	-	-	0.00	0.02	0.96
50	-	-	-	-	-	-	-0.06	0.05	0.20
Sub-Saharan Africa	0.12	0.06	0.05	0.13	0.06	0.04	-	-	-
0	-	-	-	-	-	-	0.10	0.29	0.74
10	-	-	-	-	-	-	0.11	0.25	0.66
20	-	-	-	-	-	-	0.12	0.19	0.51
30	-	-	-	-	-	-	0.13	0.11	0.24
40	-	-	-	-	-	-	0.13	0.06	0.04
50	-	-	-	-	-	-	0.12	0.12	0.32
North Africa	-0.12	0.08	0.12	-0.11	0.08	0.15	-	-	-
0	-	-	-	-	-	-	0.82	0.12	0.00
10	-	-	-	-	-	-	0.70	0.19	0.00
20	-	-	-	-	-	-	0.49	0.23	0.04
30	-	-	-	-	-	-	0.19	0.16	0.23
40	-	-	-	-	-	-	-0.11	0.07	0.11
50	-	-	-	-	-	-	-0.34	0.07	0.00
Other Foreign-Born	-0.01	0.02	0.70	-0.01	0.02	0.80	-	-	-
0	-	-	-	-	-	-	0.07	0.08	0.41
10	-	-	-	-	-	-	0.06	0.07	0.41
20	-	-	-	-	-	-	0.04	0.05	0.44
30	-	-	-	-	-	-	0.02	0.03	0.55
40	-	-	-	-	-	-	-0.01	0.02	0.70
50	-	-	-	-	-	-	-0.04	0.04	0.37

### Panel C. 1976-1979

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.63	0.23	0.20	0.66	0.23	0.24	12.77	26.45	0.22
East Asia	0.88	0.20	0.58	0.90	0.21	0.65	2.21	3.26	0.59
Southeast Asia	1.05	0.17	0.78	1.08	0.17	0.65	1.33	1.17	0.74
Southwest Asia	1.12	0.28	0.66	1.15	0.29	0.57	1.24	1.58	0.87
China/Hong Kong	0.66	0.25	0.27	0.70	0.26	0.35	0.13	0.29	0.37
Middle East	0.60	0.17	0.07	0.61	0.17	0.08	2.49	3.59	0.53

Europe	0.80	0.15	0.23	0.81	0.15	0.26	1.45	1.46	0.71
Central America	0.93	0.19	0.72	0.94	0.19	0.77	8.24	9.74	0.08
South America	0.28	0.18	0.05	0.29	0.19	0.06	12.04	32.78	0.36
Caribbean	1.09	0.17	0.60	1.12	0.18	0.49	11.09	10.16	0.01
Sub-Saharan Africa	1.90	0.65	0.06	1.99	0.68	0.05	0.75 349.7	1.46	0.88
North Africa	0.28	0.18	0.05	0.30	0.19	0.05	4	1198.70	0.09
Other Foreign-Born	0.95	0.15	0.74	0.96	0.15	0.82	3.62	3.30	0.16
Female (Male)	1.00	0.10	0.99	0.99	0.10	0.95	0.99	0.10	0.91
Age (Centered at 18)	1.07	0.00	0.00	1.06	0.00	0.00	1.06	0.00	0.00
Time in the United States (Centered at 0 years)				1.02	0.01	0.09	1.04	0.02	0.02
Origin * Time in the United States (Centered at 0 years)								<i>Included</i>	
English Interview (Non-English Interview)	1.06	0.12	0.62	1.03	0.12	0.80	1.05	0.12	0.66
College Degree or Higher (Less than a College Degree)	0.82	0.10	0.11	0.81	0.10	0.09	0.82	0.10	0.11
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.73	0.11	0.04	0.73	0.11	0.03	0.73	0.11	0.03
≥ 2.00	0.62	0.08	0.00	0.62	0.08	0.00	0.61	0.08	0.00
Insured (Uninsured)	1.01	0.14	0.95	0.99	0.14	0.97	0.98	0.14	0.92
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.24	0.04	0.00	0.24	0.04	0.00	0.24	0.04	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.23	0.15	0.08	1.25	0.15	0.06	1.25	0.15	0.06
Current Smoker	0.94	0.15	0.71	0.95	0.15	0.74	0.95	0.15	0.75
Alcohol use Status (Abstainer)									
Former Drinker	1.11	0.14	0.42	1.10	0.14	0.44	1.11	0.14	0.44
Current Drinker	0.95	0.10	0.61	0.93	0.10	0.51	0.93	0.10	0.54
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.19	0.21	0.34	1.17	0.21	0.38	1.17	0.21	0.37
≥ 75 Minutes per Week	0.85	0.10	0.17	0.83	0.10	0.12	0.82	0.10	0.11
Intercept	0.08	0.02	0.00	0.06	0.02	0.00	0.03	0.01	0.00

N = 12,839

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.07	0.05	0.17	-0.07	0.05	0.21	-	-	-
0	-	-	-	-	-	-	0.42	0.40	0.29
10	-	-	-	-	-	-	0.27	0.29	0.34
20	-	-	-	-	-	-	0.12	0.16	0.46

30	-	-	-	-	-	-	-0.03	0.06	0.60
40	-	-	-	-	-	-	-0.18	0.07	0.01
50	-	-	-	-	-	-	-0.31	0.11	0.01
East Asia	-0.02	0.04	0.58	-0.02	0.04	0.64	-	-	-
0	-	-	-	-	-	-			
10	-	-	-	-	-	-	0.10	0.21	0.64
20	-	-	-	-	-	-	0.07	0.16	0.65
30	-	-	-	-	-	-	0.04	0.10	0.71
40	-	-	-	-	-	-	-0.01	0.04	0.85
50	-	-	-	-	-	-	-0.06	0.07	0.41
Southeast Asia	0.01	0.03	0.78	0.01	0.03	0.65	-0.11	0.15	0.44
0	-	-	-	-	-	-	0.03	0.10	0.75
10	-	-	-	-	-	-	0.03	0.08	0.73
20	-	-	-	-	-	-	0.02	0.05	0.68
30	-	-	-	-	-	-	0.01	0.03	0.64
40	-	-	-	-	-	-	0.00	0.05	0.98
50	-	-	-	-	-	-	-0.01	0.10	0.91
Southwest Asia	0.02	0.04	0.66	0.02	0.04	0.57	-	-	-
0	-	-	-	-	-	-	0.02	0.14	0.87
10	-	-	-	-	-	-	0.02	0.12	0.84
20	-	-	-	-	-	-	0.02	0.08	0.78
30	-	-	-	-	-	-	0.02	0.04	0.66
40	-	-	-	-	-	-	0.02	0.08	0.84
50	-	-	-	-	-	-	0.01	0.15	0.95
China/Hong Kong	-0.07	0.06	0.24	-0.06	0.06	0.32	-	-	-
0	-	-	-	-	-	-	-0.11	0.07	0.12
10	-	-	-	-	-	-	-0.12	0.08	0.14
20	-	-	-	-	-	-	-0.11	0.08	0.17
30	-	-	-	-	-	-	-0.07	0.06	0.26
40	-	-	-	-	-	-	0.02	0.14	0.87
50	-	-	-	-	-	-	0.13	0.27	0.63
Middle East	-0.08	0.04	0.05	-0.08	0.04	0.06	-	-	-
0	-	-	-	-	-	-	0.12	0.21	0.59
10	-	-	-	-	-	-	0.07	0.15	0.66
20	-	-	-	-	-	-	0.01	0.09	0.94
30	-	-	-	-	-	-	-0.06	0.05	0.19
40	-	-	-	-	-	-	-0.13	0.06	0.03
50	-	-	-	-	-	-	-0.22	0.12	0.07
Europe	-0.04	0.03	0.22	-0.03	0.03	0.26	-	-	-
0	-	-	-	-	-	-	0.04	0.12	0.73
10	-	-	-	-	-	-	0.02	0.09	0.80
20	-	-	-	-	-	-	0.00	0.06	1.00
30	-	-	-	-	-	-	-0.03	0.03	0.35



40	-	-	-	-	-	-	-0.07	0.05	0.21
50	-	-	-	-	-	-	-0.10	0.11	0.33
Central America	-0.01	0.03	0.72	-0.01	0.03	0.77	-	-	-
0	-	-	-	-	-	-	0.33	0.22	0.13
10	-	-	-	-	-	-	0.23	0.15	0.12
20	-	-	-	-	-	-	0.13	0.08	0.11
30	-	-	-	-	-	-	0.02	0.03	0.64
40	-	-	-	-	-	-	-0.10	0.07	0.13
50	-	-	-	-	-	-	-0.22	0.12	0.06
South America	-0.17	0.06	0.01	-0.17	0.07	0.01	-	-	-
0	-	-	-	-	-	-	0.41	0.53	0.44
10	-	-	-	-	-	-	0.21	0.35	0.56
20	-	-	-	-	-	-	0.02	0.16	0.92
30	-	-	-	-	-	-	-0.15	0.06	0.02
40	-	-	-	-	-	-	-0.28	0.07	0.00
50	-	-	-	-	-	-	-0.39	0.09	0.00
Caribbean	0.01	0.03	0.60	0.02	0.03	0.49	-	-	-
0	-	-	-	-	-	-	0.39	0.16	0.02
10	-	-	-	-	-	-	0.28	0.11	0.01
20	-	-	-	-	-	-	0.17	0.06	0.01
30	-	-	-	-	-	-	0.04	0.03	0.11
40	-	-	-	-	-	-	-0.08	0.05	0.12
50	-	-	-	-	-	-	-0.21	0.09	0.03
Sub-Saharan Africa	0.12	0.07	0.07	0.13	0.07	0.05	-	-	-
0	-	-	-	-	-	-	-0.03	0.16	0.87
10	-	-	-	-	-	-	0.00	0.17	0.99
20	-	-	-	-	-	-	0.05	0.13	0.72
30	-	-	-	-	-	-	0.11	0.07	0.13
40	-	-	-	-	-	-	0.18	0.11	0.11
50	-	-	-	-	-	-	0.24	0.20	0.23
North Africa	-0.17	0.06	0.01	-0.17	0.06	0.01	-	-	-
0	-	-	-	-	-	-	0.82	0.15	0.00
10	-	-	-	-	-	-	0.64	0.31	0.04
20	-	-	-	-	-	-	0.28	0.28	0.31
30	-	-	-	-	-	-	-0.09	0.08	0.26
40	-	-	-	-	-	-	-0.31	0.05	0.00
50	-	-	-	-	-	-	-0.42	0.07	0.00
Other Foreign-Born	-0.01	0.03	0.74	-0.01	0.03	0.82	-	-	-
0	-	-	-	-	-	-	0.18	0.14	0.22
10	-	-	-	-	-	-	0.13	0.10	0.20
20	-	-	-	-	-	-	0.07	0.06	0.23
30	-	-	-	-	-	-	0.01	0.03	0.76
40	-	-	-	-	-	-	-0.06	0.05	0.18

**Panel D. 1980-1989**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.52	0.13	0.01	0.56	0.14	0.02	0.04	0.05	0.01
East Asia	0.87	0.13	0.36	0.91	0.14	0.53	0.75	0.49	0.66
Southeast Asia	1.10	0.11	0.32	1.13	0.11	0.21	0.93	0.32	0.84
Southwest Asia	0.74	0.12	0.06	0.78	0.13	0.12	0.79	0.50	0.71
China/Hong Kong	0.62	0.10	0.00	0.68	0.12	0.03	2.07	1.29	0.24
Middle East	0.67	0.13	0.03	0.71	0.13	0.07	0.60	0.57	0.59
Europe	0.93	0.11	0.52	1.00	0.12	0.99	0.77	0.36	0.58
Central America	1.01	0.10	0.93	1.02	0.10	0.85	0.38	0.16	0.02
South America	0.39	0.16	0.03	0.42	0.18	0.04	0.10	0.16	0.14
Caribbean	1.35	0.12	0.00	1.42	0.13	0.00	1.72	0.61	0.13
Sub-Saharan Africa	1.70	0.30	0.00	1.78	0.32	0.00	0.73	0.50	0.64
North Africa	0.78	0.28	0.50	0.86	0.32	0.69	6.81	9.07	0.15
Other Foreign-Born	0.91	0.09	0.30	0.95	0.09	0.57	0.97	0.35	0.93
Female (Male)	0.86	0.05	0.01	0.85	0.05	0.00	0.85	0.05	0.00
Age (Centered at 18)	1.07	0.00	0.00	1.06	0.00	0.00	1.06	0.00	0.00
Time in the United States (Centered at 0 years)				1.03	0.00	0.00	1.02	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.98	0.07	0.82	0.95	0.07	0.47	0.94	0.06	0.37
College Degree or Higher (Less than a College Degree)	0.84	0.06	0.02	0.85	0.06	0.02	0.84	0.06	0.01
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.85	0.07	0.05	0.86	0.07	0.06	0.86	0.07	0.06
≥ 2.00	0.74	0.06	0.00	0.74	0.06	0.00	0.75	0.06	0.00
Insured (Uninsured)	1.08	0.08	0.29	1.03	0.08	0.67	1.03	0.08	0.65
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.32	0.03	0.00	0.31	0.03	0.00	0.31	0.03	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.11	0.08	0.14	1.13	0.08	0.10	1.13	0.08	0.09
Current Smoker	1.00	0.08	0.96	1.01	0.08	0.92	1.01	0.08	0.86
Alcohol use Status (Abstainer)									
Former Drinker	1.06	0.08	0.43	1.04	0.08	0.61	1.04	0.08	0.65
Current Drinker	0.94	0.06	0.34	0.91	0.06	0.15	0.91	0.06	0.14

Vigorous Exercise Status (None)

< 75 Minutes per Week	1.01	0.10	0.92	0.99	0.10	0.92	0.99	0.10	0.93
≥ 75 Minutes per Week	0.81	0.06	0.00	0.78	0.05	0.00	0.78	0.05	0.00

Intercept	0.07	0.01	0.00	0.04	0.01	0.00	0.05	0.01	0.00
-----------	------	------	------	------	------	------	------	------	------

N = 51,272

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.08	0.03	0.00	-0.08	0.03	0.01	-	-	-
0	-	-	-	-	-	-	-0.14	0.03	0.00
10	-	-	-	-	-	-	-0.15	0.03	0.00
20	-	-	-	-	-	-	-0.13	0.03	0.00
30	-	-	-	-	-	-	-0.05	0.04	0.20
40	-	-	-	-	-	-	0.11	0.11	0.28
50	-	-	-	-	-	-	0.31	0.18	0.08
East Asia	-0.02	0.02	0.36	-0.01	0.02	0.53	-	-	-
0	-	-	-	-	-	-	-0.03	0.06	0.65
10	-	-	-	-	-	-	-0.02	0.05	0.61
20	-	-	-	-	-	-	-0.02	0.03	0.52
30	-	-	-	-	-	-	-0.01	0.03	0.75
40	-	-	-	-	-	-	0.00	0.06	0.96
50	-	-	-	-	-	-	0.02	0.11	0.88
Southeast Asia	0.01	0.01	0.32	0.02	0.01	0.22	-	-	-
0	-	-	-	-	-	-	-0.01	0.04	0.84
10	-	-	-	-	-	-	0.00	0.03	0.98
20	-	-	-	-	-	-	0.01	0.02	0.49
30	-	-	-	-	-	-	0.02	0.02	0.18
40	-	-	-	-	-	-	0.04	0.04	0.30
50	-	-	-	-	-	-	0.06	0.06	0.38
Southwest Asia	-0.04	0.02	0.05	-0.04	0.02	0.11	-	-	-
0	-	-	-	-	-	-	-0.02	0.06	0.69
10	-	-	-	-	-	-	-0.03	0.05	0.54
20	-	-	-	-	-	-	-0.03	0.03	0.24
30	-	-	-	-	-	-	-0.04	0.03	0.19
40	-	-	-	-	-	-	-0.04	0.06	0.50
50	-	-	-	-	-	-	-0.04	0.10	0.67
China/Hong Kong	-0.07	0.02	0.00	-0.05	0.02	0.02	-	-	-
0	-	-	-	-	-	-	0.10	0.09	0.30
10	-	-	-	-	-	-	0.04	0.06	0.49
20	-	-	-	-	-	-	-0.02	0.03	0.39
30	-	-	-	-	-	-	-0.08	0.02	0.00
40	-	-	-	-	-	-	-0.14	0.05	0.00

50	-	-	-	-	-	-	-0.21	0.07	0.00
Middle East	-0.06	0.02	0.02	-0.05	0.02	0.05	-	-	-
0	-	-	-	-	-	-	-0.05	0.08	0.53
10	-	-	-	-	-	-	-0.05	0.06	0.42
20	-	-	-	-	-	-	-0.05	0.04	0.17
30	-	-	-	-	-	-	-0.04	0.03	0.15
40	-	-	-	-	-	-	-0.04	0.08	0.63
50	-	-	-	-	-	-	-0.03	0.14	0.84
Europe	-0.01	0.02	0.52	0.00	0.02	0.99	-	-	-
0	-	-	-	-	-	-	-0.03	0.05	0.56
10	-	-	-	-	-	-	-0.02	0.04	0.59
20	-	-	-	-	-	-	-0.01	0.02	0.71
30	-	-	-	-	-	-	0.01	0.02	0.74
40	-	-	-	-	-	-	0.03	0.05	0.61
50	-	-	-	-	-	-	0.05	0.09	0.59
Central America	0.00	0.01	0.93	0.00	0.01	0.85	-	-	-
0	-	-	-	-	-	-	-0.08	0.03	0.01
10	-	-	-	-	-	-	-0.06	0.03	0.02
20	-	-	-	-	-	-	-0.03	0.02	0.06
30	-	-	-	-	-	-	0.02	0.02	0.24
40	-	-	-	-	-	-	0.09	0.05	0.06
50	-	-	-	-	-	-	0.17	0.09	0.04
South America	-0.11	0.04	0.01	-0.11	0.04	0.01	-	-	-
0	-	-	-	-	-	-	-0.13	0.04	0.00
10	-	-	-	-	-	-	-0.14	0.04	0.00
20	-	-	-	-	-	-	-0.13	0.04	0.00
30	-	-	-	-	-	-	-0.09	0.06	0.12
40	-	-	-	-	-	-	-0.03	0.16	0.87
50	-	-	-	-	-	-	0.07	0.31	0.83
Caribbean	0.05	0.01	0.00	0.05	0.01	0.00	-	-	-
0	-	-	-	-	-	-	0.07	0.05	0.14
10	-	-	-	-	-	-	0.07	0.03	0.04
20	-	-	-	-	-	-	0.06	0.02	0.00
30	-	-	-	-	-	-	0.05	0.02	0.01
40	-	-	-	-	-	-	0.04	0.04	0.32
50	-	-	-	-	-	-	0.03	0.07	0.66
Sub-Saharan Africa	0.09	0.03	0.01	0.09	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.03	0.07	0.62
10	-	-	-	-	-	-	0.00	0.06	0.96
20	-	-	-	-	-	-	0.06	0.04	0.13
30	-	-	-	-	-	-	0.12	0.04	0.00
40	-	-	-	-	-	-	0.20	0.09	0.02
50	-	-	-	-	-	-	0.27	0.13	0.04

North Africa	-0.03	0.05	0.48	-0.02	0.05	0.68	-	-	-
0	-	-	-	-	-	-	0.32	0.27	0.24
10	-	-	-	-	-	-	0.17	0.15	0.27
20	-	-	-	-	-	-	0.03	0.06	0.64
30	-	-	-	-	-	-	-0.09	0.05	0.10
40	-	-	-	-	-	-	-0.19	0.08	0.01
50	-	-	-	-	-	-	-0.27	0.08	0.00
Other Foreign-Born	-0.01	0.01	0.30	-0.01	0.01	0.56	-	-	-
0	-	-	-	-	-	-	0.00	0.04	0.93
10	-	-	-	-	-	-	-0.01	0.03	0.86
20	-	-	-	-	-	-	-0.01	0.02	0.66
30	-	-	-	-	-	-	-0.01	0.02	0.66
40	-	-	-	-	-	-	-0.01	0.04	0.80
50	-	-	-	-	-	-	-0.01	0.07	0.86

## Panel E. 1990-2001

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	1.22	0.36	0.50	1.29	0.39	0.40	0.28	0.26	0.18
East Asia	0.95	0.18	0.79	0.98	0.18	0.93	0.15	0.07	0.00
Southeast Asia	1.28	0.14	0.02	1.31	0.14	0.01	1.04	0.26	0.86
Southwest Asia	1.10	0.14	0.47	1.13	0.15	0.34	1.02	0.27	0.93
China/Hong Kong	0.43	0.07	0.00	0.44	0.07	0.00	0.64	0.26	0.28
Middle East	0.82	0.17	0.34	0.84	0.17	0.40	0.68	0.34	0.45
Europe	1.04	0.10	0.69	1.08	0.10	0.45	0.91	0.19	0.66
Central America	0.94	0.10	0.55	0.94	0.10	0.57	1.04	0.25	0.88
South America	1.16	0.44	0.70	1.22	0.46	0.59	0.63	0.55	0.60
Caribbean	1.34	0.11	0.00	1.37	0.11	0.00	1.08	0.24	0.71
Sub-Saharan Africa	1.17	0.15	0.22	1.21	0.15	0.14	1.44	0.42	0.21
North Africa	0.84	0.27	0.59	0.87	0.28	0.67	0.28	0.26	0.17
Other Foreign-Born	0.85	0.07	0.06	0.88	0.08	0.13	1.02	0.20	0.93
Female (Male)	0.83	0.05	0.00	0.83	0.05	0.00	0.83	0.05	0.00
Age (Centered at 18)	1.08	0.00	0.00	1.08	0.00	0.00	1.08	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.00	0.00	1.01	0.01	0.47
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.98	0.06	0.80	0.97	0.06	0.60	0.97	0.06	0.66
College Degree or Higher (Less than a College Degree)	0.88	0.06	0.07	0.89	0.06	0.08	0.89	0.06	0.08
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.93	0.06	0.28	0.92	0.06	0.25	0.92	0.06	0.25

$\geq 2.00$	0.72	0.05	0.00	0.71	0.05	0.00	0.71	0.05	0.00
Insured (Uninsured)	1.07	0.07	0.29	1.04	0.07	0.50	1.05	0.07	0.46
Last Healthcare Visit < 1 Year ( $\geq 1$ Year)	0.31	0.02	0.00	0.32	0.02	0.00	0.32	0.02	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.34	0.10	0.00	1.35	0.10	0.00	1.36	0.10	0.00
Current Smoker	1.13	0.10	0.17	1.14	0.10	0.13	1.15	0.10	0.11
Alcohol use Status (Abstainer)									
Former Drinker	1.03	0.08	0.70	1.02	0.08	0.81	1.01	0.08	0.87
Current Drinker	0.99	0.06	0.88	0.98	0.06	0.70	0.98	0.06	0.69
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.06	0.10	0.51	1.05	0.10	0.57	1.05	0.10	0.56
$\geq 75$ Minutes per Week	0.82	0.05	0.00	0.81	0.05	0.00	0.81	0.05	0.00
Intercept	0.04	0.00	0.00	0.04	0.00	0.00	0.04	0.01	0.00
$N = 89,966$									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	0.02	0.03	0.52	0.03	0.03	0.43	-	-	-
0	-	-	-	-	-	-	-0.08	0.04	0.04
10	-	-	-	-	-	-	-0.03	0.03	0.32
20	-	-	-	-	-	-	0.08	0.07	0.25
30	-	-	-	-	-	-	0.25	0.22	0.26
40	-	-	-	-	-	-	0.44	0.36	0.22
50	-	-	-	-	-	-	0.62	0.38	0.10
East Asia	0.00	0.02	0.79	0.00	0.02	0.93	-	-	-
0	-	-	-	-	-	-	-0.11	0.02	0.00
10	-	-	-	-	-	-	-0.06	0.02	0.00
20	-	-	-	-	-	-	0.05	0.03	0.07
30	-	-	-	-	-	-	0.23	0.08	0.00
40	-	-	-	-	-	-	0.47	0.14	0.00
50	-	-	-	-	-	-	0.66	0.13	0.00
Southeast Asia	0.03	0.01	0.03	0.03	0.01	0.02	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.86
10	-	-	-	-	-	-	0.02	0.01	0.18
20	-	-	-	-	-	-	0.03	0.01	0.02
30	-	-	-	-	-	-	0.05	0.03	0.08
40	-	-	-	-	-	-	0.07	0.05	0.15
50	-	-	-	-	-	-	0.09	0.07	0.20

Southwest Asia	0.01	0.01	0.48	0.01	0.01	0.35	-	-	-
0	-	-	-	-	-	-	0.00	0.03	0.93
10	-	-	-	-	-	-	0.01	0.01	0.54
20	-	-	-	-	-	-	0.01	0.02	0.43
30	-	-	-	-	-	-	0.02	0.04	0.56
40	-	-	-	-	-	-	0.03	0.06	0.62
50	-	-	-	-	-	-	0.04	0.08	0.66
China/Hong Kong	-0.07	0.01	0.00	-0.06	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.04	0.03	0.23
10	-	-	-	-	-	-	-0.06	0.01	0.00
20	-	-	-	-	-	-	-0.07	0.01	0.00
30	-	-	-	-	-	-	-0.09	0.02	0.00
40	-	-	-	-	-	-	-0.10	0.03	0.00
50	-	-	-	-	-	-	-0.12	0.04	0.01
Middle East	-0.02	0.02	0.32	-0.02	0.02	0.38	-	-	-
0	-	-	-	-	-	-	-0.03	0.04	0.40
10	-	-	-	-	-	-	-0.02	0.02	0.32
20	-	-	-	-	-	-	-0.01	0.02	0.56
30	-	-	-	-	-	-	0.00	0.04	0.98
40	-	-	-	-	-	-	0.01	0.08	0.87
50	-	-	-	-	-	-	0.03	0.12	0.81
Europe	0.00	0.01	0.69	0.01	0.01	0.46	-	-	-
0	-	-	-	-	-	-	-0.01	0.02	0.66
10	-	-	-	-	-	-	0.00	0.01	0.93
20	-	-	-	-	-	-	0.01	0.01	0.35
30	-	-	-	-	-	-	0.02	0.02	0.32
40	-	-	-	-	-	-	0.03	0.04	0.35
50	-	-	-	-	-	-	0.05	0.05	0.37
Central America	-0.01	0.01	0.55	-0.01	0.01	0.57	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.88
10	-	-	-	-	-	-	0.00	0.01	0.84
20	-	-	-	-	-	-	-0.01	0.01	0.55
30	-	-	-	-	-	-	-0.01	0.03	0.60
40	-	-	-	-	-	-	-0.02	0.04	0.63
50	-	-	-	-	-	-	-0.03	0.06	0.64
South America	0.02	0.04	0.71	0.02	0.04	0.61	-	-	-
0	-	-	-	-	-	-	-0.04	0.06	0.55
10	-	-	-	-	-	-	0.00	0.04	0.97
20	-	-	-	-	-	-	0.06	0.06	0.35
30	-	-	-	-	-	-	0.13	0.14	0.37
40	-	-	-	-	-	-	0.21	0.25	0.41
50	-	-	-	-	-	-	0.30	0.37	0.41
Caribbean	0.03	0.01	0.00	0.03	0.01	0.00	-	-	-

0	-	-	-	-	-	-	0.01	0.02	0.72
10	-	-	-	-	-	-	0.02	0.01	0.03
20	-	-	-	-	-	-	0.04	0.01	0.00
30	-	-	-	-	-	-	0.06	0.03	0.04
40	-	-	-	-	-	-	0.08	0.05	0.10
50	-	-	-	-	-	-	0.10	0.07	0.15
Sub-Saharan Africa	0.02	0.01	0.24	0.02	0.01	0.15	-	-	-
0	-	-	-	-	-	-	0.04	0.03	0.24
10	-	-	-	-	-	-	0.02	0.02	0.12
20	-	-	-	-	-	-	0.01	0.02	0.52
30	-	-	-	-	-	-	0.00	0.03	0.96
40	-	-	-	-	-	-	-0.01	0.05	0.77
50	-	-	-	-	-	-	-0.03	0.06	0.68
North Africa	-0.02	0.03	0.58	-0.01	0.03	0.66	-	-	-
0	-	-	-	-	-	-	-0.08	0.04	0.04
10	-	-	-	-	-	-	-0.04	0.03	0.15
20	-	-	-	-	-	-	0.02	0.05	0.63
30	-	-	-	-	-	-	0.13	0.15	0.40
40	-	-	-	-	-	-	0.26	0.28	0.37
50	-	-	-	-	-	-	0.41	0.40	0.32
Other Foreign-Born	-0.02	0.01	0.06	-0.01	0.01	0.13	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.93
10	-	-	-	-	-	-	-0.01	0.01	0.37
20	-	-	-	-	-	-	-0.02	0.01	0.09
30	-	-	-	-	-	-	-0.03	0.02	0.16
40	-	-	-	-	-	-	-0.04	0.03	0.22
50	-	-	-	-	-	-	-0.05	0.04	0.25

## Panel F. 2002-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.57	0.20	0.12	0.59	0.21	0.15	0.79	0.38	0.62
East Asia	0.56	0.15	0.03	0.58	0.16	0.05	0.51	0.24	0.15
Southeast Asia	1.24	0.21	0.21	1.27	0.22	0.16	1.07	0.31	0.82
Southwest Asia	1.00	0.18	1.00	1.03	0.19	0.88	0.99	0.30	0.98
China/Hong Kong	0.56	0.12	0.01	0.58	0.12	0.01	0.31	0.12	0.00
Middle East	0.74	0.19	0.25	0.77	0.20	0.32	0.66	0.29	0.34
Europe	0.98	0.20	0.91	1.00	0.20	0.99	0.95	0.39	0.90
Central America	1.51	0.29	0.03	1.52	0.29	0.03	1.44	0.51	0.31
South America	0.34	0.21	0.08	0.35	0.22	0.09	1.53	1.61	0.68



Caribbean	1.32	0.19	0.06	1.35	0.20	0.05	1.53	0.47	0.17
Sub-Saharan Africa	1.12	0.20	0.54	1.15	0.21	0.46	0.87	0.28	0.66
North Africa	2.14	0.61	0.01	2.19	0.63	0.01	2.53	1.21	0.05
Other Foreign-Born	0.99	0.15	0.92	1.01	0.15	0.94	0.95	0.26	0.85
Female (Male)	0.79	0.07	0.01	0.79	0.07	0.00	0.79	0.07	0.01
Age (Centered at 18)	1.09	0.00	0.00	1.09	0.00	0.00	1.09	0.00	0.00
Time in the United States (Centered at 0 years)				1.01	0.01	0.27	1.00	0.02	0.88
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.11	0.11	0.32	1.10	0.11	0.34	1.12	0.12	0.27
College Degree or Higher (Less than a College Degree)	0.84	0.08	0.08	0.85	0.08	0.09	0.85	0.08	0.09
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.97	0.10	0.79	0.96	0.09	0.70	0.97	0.09	0.75
≥ 2.00	0.67	0.07	0.00	0.65	0.06	0.00	0.65	0.06	0.00
Insured (Uninsured)	1.12	0.11	0.26	1.10	0.11	0.32	1.10	0.11	0.34
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.38	0.04	0.00	0.39	0.04	0.00	0.39	0.04	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.33	0.16	0.02	1.33	0.16	0.02	1.33	0.16	0.02
Current Smoker	1.21	0.16	0.14	1.22	0.16	0.13	1.21	0.16	0.14
Alcohol use Status (Abstainer)									
Former Drinker	1.24	0.14	0.06	1.23	0.14	0.06	1.25	0.14	0.05
Current Drinker	1.04	0.10	0.70	1.04	0.10	0.70	1.04	0.10	0.67
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.22	0.19	0.20	1.21	0.19	0.22	1.21	0.19	0.21
≥ 75 Minutes per Week	0.99	0.10	0.90	0.98	0.10	0.84	0.98	0.10	0.87
Intercept	0.03	0.00	0.00	0.03	0.00	0.00	0.03	0.01	0.00
<i>N</i> = 48,036									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.04	0.02	0.07	-0.03	0.02	0.10	-	-	-
0	-	-	-	-	-	-	-0.02	0.03	0.60
10	-	-	-	-	-	-	-0.05	0.02	0.03
20	-	-	-	-	-	-	-0.07	0.04	0.05
30	-	-	-	-	-	-	-0.09	0.05	0.07
40	-	-	-	-	-	-	-0.10	0.06	0.10
50	-	-	-	-	-	-	-0.11	0.08	0.16

East Asia	-0.04	0.02	0.02	-0.04	0.02	0.03	-	-	-
0	-	-	-	-	-	-	-0.04	0.03	0.10
10	-	-	-	-	-	-	-0.03	0.02	0.17
20	-	-	-	-	-	-	-0.02	0.07	0.75
30	-	-	-	-	-	-	-0.01	0.12	0.95
40	-	-	-	-	-	-	0.01	0.19	0.97
50	-	-	-	-	-	-	0.02	0.28	0.93
Southeast Asia	0.02	0.01	0.22	0.02	0.01	0.16	-	-	-
0	-	-	-	-	-	-	0.01	0.02	0.82
10	-	-	-	-	-	-	0.03	0.02	0.14
20	-	-	-	-	-	-	0.05	0.05	0.30
30	-	-	-	-	-	-	0.08	0.09	0.38
40	-	-	-	-	-	-	0.11	0.14	0.43
50	-	-	-	-	-	-	0.15	0.20	0.46
Southwest Asia	0.00	0.01	1.00	0.00	0.01	0.88	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.98
10	-	-	-	-	-	-	0.00	0.02	0.91
20	-	-	-	-	-	-	0.00	0.05	0.92
30	-	-	-	-	-	-	0.01	0.08	0.93
40	-	-	-	-	-	-	0.01	0.12	0.93
50	-	-	-	-	-	-	0.01	0.16	0.93
China/Hong Kong	-0.04	0.01	0.00	-0.04	0.01	0.01	-	-	-
0	-	-	-	-	-	-	-0.06	0.02	0.00
10	-	-	-	-	-	-	-0.02	0.02	0.27
20	-	-	-	-	-	-	0.05	0.07	0.45
30	-	-	-	-	-	-	0.17	0.18	0.33
40	-	-	-	-	-	-	0.33	0.31	0.28
50	-	-	-	-	-	-	0.51	0.39	0.19
Middle East	-0.02	0.02	0.23	-0.02	0.02	0.30	-	-	-
0	-	-	-	-	-	-	-0.03	0.03	0.31
10	-	-	-	-	-	-	-0.01	0.02	0.61
20	-	-	-	-	-	-	0.01	0.07	0.93
30	-	-	-	-	-	-	0.03	0.13	0.83
40	-	-	-	-	-	-	0.05	0.21	0.80
50	-	-	-	-	-	-	0.08	0.31	0.78
Europe	0.00	0.02	0.91	0.00	0.02	0.99	-	-	-
0	-	-	-	-	-	-	0.00	0.03	0.90
10	-	-	-	-	-	-	0.00	0.02	0.95
20	-	-	-	-	-	-	0.01	0.05	0.90
30	-	-	-	-	-	-	0.01	0.09	0.89
40	-	-	-	-	-	-	0.02	0.14	0.89
50	-	-	-	-	-	-	0.02	0.19	0.90
Central America	0.04	0.02	0.05	0.04	0.02	0.04	-	-	-

0	-	-	-	-	-	-	0.03	0.03	0.34
10	-	-	-	-	-	-	0.04	0.03	0.14
20	-	-	-	-	-	-	0.05	0.07	0.52
30	-	-	-	-	-	-	0.05	0.12	0.66
40	-	-	-	-	-	-	0.06	0.18	0.73
50	-	-	-	-	-	-	0.07	0.25	0.77
South America	-0.06	0.02	0.02	-0.06	0.02	0.02	-	-	-
0	-	-	-	-	-	-	0.04	0.10	0.72
10	-	-	-	-	-	-	-0.10	0.02	0.00
20	-	-	-	-	-	-	-0.11	0.02	0.00
30	-	-	-	-	-	-	-0.11	0.04	0.00
40	-	-	-	-	-	-	-0.12	0.06	0.04
50	-	-	-	-	-	-	-0.12	0.07	0.11
Caribbean	0.02	0.01	0.06	0.02	0.01	0.05	-	-	-
0	-	-	-	-	-	-	0.04	0.03	0.19
10	-	-	-	-	-	-	0.02	0.02	0.26
20	-	-	-	-	-	-	0.00	0.04	1.00
30	-	-	-	-	-	-	-0.02	0.07	0.80
40	-	-	-	-	-	-	-0.03	0.09	0.73
50	-	-	-	-	-	-	-0.04	0.11	0.68
Sub-Saharan Africa	0.01	0.01	0.54	0.01	0.01	0.46	-	-	-
0	-	-	-	-	-	-	-0.01	0.02	0.66
10	-	-	-	-	-	-	0.02	0.02	0.31
20	-	-	-	-	-	-	0.06	0.07	0.34
30	-	-	-	-	-	-	0.11	0.13	0.38
40	-	-	-	-	-	-	0.18	0.21	0.41
50	-	-	-	-	-	-	0.25	0.31	0.43
North Africa	0.07	0.03	0.02	0.07	0.03	0.02	-	-	-
0	-	-	-	-	-	-	0.09	0.06	0.11
10	-	-	-	-	-	-	0.06	0.05	0.24
20	-	-	-	-	-	-	0.03	0.11	0.78
30	-	-	-	-	-	-	0.01	0.16	0.97
40	-	-	-	-	-	-	-0.02	0.19	0.93
50	-	-	-	-	-	-	-0.04	0.21	0.87
Other Foreign-Born	0.00	0.01	0.92	0.00	0.01	0.94	-	-	-
0	-	-	-	-	-	-	0.00	0.02	0.85
10	-	-	-	-	-	-	0.00	0.01	0.88
20	-	-	-	-	-	-	0.01	0.04	0.82
30	-	-	-	-	-	-	0.02	0.07	0.81
40	-	-	-	-	-	-	0.02	0.10	0.81
50	-	-	-	-	-	-	0.03	0.13	0.81

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

**Appendix Table 2.6** Results of Stratified Sample-Weighted, Binomial Logistic Regression Models for Reporting a BMI in the Overweight or Obese Range by National Origin for Pre-1965 (Panel A), 1965-1975 (Panel B), 1976-1979 (Panel C), 1980-1989 (Panel D), 1990-2001 (Panel E), and 2002-2018 (Panel F) Arrival Cohorts, Foreign-Born Adults Ages 18-65+, National Health Interview Survey 2000-2018

**Panel A. Pre-1965**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.69	0.11	0.02	0.69	0.11	0.02	1.39	1.19	0.70
East Asia	0.33	0.06	0.00	0.33	0.06	0.00	1.00	1.09	1.00
Southeast Asia	0.36	0.08	0.00	0.36	0.08	0.00	0.35	0.46	0.42
Southwest Asia	0.51	0.23	0.13	0.50	0.22	0.12	5.62	18.50	0.60
China/Hong Kong	0.11	0.03	0.00	0.11	0.03	0.00	0.03	0.05	0.01
Middle East	0.63	0.22	0.18	0.63	0.22	0.17	0.33	0.74	0.62
Europe	0.62	0.07	0.00	0.62	0.07	0.00	1.38	0.98	0.65
Central America	1.07	0.25	0.77	1.06	0.25	0.79	2.30	3.73	0.61
South America	0.79	0.40	0.65	0.79	0.40	0.64	13.86	36.03	0.31
Caribbean	0.67	0.09	0.00	0.66	0.09	0.00	2.40	2.20	0.34
Sub-Saharan Africa	0.40	0.19	0.05	0.40	0.19	0.05	0.04	0.15	0.40
North Africa	1.07	0.47	0.88	1.07	0.47	0.89	1.73	5.51	0.86
Other Foreign-Born	0.73	0.09	0.01	0.73	0.09	0.01	2.45	1.96	0.26
Female (Male)	0.49	0.03	0.00	0.49	0.03	0.00	0.49	0.03	0.00
Age (Centered at 18)	0.97	0.00	0.00	0.97	0.00	0.00	0.97	0.00	0.00
Time in the United States (Centered at 0 years)				1.00	0.00	0.48	1.01	0.01	0.35
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	0.83	0.09	0.08	0.84	0.09	0.11	0.84	0.09	0.12
College Degree or Higher (Less than a College Degree)	0.80	0.07	0.01	0.80	0.07	0.01	0.80	0.07	0.01
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	1.13	0.13	0.29	1.13	0.13	0.30	1.13	0.13	0.27
≥ 2.00	1.02	0.11	0.85	1.02	0.11	0.84	1.03	0.11	0.82
Insured (Uninsured)	0.95	0.15	0.75	0.95	0.15	0.74	0.94	0.15	0.71
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.66	0.08	0.00	0.66	0.08	0.00	0.66	0.07	0.00
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.16	0.09	0.05	1.16	0.09	0.05	1.16	0.09	0.05
Current Smoker	0.68	0.08	0.00	0.69	0.08	0.00	0.68	0.08	0.00

Alcohol use Status (Abstainer)

Former Drinker	1.02	0.10	0.84	1.02	0.10	0.81	1.02	0.10	0.85
Current Drinker	0.83	0.07	0.03	0.83	0.07	0.04	0.83	0.07	0.03

Vigorous Exercise Status (None)

< 75 Minutes per Week	0.86	0.13	0.32	0.86	0.13	0.32	0.87	0.13	0.34
≥ 75 Minutes per Week	0.67	0.05	0.00	0.67	0.05	0.00	0.67	0.06	0.00

Intercept	29.05	7.23	0.00	31.46	8.83	0.00	14.90	9.55	0.00
-----------	-------	------	------	-------	------	------	-------	------	------

N = 16,032

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.07	0.03	0.02	-0.07	0.03	0.02	-	-	-
0	-	-	-	-	-	-	0.07	0.18	0.70
10	-	-	-	-	-	-	0.04	0.15	0.78
20	-	-	-	-	-	-	0.01	0.12	0.91
30	-	-	-	-	-	-	-0.01	0.09	0.87
40	-	-	-	-	-	-	-0.04	0.06	0.48
50	-	-	-	-	-	-	-0.07	0.04	0.07
East Asia	-0.24	0.04	0.00	-0.24	0.04	0.00	-	-	-
0	-	-	-	-	-	-	0.00	0.24	1.00
10	-	-	-	-	-	-	-0.05	0.20	0.81
20	-	-	-	-	-	-	-0.09	0.15	0.54
30	-	-	-	-	-	-	-0.14	0.11	0.21
40	-	-	-	-	-	-	-0.19	0.07	0.01
50	-	-	-	-	-	-	-0.23	0.04	0.00
Southeast Asia	-0.22	0.05	0.00	-0.22	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.24	0.29	0.40
10	-	-	-	-	-	-	-0.24	0.24	0.31
20	-	-	-	-	-	-	-0.24	0.18	0.20
30	-	-	-	-	-	-	-0.23	0.13	0.08
40	-	-	-	-	-	-	-0.23	0.08	0.00
50	-	-	-	-	-	-	-0.22	0.05	0.00
Southwest Asia	-0.14	0.10	0.16	-0.14	0.10	0.15	-	-	-
0	-	-	-	-	-	-	0.28	0.33	0.40
10	-	-	-	-	-	-	0.21	0.33	0.52
20	-	-	-	-	-	-	0.14	0.31	0.65
30	-	-	-	-	-	-	0.06	0.26	0.83
40	-	-	-	-	-	-	-0.04	0.18	0.84
50	-	-	-	-	-	-	-0.14	0.10	0.18
China/Hong Kong	-0.48	0.05	0.00	-0.48	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.56	0.16	0.00

10	-	-	-	-	-	-	-0.56	0.13	0.00
20	-	-	-	-	-	-	-0.56	0.11	0.00
30	-	-	-	-	-	-	-0.55	0.09	0.00
40	-	-	-	-	-	-	-0.53	0.06	0.00
50	-	-	-	-	-	-	-0.50	0.05	0.00
Middle East	-0.09	0.07	0.21	-0.09	0.07	0.20	-	-	-
0	-	-	-	-	-	-	-0.25	0.49	0.60
10	-	-	-	-	-	-	-0.22	0.41	0.59
20	-	-	-	-	-	-	-0.19	0.32	0.56
30	-	-	-	-	-	-	-0.16	0.23	0.49
40	-	-	-	-	-	-	-0.12	0.14	0.36
50	-	-	-	-	-	-	-0.09	0.07	0.22
Europe	-0.10	0.02	0.00	-0.10	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.07	0.16	0.66
10	-	-	-	-	-	-	0.04	0.13	0.77
20	-	-	-	-	-	-	0.00	0.10	0.96
30	-	-	-	-	-	-	-0.03	0.07	0.70
40	-	-	-	-	-	-	-0.06	0.04	0.18
50	-	-	-	-	-	-	-0.09	0.02	0.00
Central America	0.01	0.04	0.77	0.01	0.04	0.79	-	-	-
0	-	-	-	-	-	-	0.16	0.28	0.56
10	-	-	-	-	-	-	0.13	0.23	0.57
20	-	-	-	-	-	-	0.10	0.18	0.57
30	-	-	-	-	-	-	0.07	0.13	0.57
40	-	-	-	-	-	-	0.05	0.08	0.57
50	-	-	-	-	-	-	0.02	0.05	0.67
South America	-0.04	0.10	0.66	-0.05	0.10	0.65	-	-	-
0	-	-	-	-	-	-	0.34	0.18	0.06
10	-	-	-	-	-	-	0.29	0.17	0.09
20	-	-	-	-	-	-	0.23	0.16	0.16
30	-	-	-	-	-	-	0.17	0.15	0.27
40	-	-	-	-	-	-	0.09	0.13	0.49
50	-	-	-	-	-	-	-0.01	0.10	0.94
Caribbean	-0.08	0.03	0.00	-0.08	0.03	0.00	-	-	-
0	-	-	-	-	-	-	0.17	0.18	0.33
10	-	-	-	-	-	-	0.12	0.14	0.40
20	-	-	-	-	-	-	0.07	0.11	0.51
30	-	-	-	-	-	-	0.03	0.08	0.75
40	-	-	-	-	-	-	-0.02	0.05	0.61
50	-	-	-	-	-	-	-0.07	0.03	0.01
Sub-Saharan Africa	-0.19	0.11	0.07	-0.20	0.11	0.07	-	-	-
0	-	-	-	-	-	-	-0.55	0.27	0.04
10	-	-	-	-	-	-	-0.53	0.31	0.09

20	-	-	-	-	-	-	-0.49	0.34	0.15
30	-	-	-	-	-	-	-0.42	0.31	0.17
40	-	-	-	-	-	-	-0.32	0.21	0.12
50	-	-	-	-	-	-	-0.21	0.11	0.05
North Africa	0.01	0.08	0.88	0.01	0.08	0.88	-	-	-
0	-	-	-	-	-	-	0.11	0.60	0.85
10	-	-	-	-	-	-	0.09	0.49	0.85
20	-	-	-	-	-	-	0.07	0.37	0.84
30	-	-	-	-	-	-	0.05	0.26	0.84
40	-	-	-	-	-	-	0.04	0.16	0.82
50	-	-	-	-	-	-	0.02	0.08	0.83
Other Foreign-Born	-0.06	0.02	0.01	-0.06	0.02	0.01	-	-	-
0	-	-	-	-	-	-	0.17	0.16	0.28
10	-	-	-	-	-	-	0.13	0.13	0.32
20	-	-	-	-	-	-	0.09	0.10	0.39
30	-	-	-	-	-	-	0.04	0.07	0.55
40	-	-	-	-	-	-	0.00	0.04	0.96
50	-	-	-	-	-	-	-0.05	0.02	0.06

## Panel B. 1965-1975

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.51	0.09	0.00	0.50	0.09	0.00	0.46	0.48	0.46
East Asia	0.24	0.04	0.00	0.25	0.04	0.00	0.13	0.11	0.02
Southeast Asia	0.27	0.03	0.00	0.29	0.04	0.00	0.32	0.22	0.09
Southwest Asia	0.32	0.06	0.00	0.35	0.07	0.00	0.31	0.41	0.37
China/Hong Kong	0.15	0.04	0.00	0.15	0.04	0.00	0.00	0.01	0.01
Middle East	0.87	0.24	0.62	0.95	0.26	0.84	0.62	0.94	0.75
Europe	0.61	0.06	0.00	0.61	0.06	0.00	0.62	0.34	0.39
Central America	0.75	0.13	0.11	0.77	0.14	0.14	1.08	1.24	0.95
South America	1.00	0.45	0.99	1.10	0.48	0.83	0.00	0.00	0.03
Caribbean	0.65	0.06	0.00	0.68	0.07	0.00	0.83	0.48	0.75
Sub-Saharan Africa	0.54	0.16	0.04	0.58	0.18	0.08	2.34	4.19	0.63
North Africa	0.25	0.11	0.00	0.26	0.12	0.00	15.13	44.21	0.35
Other Foreign-Born	0.70	0.08	0.00	0.72	0.08	0.00	0.76	0.45	0.64
Female (Male)	0.49	0.03	0.00	0.48	0.03	0.00	0.47	0.03	0.00
Age (Centered at 18)	0.99	0.00	0.01	0.98	0.00	0.00	0.98	0.00	0.00
Time in the United States (Centered at 0 years)				1.04	0.01	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							Included		
English Interview (Non-English Interview)	0.86	0.07	0.07	0.80	0.07	0.01	0.80	0.07	0.01

College Degree or Higher (Less than a College Degree)	0.68	0.05	0.00	0.66	0.05	0.00	0.66	0.05	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.82	0.09	0.05	0.81	0.09	0.05	0.80	0.08	0.04
≥ 2.00	0.86	0.08	0.10	0.85	0.08	0.07	0.84	0.08	0.06
Insured (Uninsured)	0.90	0.09	0.27	0.88	0.09	0.21	0.88	0.09	0.20
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.77	0.07	0.00	0.78	0.07	0.01	0.78	0.07	0.01
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.20	0.09	0.02	1.20	0.09	0.02	1.20	0.09	0.02
Current Smoker	0.66	0.07	0.00	0.66	0.07	0.00	0.66	0.07	0.00
Alcohol use Status (Abstainer)									
Former Drinker	1.14	0.10	0.14	1.11	0.10	0.25	1.11	0.10	0.26
Current Drinker	1.08	0.08	0.33	1.02	0.08	0.79	1.02	0.08	0.81
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.06	0.13	0.65	1.01	0.12	0.96	1.00	0.12	0.97
≥ 75 Minutes per Week	0.69	0.05	0.00	0.66	0.05	0.00	0.66	0.05	0.00
Intercept	11.55	2.10	0.00	3.98	0.91	0.00	4.13	1.57	0.00
N = 25,135									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.13	0.04	0.00	-0.14	0.04	0.00	-	-	-
0	-	-	-	-	-	-	-0.16	0.20	0.41
10	-	-	-	-	-	-	-0.17	0.17	0.31
20	-	-	-	-	-	-	-0.17	0.13	0.18
30	-	-	-	-	-	-	-0.16	0.07	0.03
40	-	-	-	-	-	-	-0.13	0.04	0.00
50	-	-	-	-	-	-	-0.11	0.06	0.06
East Asia	-0.31	0.03	0.00	-0.30	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.33	0.11	0.00
10	-	-	-	-	-	-	-0.37	0.10	0.00
20	-	-	-	-	-	-	-0.37	0.08	0.00
30	-	-	-	-	-	-	-0.35	0.05	0.00
40	-	-	-	-	-	-	-0.29	0.04	0.00
50	-	-	-	-	-	-	-0.22	0.07	0.00
Southeast Asia	-0.28	0.03	0.00	-0.26	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.22	0.12	0.07
10	-	-	-	-	-	-	-0.25	0.10	0.01



20	-	-	-	-	-	-	-0.27	0.07	0.00
30	-	-	-	-	-	-	-0.27	0.04	0.00
40	-	-	-	-	-	-	-0.26	0.03	0.00
50	-	-	-	-	-	-	-0.23	0.05	0.00
Southwest Asia	-0.24	0.04	0.00	-0.22	0.04	0.00	-	-	-
0	-	-	-	-	-	-	-0.23	0.21	0.27
10	-	-	-	-	-	-	-0.25	0.19	0.19
20	-	-	-	-	-	-	-0.25	0.14	0.08
30	-	-	-	-	-	-	-0.24	0.08	0.00
40	-	-	-	-	-	-	-0.21	0.04	0.00
50	-	-	-	-	-	-	-0.18	0.09	0.04
China/Hong Kong	-0.42	0.06	0.00	-0.41	0.06	0.00	-	-	-
0	-	-	-	-	-	-	-0.42	0.09	0.00
10	-	-	-	-	-	-	-0.51	0.07	0.00
20	-	-	-	-	-	-	-0.57	0.06	0.00
30	-	-	-	-	-	-	-0.56	0.07	0.00
40	-	-	-	-	-	-	-0.42	0.06	0.00
50	-	-	-	-	-	-	-0.19	0.12	0.12
Middle East	-0.02	0.05	0.63	-0.01	0.05	0.84	-	-	-
0	-	-	-	-	-	-	-0.10	0.31	0.74
10	-	-	-	-	-	-	-0.09	0.26	0.74
20	-	-	-	-	-	-	-0.06	0.17	0.74
30	-	-	-	-	-	-	-0.03	0.09	0.74
40	-	-	-	-	-	-	-0.01	0.05	0.92
50	-	-	-	-	-	-	0.01	0.07	0.88
Europe	-0.10	0.02	0.00	-0.10	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.10	0.12	0.38
10	-	-	-	-	-	-	-0.11	0.09	0.24
20	-	-	-	-	-	-	-0.11	0.06	0.07
30	-	-	-	-	-	-	-0.11	0.03	0.00
40	-	-	-	-	-	-	-0.09	0.02	0.00
50	-	-	-	-	-	-	-0.08	0.03	0.01
Central America	-0.05	0.03	0.12	-0.05	0.03	0.16	-	-	-
0	-	-	-	-	-	-	0.02	0.27	0.95
10	-	-	-	-	-	-	0.00	0.20	0.99
20	-	-	-	-	-	-	-0.02	0.13	0.86
30	-	-	-	-	-	-	-0.04	0.06	0.51
40	-	-	-	-	-	-	-0.05	0.04	0.18
50	-	-	-	-	-	-	-0.05	0.07	0.45
South America	0.00	0.08	0.99	0.02	0.07	0.83	-	-	-
0	-	-	-	-	-	-	-0.42	0.09	0.00
10	-	-	-	-	-	-	-0.51	0.07	0.00
20	-	-	-	-	-	-	-0.53	0.11	0.00

30	-	-	-	-	-	-	-0.31	0.16	0.05
40	-	-	-	-	-	-	0.05	0.07	0.45
50	-	-	-	-	-	-	0.14	0.04	0.00
Caribbean	-0.08	0.02	0.00	-0.07	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.04	0.13	0.75
10	-	-	-	-	-	-	-0.06	0.10	0.58
20	-	-	-	-	-	-	-0.07	0.07	0.31
30	-	-	-	-	-	-	-0.07	0.03	0.02
40	-	-	-	-	-	-	-0.07	0.02	0.00
50	-	-	-	-	-	-	-0.07	0.03	0.05
Sub-Saharan Africa	-0.12	0.06	0.07	-0.11	0.06	0.10	-	-	-
0	-	-	-	-	-	-	0.20	0.40	0.62
10	-	-	-	-	-	-	0.11	0.30	0.71
20	-	-	-	-	-	-	0.03	0.20	0.88
30	-	-	-	-	-	-	-0.05	0.11	0.68
40	-	-	-	-	-	-	-0.11	0.06	0.08
50	-	-	-	-	-	-	-0.16	0.11	0.15
North Africa	-0.30	0.10	0.00	-0.29	0.11	0.01	-	-	-
0	-	-	-	-	-	-	0.48	0.25	0.06
10	-	-	-	-	-	-	0.33	0.28	0.25
20	-	-	-	-	-	-	0.15	0.27	0.58
30	-	-	-	-	-	-	-0.06	0.18	0.75
40	-	-	-	-	-	-	-0.27	0.10	0.01
50	-	-	-	-	-	-	-0.47	0.19	0.01
Other Foreign-Born	-0.07	0.02	0.00	-0.06	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.06	0.13	0.64
10	-	-	-	-	-	-	-0.07	0.10	0.51
20	-	-	-	-	-	-	-0.07	0.07	0.30
30	-	-	-	-	-	-	-0.07	0.03	0.04
40	-	-	-	-	-	-	-0.06	0.02	0.01
50	-	-	-	-	-	-	-0.05	0.03	0.14

### Panel C. 1976-1979

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.41	0.13	0.00	0.43	0.13	0.01	0.33	0.54	0.50
East Asia	0.24	0.05	0.00	0.24	0.05	0.00	0.44	0.49	0.47
Southeast Asia	0.21	0.03	0.00	0.22	0.03	0.00	0.14	0.11	0.02
Southwest Asia	0.35	0.09	0.00	0.38	0.10	0.00	0.01	0.01	0.00
China/Hong Kong	0.09	0.03	0.00	0.10	0.03	0.00	0.01	0.03	0.02
Middle East	0.51	0.14	0.01	0.52	0.14	0.02	0.63	0.66	0.66

Europe	0.56	0.10	0.00	0.57	0.10	0.00	0.27	0.22	0.11
Central America	0.93	0.17	0.69	0.96	0.18	0.82	0.39	0.41	0.37
South America	0.43	0.22	0.10	0.47	0.25	0.15	0.02	0.07	0.20
Caribbean	0.61	0.10	0.00	0.65	0.11	0.01	1.84	1.45	0.44
Sub-Saharan Africa	0.58	0.20	0.11	0.64	0.23	0.21	0.81	1.83	0.93
North Africa	0.16	0.09	0.00	0.17	0.09	0.00	0.36	1.29	0.78
Other Foreign-Born	0.57	0.09	0.00	0.59	0.09	0.00	0.44	0.34	0.28
Female (Male)	0.52	0.05	0.00	0.51	0.05	0.00	0.50	0.05	0.00
Age (Centered at 18)	1.00	0.00	0.34	0.99	0.00	0.19	0.99	0.00	0.15
Time in the United States (Centered at 0 years)				1.04	0.01	0.00	1.03	0.02	0.04
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.07	0.12	0.52	0.99	0.11	0.95	1.00	0.11	1.00
College Degree or Higher (Less than a College Degree)	0.69	0.07	0.00	0.68	0.07	0.00	0.68	0.07	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.95	0.12	0.72	0.94	0.12	0.64	0.95	0.13	0.72
≥ 2.00	0.71	0.08	0.00	0.71	0.08	0.00	0.71	0.08	0.00
Insured (Uninsured)	1.29	0.16	0.04	1.26	0.15	0.06	1.27	0.16	0.06
Last Healthcare Visit < 1 Year (≥ 1 Year)	1.01	0.11	0.92	1.00	0.11	0.97	1.00	0.11	0.99
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.09	0.14	0.47	1.13	0.14	0.32	1.14	0.14	0.29
Current Smoker	0.77	0.11	0.06	0.79	0.11	0.09	0.80	0.11	0.10
Alcohol use Status (Abstainer)									
Former Drinker	1.03	0.13	0.80	1.01	0.13	0.91	0.99	0.13	0.96
Current Drinker	0.99	0.11	0.90	0.94	0.11	0.56	0.91	0.10	0.43
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.31	0.23	0.11	1.28	0.22	0.16	1.28	0.22	0.15
≥ 75 Minutes per Week	0.76	0.08	0.01	0.72	0.07	0.00	0.71	0.07	0.00
Intercept	5.38	1.13	0.00	2.12	0.59	0.01	2.93	1.43	0.03

$N = 12,695$

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.18	0.07	0.01	-0.17	0.07	0.01	-	-	-
0	-	-	-	-	-	-	-0.25	0.34	0.46
10	-	-	-	-	-	-	-0.24	0.26	0.36
20	-	-	-	-	-	-	-0.21	0.15	0.18

30	-	-	-	-	-	-	-0.17	0.07	0.02
40	-	-	-	-	-	-	-0.13	0.11	0.22
50	-	-	-	-	-	-	-0.10	0.17	0.57
East Asia	-0.31	0.05	0.00	-0.30	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.19	0.25	0.45
10	-	-	-	-	-	-	-0.23	0.18	0.19
20	-	-	-	-	-	-	-0.27	0.11	0.01
30	-	-	-	-	-	-	-0.29	0.05	0.00
40	-	-	-	-	-	-	-0.31	0.08	0.00
50	-	-	-	-	-	-	-0.32	0.14	0.03
Southeast Asia	-0.34	0.03	0.00	-0.33	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.40	0.14	0.01
10	-	-	-	-	-	-	-0.40	0.11	0.00
20	-	-	-	-	-	-	-0.38	0.07	0.00
30	-	-	-	-	-	-	-0.34	0.03	0.00
40	-	-	-	-	-	-	-0.28	0.06	0.00
50	-	-	-	-	-	-	-0.22	0.09	0.02
Southwest Asia	-0.21	0.06	0.00	-0.20	0.06	0.00	-	-	-
0	-	-	-	-	-	-	-0.55	0.11	0.00
10	-	-	-	-	-	-	-0.59	0.08	0.00
20	-	-	-	-	-	-	-0.51	0.08	0.00
30	-	-	-	-	-	-	-0.26	0.06	0.00
40	-	-	-	-	-	-	-0.01	0.06	0.93
50	-	-	-	-	-	-	0.09	0.05	0.07
China/Hong Kong	-0.52	0.06	0.00	-0.49	0.06	0.00	-	-	-
0	-	-	-	-	-	-	-0.54	0.12	0.00
10	-	-	-	-	-	-	-0.59	0.10	0.00
20	-	-	-	-	-	-	-0.59	0.09	0.00
30	-	-	-	-	-	-	-0.51	0.07	0.00
40	-	-	-	-	-	-	-0.35	0.13	0.01
50	-	-	-	-	-	-	-0.17	0.22	0.45
Middle East	-0.13	0.06	0.02	-0.13	0.06	0.03	-	-	-
0	-	-	-	-	-	-	-0.11	0.25	0.66
10	-	-	-	-	-	-	-0.12	0.17	0.49
20	-	-	-	-	-	-	-0.12	0.10	0.22
30	-	-	-	-	-	-	-0.12	0.06	0.03
40	-	-	-	-	-	-	-0.12	0.08	0.12
50	-	-	-	-	-	-	-0.11	0.11	0.34
Europe	-0.11	0.03	0.00	-0.11	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.30	0.17	0.08
10	-	-	-	-	-	-	-0.25	0.13	0.05
20	-	-	-	-	-	-	-0.19	0.08	0.02
30	-	-	-	-	-	-	-0.12	0.04	0.00

40	-	-	-	-	-	-	-0.06	0.05	0.26
50	-	-	-	-	-	-	-0.01	0.07	0.84
Central America	-0.01	0.03	0.69	-0.01	0.03	0.82	-	-	-
0	-	-	-	-	-	-	-0.22	0.23	0.35
10	-	-	-	-	-	-	-0.15	0.17	0.37
20	-	-	-	-	-	-	-0.08	0.09	0.37
30	-	-	-	-	-	-	-0.01	0.03	0.71
40	-	-	-	-	-	-	0.03	0.05	0.55
50	-	-	-	-	-	-	0.05	0.06	0.42
South America	-0.17	0.12	0.15	-0.15	0.12	0.20	-	-	-
0	-	-	-	-	-	-	-0.53	0.15	0.00
10	-	-	-	-	-	-	-0.52	0.20	0.01
20	-	-	-	-	-	-	-0.38	0.20	0.06
30	-	-	-	-	-	-	-0.14	0.13	0.29
40	-	-	-	-	-	-	0.04	0.16	0.79
50	-	-	-	-	-	-	0.10	0.10	0.32
Caribbean	-0.09	0.03	0.00	-0.08	0.03	0.01	-	-	-
0	-	-	-	-	-	-	0.13	0.17	0.42
10	-	-	-	-	-	-	0.06	0.11	0.60
20	-	-	-	-	-	-	-0.01	0.06	0.87
30	-	-	-	-	-	-	-0.07	0.03	0.02
40	-	-	-	-	-	-	-0.13	0.06	0.03
50	-	-	-	-	-	-	-0.17	0.10	0.09
Sub-Saharan Africa	-0.10	0.07	0.15	-0.08	0.07	0.25	-	-	-
0	-	-	-	-	-	-	-0.05	0.54	0.93
10	-	-	-	-	-	-	-0.06	0.36	0.86
20	-	-	-	-	-	-	-0.07	0.18	0.68
30	-	-	-	-	-	-	-0.08	0.07	0.23
40	-	-	-	-	-	-	-0.08	0.15	0.58
50	-	-	-	-	-	-	-0.08	0.25	0.75
North Africa	-0.40	0.12	0.00	-0.38	0.12	0.00	-	-	-
0	-	-	-	-	-	-	-0.24	0.75	0.76
10	-	-	-	-	-	-	-0.29	0.54	0.60
20	-	-	-	-	-	-	-0.33	0.32	0.30
30	-	-	-	-	-	-	-0.36	0.13	0.01
40	-	-	-	-	-	-	-0.39	0.23	0.09
50	-	-	-	-	-	-	-0.41	0.47	0.39
Other Foreign-Born	-0.11	0.03	0.00	-0.10	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.19	0.17	0.27
10	-	-	-	-	-	-	-0.17	0.12	0.16
20	-	-	-	-	-	-	-0.14	0.06	0.03
30	-	-	-	-	-	-	-0.10	0.03	0.00
40	-	-	-	-	-	-	-0.07	0.05	0.16

**Panel D. 1980-1989**

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.33	0.07	0.00	0.34	0.07	0.00	0.61	0.44	0.49
East Asia	0.22	0.03	0.00	0.22	0.03	0.00	0.28	0.16	0.03
Southeast Asia	0.22	0.02	0.00	0.22	0.02	0.00	0.37	0.12	0.00
Southwest Asia	0.43	0.06	0.00	0.46	0.06	0.00	0.71	0.34	0.48
China/Hong Kong	0.12	0.02	0.00	0.13	0.02	0.00	0.39	0.25	0.14
Middle East	0.59	0.08	0.00	0.62	0.09	0.00	0.28	0.14	0.01
Europe	0.50	0.05	0.00	0.53	0.05	0.00	0.43	0.14	0.01
Central America	0.88	0.07	0.10	0.88	0.07	0.12	0.82	0.25	0.52
South America	0.36	0.14	0.01	0.38	0.15	0.02	1.38	1.84	0.81
Caribbean	0.64	0.05	0.00	0.67	0.05	0.00	1.64	0.51	0.11
Sub-Saharan Africa	0.79	0.14	0.17	0.82	0.14	0.24	0.29	0.19	0.06
North Africa	0.77	0.28	0.48	0.85	0.31	0.65	0.11	0.19	0.19
Other Foreign-Born	0.67	0.05	0.00	0.70	0.06	0.00	1.05	0.31	0.86
Female (Male)	0.56	0.03	0.00	0.55	0.03	0.00	0.54	0.03	0.00
Age (Centered at 18)	1.01	0.00	0.00	1.00	0.00	0.02	1.00	0.00	0.03
Time in the United States (Centered at 0 years)				1.03	0.00	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.00	0.06	0.95	0.95	0.06	0.41	0.94	0.05	0.28
College Degree or Higher (Less than a College Degree)	0.76	0.04	0.00	0.75	0.04	0.00	0.75	0.04	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.94	0.06	0.36	0.95	0.06	0.46	0.95	0.06	0.46
≥ 2.00	0.92	0.06	0.16	0.92	0.06	0.17	0.91	0.06	0.14
Insured (Uninsured)	1.04	0.06	0.49	1.00	0.06	1.00	1.00	0.06	0.99
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.90	0.05	0.06	0.89	0.05	0.05	0.89	0.05	0.05
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.16	0.08	0.03	1.18	0.08	0.02	1.18	0.08	0.02
Current Smoker	1.03	0.07	0.67	1.04	0.07	0.60	1.04	0.07	0.55
Alcohol use Status (Abstainer)									
Former Drinker	1.01	0.07	0.90	0.98	0.07	0.80	0.98	0.07	0.77
Current Drinker	0.92	0.05	0.15	0.88	0.05	0.03	0.88	0.05	0.03

Vigorous Exercise Status (None)

< 75 Minutes per Week	0.96	0.08	0.66	0.94	0.08	0.51	0.94	0.08	0.46
≥ 75 Minutes per Week	0.92	0.05	0.10	0.88	0.05	0.02	0.88	0.05	0.02

Intercept	3.80	0.39	0.00	2.33	0.28	0.00	1.91	0.37	0.00
-----------	------	------	------	------	------	------	------	------	------

N = 50,743

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.24	0.05	0.00	-0.23	0.05	0.00	-	-	-
0	-	-	-	-	-	-	-0.12	0.17	0.49
10	-	-	-	-	-	-	-0.17	0.11	0.12
20	-	-	-	-	-	-	-0.22	0.06	0.00
30	-	-	-	-	-	-	-0.25	0.06	0.00
40	-	-	-	-	-	-	-0.26	0.11	0.02
50	-	-	-	-	-	-	-0.27	0.17	0.10
East Asia	-0.34	0.03	0.00	-0.33	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.29	0.11	0.01
10	-	-	-	-	-	-	-0.32	0.08	0.00
20	-	-	-	-	-	-	-0.33	0.04	0.00
30	-	-	-	-	-	-	-0.33	0.04	0.00
40	-	-	-	-	-	-	-0.32	0.09	0.00
50	-	-	-	-	-	-	-0.29	0.13	0.03
Southeast Asia	-0.34	0.02	0.00	-0.34	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.23	0.07	0.00
10	-	-	-	-	-	-	-0.28	0.05	0.00
20	-	-	-	-	-	-	-0.32	0.02	0.00
30	-	-	-	-	-	-	-0.35	0.02	0.00
40	-	-	-	-	-	-	-0.36	0.04	0.00
50	-	-	-	-	-	-	-0.35	0.07	0.00
Southwest Asia	-0.18	0.03	0.00	-0.16	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.08	0.12	0.48
10	-	-	-	-	-	-	-0.12	0.07	0.09
20	-	-	-	-	-	-	-0.15	0.04	0.00
30	-	-	-	-	-	-	-0.17	0.04	0.00
40	-	-	-	-	-	-	-0.18	0.07	0.01
50	-	-	-	-	-	-	-0.18	0.09	0.06
China/Hong Kong	-0.47	0.03	0.00	-0.46	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.22	0.14	0.11
10	-	-	-	-	-	-	-0.32	0.08	0.00
20	-	-	-	-	-	-	-0.42	0.04	0.00
30	-	-	-	-	-	-	-0.50	0.05	0.00
40	-	-	-	-	-	-	-0.57	0.09	0.00

50	-	-	-	-	-	-	-0.62	0.14	0.00
Middle East	-0.11	0.03	0.00	-0.10	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.29	0.10	0.01
10	-	-	-	-	-	-	-0.22	0.07	0.00
20	-	-	-	-	-	-	-0.13	0.04	0.00
30	-	-	-	-	-	-	-0.05	0.03	0.18
40	-	-	-	-	-	-	0.01	0.05	0.86
50	-	-	-	-	-	-	0.03	0.04	0.44
Europe	-0.14	0.02	0.00	-0.13	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.20	0.07	0.01
10	-	-	-	-	-	-	-0.18	0.05	0.00
20	-	-	-	-	-	-	-0.15	0.02	0.00
30	-	-	-	-	-	-	-0.11	0.03	0.00
40	-	-	-	-	-	-	-0.08	0.04	0.05
50	-	-	-	-	-	-	-0.05	0.04	0.27
Central America	-0.02	0.01	0.10	-0.02	0.01	0.12	-	-	-
0	-	-	-	-	-	-	-0.05	0.07	0.52
10	-	-	-	-	-	-	-0.04	0.04	0.36
20	-	-	-	-	-	-	-0.03	0.02	0.10
30	-	-	-	-	-	-	-0.02	0.02	0.39
40	-	-	-	-	-	-	-0.01	0.03	0.74
50	-	-	-	-	-	-	-0.01	0.04	0.89
South America	-0.22	0.10	0.02	-0.21	0.10	0.03	-	-	-
0	-	-	-	-	-	-	0.08	0.31	0.81
10	-	-	-	-	-	-	-0.05	0.20	0.80
20	-	-	-	-	-	-	-0.17	0.11	0.14
30	-	-	-	-	-	-	-0.28	0.12	0.02
40	-	-	-	-	-	-	-0.37	0.21	0.09
50	-	-	-	-	-	-	-0.45	0.33	0.17
Caribbean	-0.09	0.02	0.00	-0.08	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.11	0.07	0.11
10	-	-	-	-	-	-	0.03	0.04	0.49
20	-	-	-	-	-	-	-0.05	0.02	0.01
30	-	-	-	-	-	-	-0.11	0.02	0.00
40	-	-	-	-	-	-	-0.16	0.04	0.00
50	-	-	-	-	-	-	-0.20	0.06	0.00
Sub-Saharan Africa	-0.05	0.03	0.19	-0.04	0.03	0.25	-	-	-
0	-	-	-	-	-	-	-0.28	0.13	0.03
10	-	-	-	-	-	-	-0.19	0.09	0.03
20	-	-	-	-	-	-	-0.08	0.04	0.03
30	-	-	-	-	-	-	0.01	0.04	0.90
40	-	-	-	-	-	-	0.05	0.05	0.33
50	-	-	-	-	-	-	0.06	0.04	0.15



North Africa	-0.05	0.07	0.50	-0.03	0.07	0.66	-	-	-
0	-	-	-	-	-	-	-0.42	0.18	0.02
10	-	-	-	-	-	-	-0.30	0.21	0.15
20	-	-	-	-	-	-	-0.08	0.09	0.42
30	-	-	-	-	-	-	0.08	0.08	0.34
40	-	-	-	-	-	-	0.11	0.06	0.04
50	-	-	-	-	-	-	0.10	0.03	0.00
Other Foreign-Born	-0.08	0.02	0.00	-0.07	0.02	0.00	-	-	-
0	-	-	-	-	-	-	0.01	0.07	0.86
10	-	-	-	-	-	-	-0.03	0.04	0.51
20	-	-	-	-	-	-	-0.06	0.02	0.00
30	-	-	-	-	-	-	-0.08	0.02	0.00
40	-	-	-	-	-	-	-0.10	0.04	0.01
50	-	-	-	-	-	-	-0.10	0.05	0.03

## Panel E. 1990-2001

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.50	0.07	0.00	0.55	0.08	0.00	0.75	0.22	0.33
East Asia	0.16	0.02	0.00	0.17	0.02	0.00	0.13	0.04	0.00
Southeast Asia	0.22	0.02	0.00	0.23	0.02	0.00	0.39	0.07	0.00
Southwest Asia	0.38	0.03	0.00	0.41	0.04	0.00	0.64	0.12	0.02
China/Hong Kong	0.10	0.01	0.00	0.10	0.01	0.00	0.23	0.07	0.00
Middle East	0.54	0.07	0.00	0.58	0.07	0.00	0.56	0.16	0.04
Europe	0.49	0.04	0.00	0.52	0.04	0.00	0.66	0.10	0.01
Central America	0.91	0.06	0.16	0.93	0.06	0.25	0.96	0.15	0.82
South America	0.49	0.12	0.00	0.55	0.14	0.02	1.18	0.49	0.69
Caribbean	0.83	0.06	0.01	0.87	0.06	0.03	0.88	0.13	0.38
Sub-Saharan Africa	0.71	0.06	0.00	0.77	0.07	0.00	0.63	0.13	0.02
North Africa	0.80	0.21	0.40	0.86	0.22	0.57	0.95	0.57	0.93
Other Foreign-Born	0.56	0.04	0.00	0.59	0.04	0.00	0.76	0.10	0.04
Female (Male)	0.57	0.02	0.00	0.56	0.02	0.00	0.56	0.02	0.00
Age (Centered at 18)	1.03	0.00	0.00	1.02	0.00	0.00	1.02	0.00	0.00
Time in the United States (Centered at 0 years)				1.03	0.00	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.01	0.04	0.89	0.95	0.04	0.23	0.94	0.04	0.15
College Degree or Higher (Less than a College Degree)	0.78	0.04	0.00	0.80	0.04	0.00	0.80	0.04	0.00
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.93	0.04	0.12	0.92	0.04	0.09	0.92	0.04	0.09

$\geq 2.00$	0.81	0.04	0.00	0.80	0.04	0.00	0.80	0.04	0.00
Insured (Uninsured)	1.00	0.04	0.99	0.95	0.04	0.21	0.94	0.04	0.15
Last Healthcare Visit < 1 Year ( $\geq 1$ Year)	0.89	0.04	0.01	0.90	0.04	0.02	0.90	0.04	0.02
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.26	0.08	0.00	1.29	0.08	0.00	1.28	0.08	0.00
Current Smoker	1.03	0.07	0.65	1.06	0.07	0.36	1.06	0.07	0.37
Alcohol use Status (Abstainer)									
Former Drinker	1.18	0.07	0.00	1.16	0.07	0.02	1.15	0.07	0.02
Current Drinker	1.11	0.05	0.02	1.07	0.05	0.13	1.07	0.05	0.15
Vigorous Exercise Status (None)									
< 75 Minutes per Week	0.97	0.06	0.60	0.95	0.06	0.42	0.95	0.06	0.41
$\geq 75$ Minutes per Week	0.94	0.04	0.15	0.90	0.04	0.02	0.90	0.04	0.02
Intercept	2.09	0.14	0.00	1.22	0.05	0.17	1.39	0.12	0.00
$N = 87,620$									

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.15	0.03	0.00	-0.13	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.07	0.07	0.33
10	-	-	-	-	-	-	-0.12	0.03	0.00
20	-	-	-	-	-	-	-0.15	0.05	0.00
30	-	-	-	-	-	-	-0.17	0.08	0.04
40	-	-	-	-	-	-	-0.19	0.12	0.12
50	-	-	-	-	-	-	-0.19	0.15	0.21
East Asia	-0.41	0.02	0.00	-0.40	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.41	0.04	0.00
10	-	-	-	-	-	-	-0.41	0.03	0.00
20	-	-	-	-	-	-	-0.38	0.04	0.00
30	-	-	-	-	-	-	-0.32	0.09	0.00
40	-	-	-	-	-	-	-0.24	0.13	0.06
50	-	-	-	-	-	-	-0.16	0.14	0.25
Southeast Asia	-0.34	0.02	0.00	-0.33	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.22	0.04	0.00
10	-	-	-	-	-	-	-0.30	0.02	0.00
20	-	-	-	-	-	-	-0.36	0.02	0.00
30	-	-	-	-	-	-	-0.42	0.04	0.00
40	-	-	-	-	-	-	-0.46	0.07	0.00
50	-	-	-	-	-	-	-0.48	0.09	0.00

Southwest Asia	-0.22	0.02	0.00	-0.20	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.10	0.05	0.02
10	-	-	-	-	-	-	-0.18	0.02	0.00
20	-	-	-	-	-	-	-0.24	0.03	0.00
30	-	-	-	-	-	-	-0.29	0.06	0.00
40	-	-	-	-	-	-	-0.33	0.08	0.00
50	-	-	-	-	-	-	-0.35	0.11	0.00
China/Hong Kong	-0.50	0.02	0.00	-0.49	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.32	0.05	0.00
10	-	-	-	-	-	-	-0.44	0.02	0.00
20	-	-	-	-	-	-	-0.54	0.03	0.00
30	-	-	-	-	-	-	-0.63	0.05	0.00
40	-	-	-	-	-	-	-0.71	0.07	0.00
50	-	-	-	-	-	-	-0.77	0.08	0.00
Middle East	-0.13	0.03	0.00	-0.12	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.14	0.07	0.04
10	-	-	-	-	-	-	-0.12	0.03	0.00
20	-	-	-	-	-	-	-0.10	0.04	0.02
30	-	-	-	-	-	-	-0.08	0.07	0.27
40	-	-	-	-	-	-	-0.06	0.09	0.52
50	-	-	-	-	-	-	-0.04	0.09	0.66
Europe	-0.16	0.02	0.00	-0.14	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.10	0.03	0.01
10	-	-	-	-	-	-	-0.13	0.02	0.00
20	-	-	-	-	-	-	-0.16	0.02	0.00
30	-	-	-	-	-	-	-0.17	0.03	0.00
40	-	-	-	-	-	-	-0.18	0.05	0.00
50	-	-	-	-	-	-	-0.17	0.06	0.00
Central America	-0.02	0.01	0.16	-0.02	0.01	0.26	-	-	-
0	-	-	-	-	-	-	-0.01	0.04	0.82
10	-	-	-	-	-	-	-0.01	0.02	0.35
20	-	-	-	-	-	-	-0.02	0.02	0.42
30	-	-	-	-	-	-	-0.02	0.04	0.58
40	-	-	-	-	-	-	-0.02	0.04	0.66
50	-	-	-	-	-	-	-0.02	0.04	0.70
South America	-0.16	0.06	0.01	-0.13	0.06	0.03	-	-	-
0	-	-	-	-	-	-	0.04	0.09	0.68
10	-	-	-	-	-	-	-0.10	0.06	0.06
20	-	-	-	-	-	-	-0.24	0.10	0.02
30	-	-	-	-	-	-	-0.36	0.17	0.04
40	-	-	-	-	-	-	-0.46	0.24	0.06
50	-	-	-	-	-	-	-0.55	0.30	0.07
Caribbean	-0.04	0.01	0.01	-0.03	0.01	0.03	-	-	-

0	-	-	-	-	-	-	-0.03	0.04	0.38
10	-	-	-	-	-	-	-0.03	0.02	0.06
20	-	-	-	-	-	-	-0.03	0.02	0.13
30	-	-	-	-	-	-	-0.02	0.03	0.41
40	-	-	-	-	-	-	-0.02	0.04	0.58
50	-	-	-	-	-	-	-0.02	0.04	0.67
Sub-Saharan Africa	-0.07	0.02	0.00	-0.06	0.02	0.01	-	-	-
0	-	-	-	-	-	-	-0.11	0.05	0.02
10	-	-	-	-	-	-	-0.07	0.02	0.00
20	-	-	-	-	-	-	-0.03	0.03	0.34
30	-	-	-	-	-	-	0.00	0.04	0.96
40	-	-	-	-	-	-	0.02	0.04	0.67
50	-	-	-	-	-	-	0.02	0.04	0.52
North Africa	-0.05	0.06	0.42	-0.03	0.06	0.58	-	-	-
0	-	-	-	-	-	-	-0.01	0.14	0.93
10	-	-	-	-	-	-	-0.03	0.06	0.68
20	-	-	-	-	-	-	-0.04	0.09	0.68
30	-	-	-	-	-	-	-0.04	0.14	0.78
40	-	-	-	-	-	-	-0.04	0.18	0.82
50	-	-	-	-	-	-	-0.04	0.19	0.84
Other Foreign-Born	-0.13	0.01	0.00	-0.12	0.01	0.00	-	-	-
0	-	-	-	-	-	-	-0.06	0.03	0.04
10	-	-	-	-	-	-	-0.10	0.02	0.00
20	-	-	-	-	-	-	-0.13	0.02	0.00
30	-	-	-	-	-	-	-0.15	0.03	0.00
40	-	-	-	-	-	-	-0.16	0.05	0.00
50	-	-	-	-	-	-	-0.16	0.06	0.01

## Panel F. 2002-2018

	Model 1 - Age			Model 2 - Age & Duration			Model 3- Age, Duration, and Interaction		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Origin (Mexico)									
Canada	0.41	0.08	0.00	0.46	0.09	0.00	0.57	0.16	0.05
East Asia	0.13	0.02	0.00	0.14	0.02	0.00	0.15	0.04	0.00
Southeast Asia	0.25	0.03	0.00	0.27	0.03	0.00	0.25	0.05	0.00
Southwest Asia	0.49	0.05	0.00	0.54	0.06	0.00	0.54	0.09	0.00
China/Hong Kong	0.14	0.02	0.00	0.15	0.02	0.00	0.16	0.03	0.00
Middle East	0.47	0.07	0.00	0.53	0.08	0.00	0.49	0.11	0.00
Europe	0.37	0.04	0.00	0.40	0.05	0.00	0.39	0.07	0.00
Central America	0.77	0.07	0.01	0.78	0.07	0.01	0.86	0.15	0.41
South America	0.52	0.21	0.11	0.55	0.23	0.16	1.28	0.83	0.70
Caribbean	0.71	0.07	0.00	0.75	0.07	0.00	0.79	0.16	0.25

Sub-Saharan Africa	0.57	0.07	0.00	0.61	0.07	0.00	0.59	0.12	0.01
North Africa	0.81	0.21	0.41	0.89	0.23	0.66	0.78	0.32	0.55
Other Foreign-Born	0.56	0.05	0.00	0.61	0.05	0.00	0.62	0.09	0.00
Female (Male)	0.61	0.03	0.00	0.60	0.03	0.00	0.60	0.03	0.00
Age (Centered at 18)	1.03	0.00	0.00	1.03	0.00	0.00	1.03	0.00	0.00
Time in the United States (Centered at 0 years)				1.04	0.01	0.00	1.04	0.01	0.00
Origin * Time in the United States (Centered at 0 years)							<i>Included</i>		
English Interview (Non-English Interview)	1.04	0.07	0.60	1.01	0.07	0.86	1.01	0.07	0.86
College Degree or Higher (Less than a College Degree)	0.89	0.06	0.07	0.93	0.06	0.26	0.93	0.06	0.24
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	1.13	0.08	0.06	1.10	0.07	0.16	1.10	0.07	0.15
≥ 2.00	0.97	0.06	0.61	0.91	0.06	0.15	0.91	0.06	0.15
Insured (Uninsured)	1.08	0.07	0.20	1.05	0.06	0.47	1.05	0.06	0.47
Last Healthcare Visit < 1 Year (≥ 1 Year)	0.90	0.05	0.04	0.90	0.05	0.05	0.90	0.05	0.06
Cigarette Smoking Status (Abstainer)									
Former Smoker	1.37	0.11	0.00	1.39	0.11	0.00	1.38	0.11	0.00
Current Smoker	1.05	0.09	0.53	1.08	0.09	0.39	1.07	0.09	0.41
Alcohol use Status (Abstainer)									
Former Drinker	1.02	0.08	0.82	1.01	0.08	0.88	1.01	0.08	0.90
Current Drinker	1.09	0.06	0.12	1.09	0.06	0.14	1.08	0.06	0.15
Vigorous Exercise Status (None)									
< 75 Minutes per Week	1.15	0.09	0.08	1.11	0.09	0.17	1.11	0.09	0.17
≥ 75 Minutes per Week	0.86	0.05	0.01	0.83	0.05	0.00	0.84	0.05	0.00
Intercept	1.38	0.13	0.00	1.16	0.11	0.12	1.15	0.13	0.21

*N* = 43,903

	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t	dy/ dx	Std. Error	P >  t
Canada	-0.20	0.04	0.00	-0.18	0.04	0.00	-	-	-
0	-	-	-	-	-	-	-0.13	0.07	0.05
10	-	-	-	-	-	-	-0.22	0.07	0.00
20	-	-	-	-	-	-	-0.30	0.15	0.05
30	-	-	-	-	-	-	-0.36	0.24	0.14
40	-	-	-	-	-	-	-0.41	0.34	0.22
50	-	-	-	-	-	-	-0.45	0.43	0.30
East Asia	-0.44	0.03	0.00	-0.42	0.03	0.00	-	-	-

0	-	-	-	-	-	-	-0.40	0.04	0.00
10	-	-	-	-	-	-	-0.44	0.04	0.00
20	-	-	-	-	-	-	-0.46	0.12	0.00
30	-	-	-	-	-	-	-0.47	0.21	0.03
40	-	-	-	-	-	-	-0.45	0.32	0.15
50	-	-	-	-	-	-	-0.42	0.41	0.31
Southeast Asia	-0.32	0.03	0.00	-0.30	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.31	0.04	0.00
10	-	-	-	-	-	-	-0.28	0.04	0.00
20	-	-	-	-	-	-	-0.23	0.10	0.02
30	-	-	-	-	-	-	-0.17	0.14	0.25
40	-	-	-	-	-	-	-0.11	0.16	0.52
50	-	-	-	-	-	-	-0.06	0.15	0.69
Southwest Asia	-0.16	0.02	0.00	-0.14	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.14	0.04	0.00
10	-	-	-	-	-	-	-0.14	0.03	0.00
20	-	-	-	-	-	-	-0.13	0.07	0.08
30	-	-	-	-	-	-	-0.11	0.10	0.28
40	-	-	-	-	-	-	-0.09	0.12	0.44
50	-	-	-	-	-	-	-0.07	0.12	0.54
China/Hong Kong	-0.43	0.03	0.00	-0.41	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.38	0.04	0.00
10	-	-	-	-	-	-	-0.43	0.04	0.00
20	-	-	-	-	-	-	-0.46	0.10	0.00
30	-	-	-	-	-	-	-0.47	0.17	0.01
40	-	-	-	-	-	-	-0.46	0.24	0.06
50	-	-	-	-	-	-	-0.43	0.32	0.17
Middle East	-0.17	0.03	0.00	-0.15	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.17	0.05	0.00
10	-	-	-	-	-	-	-0.12	0.06	0.03
20	-	-	-	-	-	-	-0.07	0.12	0.53
30	-	-	-	-	-	-	-0.03	0.15	0.83
40	-	-	-	-	-	-	0.00	0.15	0.98
50	-	-	-	-	-	-	0.01	0.12	0.94
Europe	-0.23	0.03	0.00	-0.21	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.22	0.04	0.00
10	-	-	-	-	-	-	-0.20	0.04	0.00
20	-	-	-	-	-	-	-0.16	0.08	0.05
30	-	-	-	-	-	-	-0.12	0.11	0.29
40	-	-	-	-	-	-	-0.08	0.13	0.52
50	-	-	-	-	-	-	-0.05	0.12	0.67
Central America	-0.06	0.02	0.01	-0.05	0.02	0.01	-	-	-
0	-	-	-	-	-	-	-0.03	0.04	0.41

10	-	-	-	-	-	-	-0.07	0.03	0.03
20	-	-	-	-	-	-	-0.09	0.07	0.24
30	-	-	-	-	-	-	-0.10	0.11	0.37
40	-	-	-	-	-	-	-0.11	0.14	0.45
50	-	-	-	-	-	-	-0.10	0.16	0.51
South America	-0.15	0.10	0.12	-0.14	0.10	0.17	-	-	-
0	-	-	-	-	-	-	0.06	0.14	0.70
10	-	-	-	-	-	-	-0.23	0.11	0.04
20	-	-	-	-	-	-	-0.49	0.21	0.02
30	-	-	-	-	-	-	-0.68	0.22	0.00
40	-	-	-	-	-	-	-0.80	0.17	0.00
50	-	-	-	-	-	-	-0.88	0.11	0.00
Caribbean	-0.08	0.02	0.00	-0.06	0.02	0.01	-	-	-
0	-	-	-	-	-	-	-0.05	0.05	0.25
10	-	-	-	-	-	-	-0.07	0.03	0.03
20	-	-	-	-	-	-	-0.08	0.08	0.33
30	-	-	-	-	-	-	-0.08	0.12	0.50
40	-	-	-	-	-	-	-0.08	0.14	0.59
50	-	-	-	-	-	-	-0.07	0.15	0.65
Sub-Saharan Africa	-0.13	0.03	0.00	-0.11	0.03	0.00	-	-	-
0	-	-	-	-	-	-	-0.12	0.05	0.01
10	-	-	-	-	-	-	-0.11	0.04	0.01
20	-	-	-	-	-	-	-0.08	0.09	0.34
30	-	-	-	-	-	-	-0.06	0.12	0.62
40	-	-	-	-	-	-	-0.04	0.13	0.75
50	-	-	-	-	-	-	-0.03	0.13	0.83
North Africa	-0.05	0.06	0.42	-0.03	0.06	0.66	-	-	-
0	-	-	-	-	-	-	-0.06	0.10	0.55
10	-	-	-	-	-	-	0.01	0.08	0.93
20	-	-	-	-	-	-	0.05	0.14	0.71
30	-	-	-	-	-	-	0.07	0.14	0.63
40	-	-	-	-	-	-	0.07	0.12	0.56
50	-	-	-	-	-	-	0.06	0.09	0.50
Other Foreign-Born	-0.13	0.02	0.00	-0.11	0.02	0.00	-	-	-
0	-	-	-	-	-	-	-0.11	0.03	0.00
10	-	-	-	-	-	-	-0.11	0.03	0.00
20	-	-	-	-	-	-	-0.11	0.06	0.07
30	-	-	-	-	-	-	-0.10	0.09	0.26
40	-	-	-	-	-	-	-0.08	0.10	0.41
50	-	-	-	-	-	-	-0.07	0.10	0.51

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

### Appendix 3 – Full Multivariate Tables for Analyses Found in Chapter 6

**Appendix Table 3.1** Results of Sample-Weighted, Binomial Logistic Regression Models for Poor/Fair Self-Rated Health Relative to Good/Very Good/Excellent Self-Rated Health by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.690	0.019	***	0.533	0.016	***	0.684	0.020	***
USB NH Other	0.994	0.056		0.919	0.053		1.015	0.058	
USB Hispanic	0.846	0.040	***	0.828	0.039	***	0.907	0.044	*
Puerto Rican	0.936	0.087		0.827	0.078	*	0.870	0.084	
Haitian Black < 10 Years	0.328	0.205	+	0.482	0.319		0.448	0.286	
Haitian Black ≥ 10 Years	0.438	0.096	***	0.427	0.087	***	0.457	0.099	***
Jamaican Black < 10 Years	0.101	0.073	**	0.106	0.077	**	0.101	0.074	**
Jamaican Black ≥ 10 Years	0.707	0.141	+	0.702	0.134	+	0.760	0.154	
Trinidadian & Tobagoan Black < 10 Years	0.941	0.939		1.111	0.847		1.184	1.101	
Trinidadian & Tobagoan Black ≥ 10 Years	0.346	0.156	*	0.283	0.115	**	0.355	0.146	*
Guyanese Black < 10 Years	0.090	0.090	*	0.079	0.083	*	0.075	0.076	*
Guyanese Black ≥ 10 Years	0.552	0.197	+	0.583	0.206		0.669	0.256	
Central/South African < 10 Years	1.000			1.000			1.000		
Central/South African ≥ 10 Years	1.015	0.784		0.614	0.512		1.106	0.899	
East African < 10 Years	0.130	0.067	***	0.139	0.070	***	0.144	0.072	***
East African ≥ 10 Years	0.443	0.146	*	0.406	0.148	*	0.449	0.154	*
West African < 10 Years	0.096	0.054	***	0.096	0.054	***	0.110	0.062	***
West African ≥ 10 Years	0.509	0.151	*	0.399	0.116	**	0.538	0.157	*
Other Foreign-Born < 10 Years	0.338	0.025	***	0.303	0.022	***	0.363	0.027	***
Other Foreign-Born ≥ 10 Years	0.599	0.026	***	0.515	0.022	***	0.638	0.029	***
Age (Mean-Centered)									
	1.045	0.001	***	1.031	0.001	***	1.033	0.001	***
Interview Year (Centered at 2000)									
	1.006	0.002	***	1.017	0.002	***	1.015	0.002	***
English Interview (Non-English Interview)									
	0.815	0.039	***	0.504	0.025	***	0.731	0.037	***
College Degree or Higher (Less than a College Degree)									
	0.410	0.011	***				0.531	0.014	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.631	0.018	***				0.647	0.018	***
≥ 2.00	0.237	0.006	***				0.272	0.008	***
Insured (Uninsured)									
				0.624	0.019	***	0.852	0.026	***
Last Healthcare Visit < 1 Year (≥ 1 Year)									
				0.373	0.011	***	0.353	0.010	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.613	0.037	***	1.451	0.036	***



Current Smoker				2.624	0.064	***	2.044	0.050	***
Alcohol use Status (Abstainer)									
Former Drinker				1.096	0.037	**	1.183	0.041	***
Current Drinker				0.639	0.018	***	0.780	0.023	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.463	0.017	***	0.538	0.020	***
≥ 75 Minutes per Week				0.285	0.008	***	0.337	0.009	***
Intercept	0.571	0.032	***	0.704	0.044	***	0.845	0.056	*
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.105	0.002	***	0.114	0.003	***	0.087	0.002	***
Haitian Black < 10 Years	0.037	0.022	+	0.059	0.037		0.041	0.025	
Haitian Black ≥ 10 Years	0.049	0.010	***	0.052	0.010	***	0.042	0.009	***
Jamaican Black < 10 Years	0.012	0.008		0.014	0.010		0.010	0.007	
Jamaican Black ≥ 10 Years	0.076	0.014	***	0.083	0.014	***	0.067	0.013	***
Trinidadian & Tobagoan Black < 10 Years	0.099	0.089		0.126	0.084		0.101	0.085	
Trinidadian & Tobagoan Black ≥ 10 Years	0.039	0.017	*	0.035	0.014	*	0.033	0.013	*
Guyanese Black < 10 Years	0.010	0.010		0.010	0.010		0.007	0.007	
Guyanese Black ≥ 10 Years	0.061	0.020	**	0.070	0.023	**	0.060	0.021	**
Central/South African < 10 Years	-	-	-	-	-	-	-	-	-
Central/South African ≥ 10 Years	0.106	0.073		0.073	0.057		0.095	0.070	
East African < 10 Years	0.015	0.008	*	0.018	0.009	*	0.014	0.007	*
East African ≥ 10 Years	0.049	0.015	***	0.050	0.017	**	0.041	0.013	**
West African < 10 Years	0.011	0.006	+	0.012	0.007	+	0.010	0.006	+
West African ≥ 10 Years	0.056	0.016	***	0.049	0.013	***	0.049	0.013	***
Other Foreign-Born < 10 Years	0.038	0.003	***	0.038	0.002	***	0.033	0.002	***
Other Foreign-Born ≥ 10 Years	0.066	0.002	***	0.062	0.002	***	0.057	0.002	***
F-Statistic	F(25,122 1)	473.840		F(30,121 6)	388.120		F(33,121 3)	429.880	
Prob > F		0.000			0.000			0.000	

N = 209,995

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.626	0.014	***	0.481	0.011	***	0.629	0.014	***
USB NH Other	0.836	0.041	***	0.724	0.037	***	0.839	0.042	***
USB Hispanic	0.818	0.028	***	0.818	0.028	***	0.912	0.031	**
Puerto Rican	1.050	0.067		1.013	0.064		1.049	0.068	
Haitian Black < 10 Years	0.435	0.146	*	0.501	0.174	*	0.473	0.162	*
Haitian Black ≥ 10 Years	0.692	0.110	*	0.649	0.100	**	0.743	0.115	+
Jamaican Black < 10 Years	0.478	0.160	*	0.469	0.154	*	0.518	0.170	*
Jamaican Black ≥ 10 Years	0.715	0.117	*	0.670	0.104	*	0.790	0.127	
Trinidadian & Tobagoan Black < 10 Years	0.066	0.065	**	0.079	0.075	**	0.091	0.088	*
Trinidadian & Tobagoan Black ≥ 10 Years	0.573	0.155	*	0.553	0.153	*	0.664	0.177	
Guyanese Black < 10 Years	0.334	0.265		0.313	0.241		0.411	0.315	
Guyanese Black ≥ 10 Years	1.028	0.292		0.962	0.239		1.182	0.318	
Central/South African < 10 Years	1.437	0.730		1.893	0.948		1.826	0.870	
Central/South African ≥ 10 Years	0.485	0.340		0.399	0.262		0.501	0.346	
East African < 10 Years	0.253	0.142	*	0.257	0.134	**	0.273	0.151	*
East African ≥ 10 Years	0.299	0.099	***	0.301	0.106	***	0.339	0.118	**
West African < 10 Years	0.235	0.069	***	0.215	0.063	***	0.242	0.070	***
West African ≥ 10 Years	0.502	0.120	**	0.410	0.099	***	0.520	0.126	**
Other Foreign-Born < 10 Years	0.389	0.023	***	0.318	0.019	***	0.412	0.025	***
Other Foreign-Born ≥ 10 Years	0.644	0.022	***	0.537	0.018	***	0.700	0.024	***
Age (Mean-Centered)									
Age (Mean-Centered)	1.036	0.000	***	1.030	0.000	***	1.031	0.000	***
Interview Year (Centered at 2000)									
Interview Year (Centered at 2000)	1.003	0.002	+	1.012	0.002	***	1.011	0.002	***
English Interview (Non-English Interview)									
English Interview (Non-English Interview)	0.741	0.026	***	0.512	0.018	***	0.712	0.026	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher (Less than a College Degree)	0.428	0.011	***				0.551	0.014	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.574	0.013	***				0.603	0.013	***
≥ 2.00	0.255	0.005	***				0.304	0.006	***
Insured (Uninsured)									
Insured (Uninsured)				0.643	0.016	***	0.845	0.021	***
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.439	0.014	***	0.419	0.014	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.606	0.033	***	1.510	0.032	***
Current Smoker				2.819	0.061	***	2.232	0.049	***
Alcohol use Status (Abstainer)									
Former Drinker				0.875	0.019	***	0.973	0.022	
Current Drinker				0.507	0.011	***	0.639	0.014	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.461	0.015	***	0.522	0.017	***

≥ 75 Minutes per Week				0.319	0.009	***	0.379	0.010	***
Intercept	0.691	0.030	***	0.797	0.037	***	0.847	0.041	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.128	0.002	***	0.146	0.003	***	0.110	0.002	***
Haitian Black < 10 Years	0.060	0.019	**	0.079	0.025	**	0.055	0.018	**
Haitian Black ≥ 10 Years	0.092	0.013	***	0.100	0.014	***	0.084	0.012	***
Jamaican Black < 10 Years	0.066	0.020	***	0.074	0.023	***	0.060	0.019	***
Jamaican Black ≥ 10 Years	0.095	0.014	***	0.103	0.014	***	0.089	0.013	***
Trinidadian & Tobagoan Black < 10 Years	0.010	0.009		0.013	0.012		0.011	0.011	
Trinidadian & Tobagoan Black ≥ 10 Years	0.078	0.019	***	0.086	0.022	***	0.076	0.019	***
Guyanese Black < 10 Years	0.047	0.035		0.051	0.037		0.049	0.035	
Guyanese Black ≥ 10 Years	0.131	0.032	***	0.141	0.030	***	0.128	0.030	***
Central/South African < 10 Years	0.174	0.073		0.244	0.093	**	0.185	0.072	**
Central/South African ≥ 10 Years	0.067	0.044		0.064	0.039		0.058	0.038	
East African < 10 Years	0.036	0.019	+	0.042	0.021	*	0.033	0.017	+
East African ≥ 10 Years	0.042	0.013	**	0.049	0.016	**	0.040	0.014	**
West African < 10 Years	0.033	0.009	***	0.035	0.010	***	0.029	0.008	***
West African ≥ 10 Years	0.069	0.015	***	0.066	0.015	***	0.061	0.014	***
Other Foreign-Born < 10 Years	0.054	0.003	***	0.052	0.003	***	0.049	0.003	***
Other Foreign-Born ≥ 10 Years	0.086	0.002	***	0.084	0.002	***	0.080	0.002	***
F-Statistic	F(26,122 1)	588.52		F(31,121 6)	437.17		F(34,121 3)	501.97	
Prob > F		0			0			0	

N = 257,980

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 3.2** Results of Sample-Weighted, Binomial Logistic Regression Models for Hypertension by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.666	0.015	***	0.610	0.014	***	0.644	0.015	***
USB NH Other	0.848	0.039	***	0.819	0.038	***	0.843	0.039	***
USB Hispanic	0.686	0.025	***	0.675	0.025	***	0.684	0.026	***
Puerto Rican	0.782	0.060	***	0.733	0.058	***	0.745	0.059	***
Haitian Black < 10 Years	0.380	0.173	*	0.465	0.213	+	0.448	0.205	+
Haitian Black ≥ 10 Years	0.572	0.080	***	0.609	0.091	***	0.623	0.092	***
Jamaican Black < 10 Years	0.313	0.160	*	0.299	0.162	*	0.297	0.162	*
Jamaican Black ≥ 10 Years	0.648	0.080	***	0.632	0.080	***	0.636	0.081	***
Trinidadian & Tobagoan Black < 10 Years	0.117	0.092	**	0.119	0.096	**	0.113	0.088	**
Trinidadian & Tobagoan Black ≥ 10 Years	0.317	0.085	***	0.324	0.086	***	0.334	0.090	***
Guyanese Black < 10 Years	0.589	0.380		0.499	0.319		0.494	0.314	
Guyanese Black ≥ 10 Years	0.576	0.142	*	0.595	0.145	*	0.608	0.145	*
Central/South African < 10 Years	0.847	0.435		0.767	0.391		0.828	0.417	
Central/South African ≥ 10 Years	0.736	0.435		0.679	0.410		0.776	0.463	
East African < 10 Years	0.311	0.105	***	0.368	0.123	**	0.385	0.129	**
East African ≥ 10 Years	0.507	0.114	**	0.508	0.114	**	0.537	0.123	**
West African < 10 Years	0.393	0.095	***	0.435	0.104	***	0.465	0.111	***
West African ≥ 10 Years	0.819	0.121		0.745	0.113	+	0.830	0.125	
Other Foreign-Born < 10 Years	0.356	0.019	***	0.366	0.020	***	0.395	0.022	***
Other Foreign-Born ≥ 10 Years	0.510	0.016	***	0.490	0.016	***	0.522	0.017	***
Age (Mean-Centered)									
Age	1.061	0.000	***	1.053	0.000	***	1.053	0.000	***
Interview Year (Centered at 2000)									
Year	1.026	0.001	***	1.028	0.001	***	1.027	0.001	***
English Interview (Non-English Interview)									
English	1.319	0.048	***	1.077	0.039	*	1.187	0.044	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher	0.781	0.012	***				0.800	0.013	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.884	0.024	***				0.877	0.025	***
≥ 2.00	0.822	0.019	***				0.793	0.019	***
Insured (Uninsured)									
Uninsured				0.933	0.021	**	0.999	0.023	
Last Healthcare Visit < 1 Year (≥ 1 Year)									
≥ 1 Year				0.309	0.007	***	0.305	0.007	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.271	0.022	***	1.223	0.022	***
Current Smoker				1.205	0.023	***	1.118	0.021	***
Alcohol use Status (Abstainer)									
Former Drinker				1.296	0.036	***	1.310	0.036	***

Current Drinker				1.158	0.024	***	1.212	0.025	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.856	0.021	***	0.894	0.022	***
≥ 75 Minutes per Week				0.705	0.011	***	0.742	0.011	***
Intercept	0.397	0.018	***	0.466	0.023	***	0.482	0.024	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.325	0.005	***	0.324	0.005	***	0.314	0.005	***
Haitian Black < 10 Years	0.155	0.060	**	0.182	0.068	**	0.170	0.065	**
Haitian Black ≥ 10 Years	0.216	0.023	***	0.226	0.026	***	0.222	0.025	***
Jamaican Black < 10 Years	0.131	0.058	*	0.125	0.059	*	0.119	0.057	*
Jamaican Black ≥ 10 Years	0.238	0.022	***	0.232	0.022	***	0.225	0.022	***
Trinidadian & Tobagoan Black < 10 Years	0.054	0.040		0.054	0.041		0.049	0.036	
Trinidadian & Tobagoan Black ≥ 10 Years	0.132	0.031	***	0.134	0.031	***	0.132	0.031	***
Guyanese Black < 10 Years	0.221	0.111	*	0.193	0.099	+	0.184	0.095	+
Guyanese Black ≥ 10 Years	0.217	0.042	***	0.222	0.042	***	0.217	0.040	***
Central/South African < 10 Years	0.290	0.106	**	0.269	0.100	**	0.275	0.100	**
Central/South African ≥ 10 Years	0.262	0.114	*	0.245	0.111	*	0.262	0.115	*
East African < 10 Years	0.130	0.038	***	0.150	0.042	***	0.150	0.043	***
East African ≥ 10 Years	0.196	0.035	***	0.196	0.035	***	0.197	0.036	***
West African < 10 Years	0.159	0.032	***	0.172	0.034	***	0.175	0.035	***
West African ≥ 10 Years	0.283	0.030	***	0.263	0.029	***	0.275	0.030	***
Other Foreign-Born < 10 Years	0.146	0.006	***	0.149	0.006	***	0.153	0.007	***
Other Foreign-Born ≥ 10 Years	0.197	0.004	***	0.190	0.004	***	0.193	0.004	***
F-Statistic	F(26,122 1)	884.470		F(31,121 6)	750.860		F(34,121 3)	696.850	
Prob > F		0.000			0.000			0.000	

N = 209,908

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

# Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.437	0.008	***	0.404	0.008	***	0.443	0.009	***
USB NH Other	0.535	0.022	***	0.514	0.022	***	0.545	0.023	***
USB Hispanic	0.455	0.016	***	0.468	0.017	***	0.476	0.017	***
Puerto Rican	0.544	0.035	***	0.534	0.034	***	0.539	0.035	***
Haitian Black < 10 Years	0.341	0.124	**	0.369	0.140	**	0.359	0.134	**
Haitian Black ≥ 10 Years	0.486	0.079	***	0.477	0.077	***	0.492	0.080	***
Jamaican Black < 10 Years	0.392	0.090	***	0.395	0.087	***	0.393	0.089	***
Jamaican Black ≥ 10 Years	0.696	0.077	***	0.662	0.075	***	0.705	0.081	**
Trinidadian & Tobagoan Black < 10 Years	0.054	0.041	***	0.061	0.047	***	0.062	0.047	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.549	0.133	*	0.517	0.122	**	0.554	0.133	*
Guyanese Black < 10 Years	0.551	0.287		0.579	0.287		0.614	0.304	
Guyanese Black ≥ 10 Years	0.747	0.159		0.718	0.150		0.760	0.163	
Central/South African < 10 Years	0.165	0.108	**	0.181	0.119	**	0.174	0.116	**
Central/South African ≥ 10 Years	0.675	0.373		0.612	0.372		0.698	0.391	
East African < 10 Years	0.165	0.051	***	0.172	0.052	***	0.173	0.053	***
East African ≥ 10 Years	0.187	0.064	***	0.196	0.067	***	0.204	0.070	***
West African < 10 Years	0.348	0.070	***	0.335	0.068	***	0.355	0.073	***
West African ≥ 10 Years	0.821	0.137		0.735	0.124	+	0.822	0.141	
Other Foreign-Born < 10 Years	0.273	0.014	***	0.260	0.013	***	0.293	0.015	***
Other Foreign-Born ≥ 10 Years	0.366	0.010	***	0.346	0.010	***	0.382	0.011	***
Age (Mean-Centered)									
Age (Mean-Centered)	1.067	0.000	***	1.064	0.000	***	1.064	0.000	***
Interview Year (Centered at 2000)									
Interview Year (Centered at 2000)	1.011	0.001	***	1.013	0.001	***	1.014	0.001	***
English Interview (Non-English Interview)									
English Interview (Non-English Interview)	0.956	0.030		0.791	0.025	***	0.914	0.029	**
College Degree or Higher (Less than a College Degree)									
College Degree or Higher (Less than a College Degree)	0.658	0.010	***				0.699	0.011	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.870	0.018	***				0.876	0.018	***
≥ 2.00	0.689	0.013	***				0.708	0.014	***
Insured (Uninsured)									
Insured (Uninsured)				0.822	0.019	***	0.925	0.021	***
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.331	0.009	***	0.324	0.009	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.222	0.019	***	1.171	0.019	***
Current Smoker				1.306	0.024	***	1.159	0.021	***
Alcohol use Status (Abstainer)									
Former Drinker				1.090	0.021	***	1.132	0.022	***
Current Drinker				0.814	0.014	***	0.900	0.015	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.843	0.020	***	0.895	0.022	***

≥ 75 Minutes per Week				0.653	0.011	***	0.709	0.012	***
Intercept	0.865	0.032	***	1.084	0.044	*	1.058	0.045	
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.378	0.004	***	0.383	0.004	***	0.365	0.004	***
Haitian Black < 10 Years	0.172	0.052	***	0.186	0.058	***	0.171	0.053	***
Haitian Black ≥ 10 Years	0.228	0.028	***	0.229	0.028	***	0.221	0.028	***
Jamaican Black < 10 Years	0.192	0.035	***	0.197	0.034	***	0.184	0.034	***
Jamaican Black ≥ 10 Years	0.297	0.023	***	0.291	0.023	***	0.288	0.023	***
Trinidadian & Tobagoan Black < 10 Years	0.032	0.023		0.036	0.027		0.034	0.025	
Trinidadian & Tobagoan Black ≥ 10 Years	0.250	0.045	***	0.243	0.043	***	0.242	0.044	***
Guyanese Black < 10 Years	0.251	0.098	**	0.265	0.096	**	0.261	0.096	**
Guyanese Black ≥ 10 Years	0.312	0.045	***	0.308	0.044	***	0.304	0.045	***
Central/South African < 10 Years	0.091	0.054	+	0.101	0.060	+	0.091	0.055	+
Central/South African ≥ 10 Years	0.291	0.114	*	0.276	0.121	*	0.286	0.114	*
East African < 10 Years	0.091	0.026	***	0.096	0.026	***	0.090	0.025	***
East African ≥ 10 Years	0.102	0.031	***	0.109	0.033	***	0.105	0.032	***
West African < 10 Years	0.175	0.029	***	0.172	0.029	***	0.169	0.029	***
West African ≥ 10 Years	0.333	0.037	***	0.314	0.036	***	0.321	0.037	***
Other Foreign-Born < 10 Years	0.142	0.006	***	0.139	0.006	***	0.144	0.006	***
Other Foreign-Born ≥ 10 Years	0.182	0.003	***	0.177	0.003	***	0.180	0.003	***
F-Statistic	F(26,122 1)	1159.6		F(31,121 6)	912.34		F(34,121 3)	892.64	
Prob > F		0			0			0	

N = 257,896

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 3.3** Results of Sample-Weighted, Binomial Logistic Regression Models for Pre-Diabetes/Diabetes by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.641	0.018	***	0.604	0.017	***	0.652	0.019	***
USB NH Other	0.974	0.060		0.955	0.061		0.994	0.063	
USB Hispanic	1.147	0.056	**	1.188	0.060	***	1.208	0.061	***
Puerto Rican	1.407	0.126	***	1.317	0.124	**	1.349	0.126	***
Haitian Black < 10 Years	0.299	0.317		0.318	0.355		0.313	0.345	
Haitian Black ≥ 10 Years	1.171	0.200		1.115	0.201		1.162	0.208	
Jamaican Black < 10 Years	0.241	0.169		0.228	0.155	*	0.223	0.152	*
Jamaican Black ≥ 10 Years	1.053	0.203		1.038	0.194		1.048	0.200	
Trinidadian & Tobagoan Black < 10 Years	0.625	0.722		0.773	0.901		0.733	0.879	
Trinidadian & Tobagoan Black ≥ 10 Years	0.687	0.268		0.717	0.281		0.746	0.297	
Guyanese Black < 10 Years	0.589	0.388		0.488	0.316		0.483	0.315	
Guyanese Black ≥ 10 Years	1.402	0.532		1.553	0.620		1.606	0.613	
Central/South African < 10 Years	0.090	0.090	*	0.077	0.079	*	0.086	0.088	*
Central/South African ≥ 10 Years	0.650	0.371		0.536	0.310		0.685	0.393	
East African < 10 Years	0.788	0.336		0.926	0.400		0.983	0.428	
East African ≥ 10 Years	0.604	0.182	+	0.537	0.178	+	0.580	0.190	+
West African < 10 Years	0.492	0.192	+	0.506	0.200	+	0.559	0.222	
West African ≥ 10 Years	1.311	0.249		1.073	0.209		1.254	0.243	
Other Foreign-Born < 10 Years	0.442	0.040	***	0.453	0.042	***	0.506	0.047	***
Other Foreign-Born ≥ 10 Years	0.842	0.035	***	0.816	0.034	***	0.894	0.038	**
Age (Mean-Centered)									
Interview Year (Centered at 2000)	1.058	0.001	***	1.046	0.001	***	1.046	0.001	***
English Interview (Non-English Interview)	1.032	0.002	***	1.035	0.002	***	1.035	0.002	***
College Degree or Higher (Less than a College Degree)	0.963	0.046		0.750	0.036	***	0.858	0.043	**
	0.673	0.016	***				0.719	0.017	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.899	0.031	**				0.898	0.031	**
≥ 2.00	0.761	0.024	***				0.767	0.024	***
Insured (Uninsured)				0.954	0.034		1.043	0.037	
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.217	0.009	***	0.213	0.009	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.337	0.032	***	1.270	0.031	***
Current Smoker				1.206	0.033	***	1.090	0.030	**
Alcohol use Status (Abstainer)									
Former Drinker				1.294	0.045	***	1.314	0.046	***



Current Drinker				0.766	0.023	***	0.813	0.024	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.833	0.029	***	0.886	0.031	***
≥ 75 Minutes per Week				0.603	0.015	***	0.649	0.016	***
Intercept	0.115	0.007	***	0.172	0.012	***	0.171	0.012	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.092	0.002	***	0.082	0.002	***	0.077	0.002	***
Haitian Black < 10 Years	0.029	0.030		0.028	0.030		0.025	0.027	
Haitian Black ≥ 10 Years	0.106	0.016	***	0.091	0.015	***	0.088	0.014	***
Jamaican Black < 10 Years	0.024	0.016		0.020	0.013		0.018	0.012	
Jamaican Black ≥ 10 Years	0.096	0.017	***	0.085	0.014	***	0.080	0.014	***
Trinidadian & Tobagoan Black < 10 Years	0.059	0.064		0.065	0.070		0.057	0.065	
Trinidadian & Tobagoan Black ≥ 10 Years	0.065	0.024	**	0.060	0.022	**	0.058	0.022	**
Guyanese Black < 10 Years	0.056	0.035		0.042	0.026		0.039	0.024	
Guyanese Black ≥ 10 Years	0.124	0.041	**	0.122	0.043	**	0.118	0.040	**
Central/South African < 10 Years	0.009	0.009		0.007	0.007		0.007	0.007	
Central/South African ≥ 10 Years	0.061	0.033	+	0.046	0.025	+	0.054	0.029	+
East African < 10 Years	0.074	0.029	*	0.076	0.030	*	0.076	0.030	*
East African ≥ 10 Years	0.057	0.016	***	0.046	0.014	**	0.046	0.014	***
West African < 10 Years	0.047	0.018	**	0.043	0.016	**	0.044	0.017	**
West African ≥ 10 Years	0.117	0.019	***	0.088	0.015	***	0.094	0.016	***
Other Foreign-Born < 10 Years	0.043	0.003	***	0.039	0.003	***	0.040	0.003	***
Other Foreign-Born ≥ 10 Years	0.078	0.002	***	0.068	0.002	***	0.069	0.002	***
F-Statistic	F(26,122 0)	469.77		F(30,121 6)	442.24		F(33,121 3)	421.78	
Prob > F		0			0			0	

N = 210,028

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

# Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.537	0.013	***	0.512	0.012	***	0.566	0.014	***
USB NH Other	0.969	0.056		0.950	0.057		1.013	0.059	
USB Hispanic	0.949	0.040		1.005	0.042		1.029	0.043	
Puerto Rican	1.042	0.078		1.029	0.078		1.044	0.078	
Haitian Black < 10 Years	0.321	0.146	*	0.323	0.147	*	0.311	0.139	**
Haitian Black ≥ 10 Years	1.241	0.243		1.174	0.233		1.234	0.244	
Jamaican Black < 10 Years	0.980	0.318		0.941	0.303		0.955	0.305	
Jamaican Black ≥ 10 Years	0.901	0.109		0.838	0.100		0.895	0.107	
Trinidadian & Tobagoan Black < 10 Years	0.113	0.114	*	0.136	0.133	*	0.143	0.140	*
Trinidadian & Tobagoan Black ≥ 10 Years	1.208	0.298		1.168	0.283		1.263	0.304	
Guyanese Black < 10 Years	0.388	0.294		0.403	0.290		0.435	0.318	
Guyanese Black ≥ 10 Years	1.316	0.337		1.271	0.321		1.351	0.348	
Central/South African < 10 Years	0.095	0.099	*	0.108	0.112	*	0.103	0.108	*
Central/South African ≥ 10 Years	0.381	0.317		0.329	0.279		0.375	0.318	
East African < 10 Years	0.229	0.138	*	0.220	0.137	*	0.224	0.136	*
East African ≥ 10 Years	0.632	0.218		0.632	0.222		0.661	0.229	
West African < 10 Years	0.285	0.093	***	0.257	0.083	***	0.272	0.088	***
West African ≥ 10 Years	0.820	0.203		0.705	0.173		0.786	0.195	
Other Foreign-Born < 10 Years	0.391	0.031	***	0.363	0.029	***	0.412	0.033	***
Other Foreign-Born ≥ 10 Years	0.660	0.024	***	0.622	0.022	***	0.695	0.025	***
Age (Mean-Centered)									
Age (Mean-Centered)	1.046	0.001	***	1.041	0.001	***	1.040	0.001	***
Interview Year (Centered at 2000)									
Interview Year (Centered at 2000)	1.030	0.002	***	1.034	0.002	***	1.035	0.002	***
English Interview (Non-English Interview)									
English Interview (Non-English Interview)	0.860	0.037	***	0.726	0.032	***	0.845	0.037	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher (Less than a College Degree)	0.611	0.016	***				0.688	0.018	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.833	0.022	***				0.843	0.022	***
≥ 2.00	0.625	0.016	***				0.671	0.018	***
Insured (Uninsured)									
Insured (Uninsured)				0.818	0.027	***	0.922	0.030	*
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.290	0.014	***	0.285	0.014	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.341	0.032	***	1.291	0.030	***
Current Smoker				1.351	0.036	***	1.202	0.033	***
Alcohol use Status (Abstainer)									
Former Drinker				1.106	0.027	***	1.154	0.028	***
Current Drinker				0.585	0.013	***	0.650	0.015	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.767	0.027	***	0.819	0.029	***

≥ 75 Minutes per Week				0.616	0.016	***	0.673	0.018	***
Intercept	0.166	0.008	***	0.212	0.012	***	0.208	0.012	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.104	0.002	***	0.101	0.002	***	0.092	0.002	***
Haitian Black < 10 Years	0.036	0.016	*	0.035	0.015	*	0.031	0.013	*
Haitian Black ≥ 10 Years	0.126	0.021	***	0.116	0.020	***	0.111	0.019	***
Jamaican Black < 10 Years	0.102	0.030	***	0.095	0.028	***	0.088	0.026	***
Jamaican Black ≥ 10 Years	0.095	0.010	***	0.086	0.009	***	0.083	0.009	***
Trinidadian & Tobagoan Black < 10 Years	0.013	0.013		0.015	0.014		0.014	0.014	
Trinidadian & Tobagoan Black ≥ 10 Years	0.123	0.026	***	0.116	0.025	***	0.114	0.024	***
Guyanese Black < 10 Years	0.043	0.031		0.043	0.030		0.042	0.030	
Guyanese Black ≥ 10 Years	0.132	0.029	***	0.125	0.027	***	0.121	0.027	***
Central/South African < 10 Years	0.011	0.011		0.012	0.012		0.010	0.011	
Central/South African ≥ 10 Years	0.042	0.034		0.036	0.029		0.037	0.030	
East African < 10 Years	0.026	0.015	+	0.024	0.015	+	0.022	0.013	+
East African ≥ 10 Years	0.068	0.022	**	0.066	0.022	**	0.063	0.020	**
West African < 10 Years	0.032	0.010	**	0.028	0.009	***	0.027	0.008	***
West African ≥ 10 Years	0.087	0.020	***	0.073	0.017	***	0.074	0.017	***
Other Foreign-Born < 10 Years	0.043	0.003	***	0.039	0.003	***	0.040	0.003	***
Other Foreign-Born ≥ 10 Years	0.071	0.002	***	0.065	0.002	***	0.066	0.002	***
F-Statistic	F(26,122 1)	446.99		F(31,121 6)	370.98		F(34,121 3)	360.58	
Prob > F		0			0			0	

N = 257,960

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 3.4** Results of Sample-Weighted, Binomial Logistic Regression Models for Asthma by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.920	0.028	**	0.866	0.026	***	0.893	0.028	***
USB NH Other	1.235	0.069	***	1.208	0.067	***	1.216	0.068	***
USB Hispanic	0.969	0.044		0.941	0.042		0.964	0.044	
Puerto Rican	1.530	0.159	***	1.503	0.155	***	1.502	0.156	***
Haitian Black < 10 Years	0.285	0.242		0.343	0.291		0.318	0.274	
Haitian Black ≥ 10 Years	0.447	0.149	*	0.476	0.159	*	0.478	0.159	*
Jamaican Black < 10 Years	0.566	0.290		0.565	0.298		0.574	0.303	
Jamaican Black ≥ 10 Years	0.801	0.170		0.779	0.167		0.802	0.172	
Trinidadian & Tobagoan Black < 10 Years	0.689	0.717		0.646	0.678		0.686	0.724	
Trinidadian & Tobagoan Black ≥ 10 Years	0.465	0.225		0.468	0.232		0.481	0.238	
Guyanese Black < 10 Years	0.779	0.626		0.716	0.577		0.725	0.583	
Guyanese Black ≥ 10 Years	0.360	0.176	*	0.357	0.176	*	0.371	0.183	*
Central/South African < 10 Years	0.106	0.078	**	0.110	0.081	**	0.104	0.076	**
Central/South African ≥ 10 Years	0.490	0.502		0.497	0.505		0.489	0.501	
East African < 10 Years	0.226	0.114	**	0.261	0.132	**	0.253	0.128	**
East African ≥ 10 Years	0.248	0.100	***	0.257	0.104	***	0.255	0.103	***
West African < 10 Years	0.168	0.077	***	0.193	0.088	***	0.185	0.085	***
West African ≥ 10 Years	0.316	0.092	***	0.321	0.095	***	0.319	0.094	***
Other Foreign-Born < 10 Years	0.333	0.026	***	0.361	0.028	***	0.353	0.028	***
Other Foreign-Born ≥ 10 Years	0.496	0.024	***	0.497	0.024	***	0.504	0.025	***
Age (Mean-Centered)									
Age	0.987	0.001	***	0.982	0.001	***	0.983	0.001	***
Interview Year (Centered at 2000)									
Year	1.023	0.002	***	1.024	0.002	***	1.023	0.002	***
English Interview (Non-English Interview)									
English	1.628	0.099	***	1.437	0.086	***	1.510	0.091	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher	1.080	0.024	***				1.081	0.025	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.849	0.027	***				0.850	0.027	***
≥ 2.00	0.729	0.021	***				0.708	0.021	***
Insured (Uninsured)									
Uninsured				1.033	0.033		1.086	0.035	*
Last Healthcare Visit < 1 Year (≥ 1 Year)									
≥ 1 Year				0.631	0.017	***	0.632	0.017	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.202	0.029	***	1.204	0.029	***
Current Smoker				1.085	0.026	***	1.068	0.026	**
Alcohol use Status (Abstainer)									
Former Drinker				1.170	0.048	***	1.179	0.049	***

Current Drinker				1.088	0.036	*	1.111	0.037	**
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.989	0.031		1.000	0.032	
≥ 75 Minutes per Week				0.936	0.019	***	0.946	0.020	**
Intercept	0.083	0.006	***	0.071	0.005	***	0.082	0.006	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.116	0.003	***	0.118	0.003	***	0.115	0.003	***
Haitian Black < 10 Years	0.036	0.029		0.044	0.036		0.040	0.033	
Haitian Black ≥ 10 Years	0.055	0.017	***	0.060	0.019	***	0.059	0.018	***
Jamaican Black < 10 Years	0.069	0.033	*	0.070	0.034	*	0.070	0.034	*
Jamaican Black ≥ 10 Years	0.095	0.018	***	0.094	0.018	***	0.095	0.018	***
Trinidadian & Tobagoan Black < 10 Years	0.083	0.079		0.080	0.077		0.082	0.080	
Trinidadian & Tobagoan Black ≥ 10 Years	0.057	0.026	*	0.059	0.028	*	0.059	0.027	*
Guyanese Black < 10 Years	0.092	0.067		0.088	0.064		0.086	0.063	
Guyanese Black ≥ 10 Years	0.045	0.021	*	0.046	0.021	*	0.046	0.022	*
Central/South African < 10 Years	0.014	0.010		0.014	0.010		0.013	0.010	
Central/South African ≥ 10 Years	0.060	0.058		0.062	0.059		0.060	0.058	
East African < 10 Years	0.029	0.014	*	0.034	0.016	*	0.032	0.016	*
East African ≥ 10 Years	0.031	0.012	*	0.033	0.013	*	0.032	0.012	*
West African < 10 Years	0.021	0.010	*	0.025	0.011	*	0.024	0.010	*
West African ≥ 10 Years	0.040	0.011	***	0.041	0.012	***	0.040	0.011	***
Other Foreign-Born < 10 Years	0.042	0.003	***	0.046	0.003	***	0.044	0.003	***
Other Foreign-Born ≥ 10 Years	0.061	0.002	***	0.062	0.002	***	0.062	0.002	***
F-Statistic	F(25,122 1)	54.170		F(30,121 6)	58.080		F(33,121 3)	56.600	
Prob > F		0.000			0.000			0.000	

N = 209,996

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.020	0.024		0.910	0.021	***	0.984	0.023	
USB NH Other	1.314	0.055	***	1.243	0.051	***	1.301	0.054	***
USB Hispanic	1.030	0.038		1.010	0.037		1.057	0.039	
Puerto Rican	2.058	0.140	***	2.053	0.141	***	2.058	0.139	***
Haitian Black < 10 Years	0.205	0.113	**	0.242	0.135	*	0.237	0.132	**
Haitian Black ≥ 10 Years	0.536	0.134	*	0.563	0.138	*	0.586	0.145	*
Jamaican Black < 10 Years	0.694	0.224		0.731	0.234		0.775	0.249	
Jamaican Black ≥ 10 Years	0.578	0.084	***	0.586	0.088	***	0.615	0.091	***
Trinidadian & Tobagoan Black < 10 Years	0.404	0.324		0.406	0.333		0.440	0.355	
Trinidadian & Tobagoan Black ≥ 10 Years	0.335	0.118	**	0.331	0.116	**	0.350	0.123	**
Guyanese Black < 10 Years	0.754	0.495		0.801	0.554		0.893	0.608	
Guyanese Black ≥ 10 Years	0.573	0.184	+	0.577	0.187	+	0.615	0.198	
Central/South African < 10 Years	1.000			1.000			1.000		
Central/South African ≥ 10 Years	0.078	0.080	*	0.082	0.084	*	0.084	0.086	*
East African < 10 Years	0.088	0.037	***	0.102	0.043	***	0.103	0.044	***
East African ≥ 10 Years	0.334	0.103	***	0.366	0.114	***	0.379	0.118	**
West African < 10 Years	0.504	0.181	+	0.563	0.198		0.574	0.205	
West African ≥ 10 Years	0.267	0.077	***	0.267	0.077	***	0.287	0.083	***
Other Foreign-Born < 10 Years	0.300	0.021	***	0.313	0.022	***	0.332	0.023	***
Other Foreign-Born ≥ 10 Years	0.537	0.021	***	0.529	0.021	***	0.567	0.022	***
Age (Mean-Centered)									
Age (Mean-Centered)	0.995	0.000	***	0.992	0.000	***	0.993	0.000	***
Interview Year (Centered at 2000)									
Interview Year (Centered at 2000)	1.020	0.001	***	1.023	0.001	***	1.022	0.001	***
English Interview (Non-English Interview)									
English Interview (Non-English Interview)	1.381	0.061	***	1.156	0.052	***	1.258	0.056	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher (Less than a College Degree)	0.970	0.017	+				0.995	0.017	
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.793	0.018	***				0.795	0.018	***
≥ 2.00	0.667	0.013	***				0.658	0.013	***
Insured (Uninsured)									
Insured (Uninsured)				0.989	0.024		1.063	0.027	*
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.539	0.016	***	0.535	0.016	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.342	0.027	***	1.325	0.027	***
Current Smoker				1.314	0.026	***	1.242	0.025	***
Alcohol use Status (Abstainer)									
Former Drinker				1.164	0.028	***	1.195	0.029	***
Current Drinker				1.027	0.021		1.083	0.022	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.948	0.024	*	0.974	0.025	

≥ 75 Minutes per Week				0.887	0.015	***	0.918	0.016	***
Intercept	0.139	0.007	***	0.120	0.006	***	0.131	0.007	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.142	0.003	***	0.150	0.003	***	0.141	0.003	***
Haitian Black < 10 Years	0.033	0.018	+	0.041	0.022	+	0.038	0.020	+
Haitian Black ≥ 10 Years	0.082	0.019	***	0.090	0.020	***	0.088	0.020	***
Jamaican Black < 10 Years	0.103	0.030	***	0.114	0.032	***	0.113	0.032	***
Jamaican Black ≥ 10 Years	0.088	0.012	***	0.094	0.013	***	0.092	0.012	***
Trinidadian & Tobagoan Black < 10 Years	0.063	0.047		0.067	0.051		0.068	0.051	
Trinidadian & Tobagoan Black ≥ 10 Years	0.053	0.017	**	0.055	0.018	**	0.054	0.018	**
Guyanese Black < 10 Years	0.111	0.065	+	0.124	0.075	+	0.128	0.076	+
Guyanese Black ≥ 10 Years	0.087	0.025	***	0.092	0.027	***	0.092	0.027	***
Central/South African < 10 Years	-	-	-	-	-	-	-	-	-
Central/South African ≥ 10 Years	0.013	0.013		0.014	0.014		0.014	0.014	
East African < 10 Years	0.014	0.006	*	0.018	0.007	*	0.017	0.007	*
East African ≥ 10 Years	0.052	0.015	***	0.061	0.018	***	0.059	0.017	***
West African < 10 Years	0.077	0.025	**	0.090	0.029	**	0.086	0.028	**
West African ≥ 10 Years	0.042	0.012	***	0.045	0.012	***	0.045	0.012	***
Other Foreign-Born < 10 Years	0.047	0.003	***	0.052	0.003	***	0.052	0.003	***
Other Foreign-Born ≥ 10 Years	0.082	0.002	***	0.086	0.003	***	0.085	0.003	***
F-Statistic	F(25,122 2)			F(30,121 6)			F(33,121 3)		
Prob > F	0			0			0		

N = 257,881

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 3.5** Results of Sample-Weighted, Binomial Logistic Regression Models for Overweight/Obese BMI Relative to Normal BMI by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	0.881	0.019	***	0.868	0.019	***	0.852	0.019	***
USB NH Other	0.835	0.034	***	0.817	0.033	***	0.823	0.033	***
USB Hispanic	1.276	0.044	***	1.261	0.043	***	1.231	0.043	***
Puerto Rican	0.931	0.077		0.904	0.073		0.916	0.075	
Haitian Black < 10 Years	0.309	0.113	***	0.304	0.111	***	0.320	0.115	**
Haitian Black ≥ 10 Years	0.762	0.102	*	0.789	0.103	+	0.793	0.106	+
Jamaican Black < 10 Years	0.499	0.137	*	0.469	0.129	**	0.456	0.126	**
Jamaican Black ≥ 10 Years	0.930	0.141		0.935	0.141		0.900	0.136	
Trinidadian & Tobagoan Black < 10 Years	0.630	0.429		0.597	0.382		0.560	0.355	
Trinidadian & Tobagoan Black ≥ 10 Years	0.728	0.182		0.766	0.192		0.743	0.189	
Guyanese Black < 10 Years	0.437	0.188	*	0.409	0.184	*	0.401	0.175	*
Guyanese Black ≥ 10 Years	0.697	0.189		0.706	0.196		0.681	0.189	
Central/South African < 10 Years	0.654	0.246		0.582	0.221		0.642	0.238	
Central/South African ≥ 10 Years	0.849	0.401		0.751	0.347		0.803	0.383	
East African < 10 Years	0.343	0.066	***	0.322	0.063	***	0.344	0.067	***
East African ≥ 10 Years	0.514	0.098	***	0.513	0.095	***	0.535	0.102	***
West African < 10 Years	0.518	0.085	***	0.492	0.081	***	0.533	0.088	***
West African ≥ 10 Years	1.195	0.181		1.140	0.174		1.214	0.187	
Other Foreign-Born < 10 Years	0.533	0.020	***	0.494	0.019	***	0.528	0.020	***
Other Foreign-Born ≥ 10 Years	0.769	0.024	***	0.739	0.023	***	0.747	0.023	***
Age (Mean-Centered)									
Age	1.016	0.000	***	1.012	0.000	***	1.012	0.000	***
Interview Year (Centered at 2000)									
Interview Year	1.012	0.001	***	1.009	0.001	***	1.011	0.001	***
English Interview (Non-English Interview)									
English Interview	0.674	0.022	***	0.695	0.023	***	0.682	0.023	***
College Degree or Higher (Less than a College Degree)									
College Degree or Higher	0.820	0.012	***				0.785	0.012	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	1.167	0.029	***				1.148	0.029	***
≥ 2.00	1.529	0.032	***				1.457	0.032	***
Insured (Uninsured)									
Insured				1.006	0.019		0.968	0.019	
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year				0.866	0.013	***	0.860	0.013	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.157	0.019	***	1.132	0.019	***
Current Smoker				0.725	0.012	***	0.710	0.012	***
Alcohol use Status (Abstainer)									
Former Drinker				1.356	0.033	***	1.348	0.033	***



Current Drinker				1.389	0.027	***	1.382	0.027	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				1.066	0.022	**	1.076	0.023	***
≥ 75 Minutes per Week				0.843	0.012	***	0.852	0.012	***
Intercept	2.746	0.116	***	3.140	0.133	***	2.655	0.119	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.734	0.004	***	0.739	0.004	***	0.741	0.004	***
Haitian Black < 10 Years	0.461	0.091	***	0.462	0.091	***	0.478	0.090	***
Haitian Black ≥ 10 Years	0.678	0.029	***	0.690	0.028	***	0.694	0.028	***
Jamaican Black < 10 Years	0.580	0.067	***	0.570	0.068	***	0.566	0.068	***
Jamaican Black ≥ 10 Years	0.720	0.031	***	0.725	0.030	***	0.720	0.031	***
Trinidadian & Tobagoan Black < 10 Years	0.635	0.158	***	0.628	0.150	***	0.616	0.150	***
Trinidadian & Tobagoan Black ≥ 10 Years	0.668	0.055	***	0.684	0.054	***	0.680	0.055	***
Guyanese Black < 10 Years	0.547	0.106	***	0.536	0.112	***	0.534	0.108	***
Guyanese Black ≥ 10 Years	0.658	0.061	***	0.666	0.061	***	0.661	0.062	***
Central/South African < 10 Years	0.644	0.086	***	0.622	0.089	***	0.648	0.084	***
Central/South African ≥ 10 Years	0.701	0.099	***	0.680	0.101	***	0.697	0.101	***
East African < 10 Years	0.486	0.048	***	0.476	0.049	***	0.496	0.048	***
East African ≥ 10 Years	0.587	0.046	***	0.591	0.045	***	0.605	0.046	***
West African < 10 Years	0.589	0.040	***	0.581	0.040	***	0.604	0.040	***
West African ≥ 10 Years	0.767	0.027	***	0.763	0.027	***	0.777	0.026	***
Other Foreign-Born < 10 Years	0.595	0.008	***	0.582	0.008	***	0.602	0.008	***
Other Foreign-Born ≥ 10 Years	0.680	0.005	***	0.676	0.005	***	0.681	0.005	***
F-Statistic	F(25,122 1)	115.870		F(30,121 6)	107.800		F(33,121 3)	111.890	
Prob > F		0.000			0.000			0.000	

N = 206,721

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

## Panel B. Women

	Model 1		Model 2		Model 3	
	OR	Std. Error P >  t	OR	Std. Error P >  t	OR	Std. Error P >  t
Race/Ethnicity (USB NH Black)						
USB NH White	0.438	0.009 ***	0.426	0.008 ***	0.451	0.009 ***
USB NH Other	0.439	0.017 ***	0.433	0.018 ***	0.451	0.018 ***
USB Hispanic	0.667	0.020 ***	0.692	0.021 ***	0.684	0.020 ***
Puerto Rican	0.607	0.039 ***	0.601	0.039 ***	0.610	0.039 ***
Haitian Black < 10 Years	0.812	0.243	0.789	0.242	0.782	0.239
Haitian Black ≥ 10 Years	0.768	0.098 *	0.762	0.096 *	0.778	0.098 *
Jamaican Black < 10 Years	0.583	0.148 *	0.536	0.137 *	0.538	0.137 *
Jamaican Black ≥ 10 Years	0.801	0.087 *	0.759	0.082 *	0.795	0.086 *
Trinidadian & Tobagoan Black < 10 Years	0.183	0.056 ***	0.182	0.058 ***	0.184	0.054 ***
Trinidadian & Tobagoan Black ≥ 10 Years	0.609	0.135 *	0.574	0.127 *	0.597	0.130 *
Guyanese Black < 10 Years	0.674	0.329	0.651	0.349	0.656	0.342
Guyanese Black ≥ 10 Years	0.870	0.206	0.839	0.191	0.871	0.205
Central/South African < 10 Years	0.253	0.121 **	0.246	0.107 ***	0.253	0.117 **
Central/South African ≥ 10 Years	1.065	0.538	0.818	0.402	0.966	0.484
East African < 10 Years	0.330	0.075 ***	0.327	0.078 ***	0.324	0.077 ***
East African ≥ 10 Years	0.574	0.130 *	0.581	0.124 *	0.601	0.132 *
West African < 10 Years	0.554	0.094 ***	0.497	0.085 ***	0.535	0.092 ***
West African ≥ 10 Years	1.053	0.180	0.950	0.167	1.051	0.183
Other Foreign-Born < 10 Years	0.250	0.010 ***	0.216	0.008 ***	0.244	0.009 ***
Other Foreign-Born ≥ 10 Years	0.371	0.010 ***	0.350	0.009 ***	0.376	0.010 ***
Age (Mean-Centered)						
	1.014	0.000 ***	1.010	0.000 ***	1.010	0.000 ***
Interview Year (Centered at 2000)						
	1.024	0.001 ***	1.026	0.001 ***	1.027	0.001 ***
English Interview (Non-English Interview)						
	0.666	0.018 ***	0.603	0.017 ***	0.676	0.019 ***
College Degree or Higher (Less than a College Degree)						
	0.615	0.008 ***			0.657	0.008 ***
Family Income-to-Needs Ratio (< 1.00)						
1.00-1.99	1.062	0.021 **			1.060	0.021 **
≥ 2.00	0.866	0.016 ***			0.903	0.017 ***
Insured (Uninsured)						
			0.787	0.014 ***	0.864	0.016 ***
Last Healthcare Visit < 1 Year (≥ 1 Year)						
			0.823	0.015 ***	0.810	0.015 ***
Cigarette Smoking Status (Abstainer)						
Former Smoker			1.258	0.019 ***	1.201	0.018 ***
Current Smoker			1.021	0.016	0.912	0.014 ***
Alcohol use Status (Abstainer)						
Former Drinker			1.296	0.023 ***	1.337	0.024 ***
Current Drinker			0.895	0.014 ***	0.985	0.016
Vigorous Exercise Status (None)						

< 75 Minutes per Week			0.905	0.017 ***	0.957	0.018 *
≥ 75 Minutes per Week			0.614	0.008 ***	0.660	0.009 ***
Intercept	4.116	0.147 ***	5.174	0.191 ***	4.549	0.172 ***
	Avg. M.E.	Std. Error P >  t	Avg. M.E.	Std. Error P >  t	Avg. M.E.	Std. Error P >  t
USB NH Black	0.738	0.004 ***	0.744	0.003 ***	0.735	0.004 ***
Haitian Black < 10 Years	0.696	0.063 ***	0.696	0.065 ***	0.684	0.066 ***
Haitian Black ≥ 10 Years	0.684	0.027 ***	0.689	0.027 ***	0.683	0.027 ***
Jamaican Black < 10 Years	0.622	0.060 ***	0.609	0.060 ***	0.599	0.061 ***
Jamaican Black ≥ 10 Years	0.693	0.023 ***	0.688	0.023 ***	0.688	0.023 ***
Trinidadian & Tobagoan Black < 10 Years	0.340	0.068 ***	0.346	0.072 ***	0.338	0.066 ***
Trinidadian & Tobagoan Black ≥ 10 Years	0.632	0.051 ***	0.625	0.052 ***	0.623	0.051 ***
Guyanese Black < 10 Years	0.656	0.110 ***	0.654	0.122 ***	0.645	0.120 ***
Guyanese Black ≥ 10 Years	0.711	0.049 ***	0.709	0.047 ***	0.707	0.049 ***
Central/South African < 10 Years	0.417	0.117 ***	0.417	0.106 ***	0.412	0.112 ***
Central/South African ≥ 10 Years	0.750	0.095 ***	0.704	0.102 ***	0.728	0.099 ***
East African < 10 Years	0.482	0.057 ***	0.488	0.059 ***	0.473	0.059 ***
East African ≥ 10 Years	0.618	0.053 ***	0.628	0.050 ***	0.625	0.052 ***
West African < 10 Years	0.610	0.040 ***	0.591	0.041 ***	0.597	0.041 ***
West African ≥ 10 Years	0.748	0.032 ***	0.734	0.034 ***	0.744	0.033 ***
Other Foreign-Born < 10 Years	0.414	0.008 ***	0.386	0.008 ***	0.403	0.008 ***
Other Foreign-Born ≥ 10 Years	0.511	0.004 ***	0.504	0.005 ***	0.510	0.004 ***
F-Statistic	F(26,1221)	296.57	F(31,1216)	242.23	F(34,1213)	281.36
Prob > F	0		0		0	

N = 242,703

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

**Appendix Table 3.6** Results of Sample-Weighted, Binomial Logistic Regression Models for Depressive Symptoms by Race/Ethnicity and National/Regional Origin, Adults Aged 18-65+, National Health Interview Survey 2000-2018

Panel A. Men

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.104	0.037	**	0.885	0.031	***	1.070	0.037	+
USB NH Other	1.360	0.092	***	1.268	0.084	***	1.374	0.093	***
USB Hispanic	1.071	0.055		1.032	0.054		1.129	0.059	*
Puerto Rican	1.662	0.196	***	1.557	0.177	***	1.643	0.190	***
Haitian Black < 10 Years	0.231	0.154	*	0.386	0.249		0.323	0.217	+
Haitian Black ≥ 10 Years	0.908	0.199		1.026	0.221		1.120	0.248	
Jamaican Black < 10 Years	0.636	0.421		0.695	0.459		0.712	0.463	
Jamaican Black ≥ 10 Years	0.671	0.169		0.685	0.172		0.750	0.188	
Trinidadian & Tobagoan Black < 10 Years	1.000			1.000			1.000		
Trinidadian & Tobagoan Black ≥ 10 Years	0.324	0.233		0.273	0.192	+	0.327	0.225	
Guyanese Black < 10 Years	1.395	1.273		1.349	1.186		1.407	1.343	
Guyanese Black ≥ 10 Years	0.373	0.235		0.350	0.205	+	0.399	0.226	
Central/South African < 10 Years	0.424	0.279		0.399	0.278		0.417	0.287	
Central/South African ≥ 10 Years	1.757	1.102		1.492	0.895		2.014	1.260	
East African < 10 Years	0.234	0.138	*	0.280	0.162	*	0.297	0.172	*
East African ≥ 10 Years	0.883	0.290		0.903	0.301		1.032	0.342	
West African < 10 Years	0.724	0.219		0.795	0.272		0.890	0.296	
West African ≥ 10 Years	0.641	0.166	+	0.588	0.155	*	0.737	0.192	
Other Foreign-Born < 10 Years	0.619	0.043	***	0.574	0.041	***	0.666	0.048	***
Other Foreign-Born ≥ 10 Years	0.818	0.041	***	0.741	0.036	***	0.873	0.044	**
Age (Mean-Centered)									
Age	0.999	0.001		0.990	0.001	***	0.993	0.001	***
Interview Year (Centered at 2000)									
Interview Year	1.015	0.002	***	1.026	0.002	***	1.022	0.002	***
English Interview (Non-English Interview)									
English Interview	1.278	0.068	***	0.895	0.046	*	1.175	0.062	**
College Degree or Higher (Less than a College Degree)									
College Degree or Higher	0.549	0.016	***				0.678	0.020	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.718	0.021	***				0.731	0.022	***
≥ 2.00	0.322	0.009	***				0.365	0.011	***
Insured (Uninsured)									
Insured				0.592	0.017	***	0.745	0.022	***
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year				0.515	0.015	***	0.506	0.015	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.419	0.039	***	1.315	0.037	***
Current Smoker				2.538	0.064	***	2.129	0.055	***
Alcohol use Status (Abstainer)									
Former Drinker				1.339	0.053	***	1.407	0.056	***

Current Drinker				0.999	0.033		1.172	0.039	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.665	0.025	***	0.745	0.028	***
≥ 75 Minutes per Week				0.588	0.014	***	0.665	0.016	***
Intercept	0.147	0.010	***	0.124	0.009	***	0.144	0.011	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.069	0.002	***	0.079	0.002	***	0.064	0.002	***
Haitian Black < 10 Years	0.017	0.011		0.032	0.020		0.022	0.014	
Haitian Black ≥ 10 Years	0.063	0.013	***	0.081	0.016	***	0.071	0.014	***
Jamaican Black < 10 Years	0.045	0.028		0.056	0.035		0.046	0.029	
Jamaican Black ≥ 10 Years	0.047	0.011	***	0.055	0.013	***	0.049	0.012	***
Trinidadian & Tobagoan Black < 10 Years	-	-	-	-	-	-	-	-	-
Trinidadian & Tobagoan Black ≥ 10 Years	0.023	0.016		0.023	0.016		0.022	0.015	
Guyanese Black < 10 Years	0.093	0.077		0.103	0.082		0.087	0.076	
Guyanese Black ≥ 10 Years	0.027	0.016		0.029	0.017	+	0.026	0.015	+
Central/South African < 10 Years	0.030	0.019		0.033	0.022		0.028	0.018	
Central/South African ≥ 10 Years	0.115	0.063	+	0.113	0.060	+	0.121	0.066	+
East African < 10 Years	0.017	0.010	+	0.023	0.013	+	0.020	0.011	+
East African ≥ 10 Years	0.061	0.019	***	0.072	0.022	***	0.066	0.020	***
West African < 10 Years	0.051	0.014	***	0.064	0.020	**	0.057	0.018	***
West African ≥ 10 Years	0.045	0.011	***	0.048	0.012	***	0.048	0.012	***
Other Foreign-Born < 10 Years	0.044	0.003	***	0.047	0.003	***	0.043	0.003	***
Other Foreign-Born ≥ 10 Years	0.057	0.002	***	0.060	0.002	***	0.056	0.002	***
F-Statistic	F(25,122 1)	124.190		F(30,121 6)	115.180		F(33,121 3)	156.670	
Prob > F		0			0			0	

N = 207,627

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$

# Panel B. Women

	Model 1			Model 2			Model 3		
	OR	Std. Error	P >  t	OR	Std. Error	P >  t	OR	Std. Error	P >  t
Race/Ethnicity (USB NH Black)									
USB NH White	1.168	0.029	***	0.847	0.021	***	1.082	0.027	**
USB NH Other	1.334	0.067	***	1.108	0.054	*	1.281	0.064	***
USB Hispanic	1.089	0.043	*	1.052	0.041		1.176	0.046	***
Puerto Rican	1.639	0.122	***	1.665	0.121	***	1.724	0.128	***
Haitian Black < 10 Years	0.927	0.304		1.257	0.439		1.216	0.426	
Haitian Black ≥ 10 Years	0.933	0.187		1.040	0.202		1.161	0.232	
Jamaican Black < 10 Years	0.651	0.271		0.676	0.273		0.759	0.313	
Jamaican Black ≥ 10 Years	0.633	0.105	**	0.652	0.110	*	0.752	0.127	+
Trinidadian & Tobagoan Black < 10 Years	1.046	0.614		1.063	0.661		1.329	0.813	
Trinidadian & Tobagoan Black ≥ 10 Years	0.387	0.154	*	0.369	0.151	*	0.437	0.176	*
Guyanese Black < 10 Years	0.655	0.440		0.646	0.426		0.849	0.545	
Guyanese Black ≥ 10 Years	0.221	0.109	**	0.228	0.110	**	0.263	0.126	**
Central/South African < 10 Years	0.849	0.588		1.105	0.734		1.148	0.760	
Central/South African ≥ 10 Years	1.011	0.644		0.978	0.586		1.215	0.759	
East African < 10 Years	0.321	0.120	**	0.401	0.144	*	0.418	0.156	*
East African ≥ 10 Years	0.774	0.307		0.940	0.389		1.069	0.439	
West African < 10 Years	0.565	0.223		0.643	0.247		0.731	0.287	
West African ≥ 10 Years	0.633	0.137	*	0.593	0.131	*	0.774	0.167	
Other Foreign-Born < 10 Years	0.673	0.039	***	0.595	0.034	***	0.768	0.045	***
Other Foreign-Born ≥ 10 Years	0.958	0.037		0.841	0.032	***	1.068	0.042	+
Age (Mean-Centered)									
Age (Mean-Centered)	0.999	0.000	*	0.996	0.001	***	0.998	0.001	***
Interview Year (Centered at 2000)									
Interview Year (Centered at 2000)	1.016	0.002	***	1.025	0.002	***	1.023	0.002	***
English Interview (Non-English Interview)									
English Interview (Non-English Interview)	1.103	0.045	*	0.763	0.031	***	1.009	0.043	
College Degree or Higher (Less than a College Degree)									
College Degree or Higher (Less than a College Degree)	0.527	0.013	***				0.635	0.016	***
Family Income-to-Needs Ratio (< 1.00)									
1.00-1.99	0.683	0.015	***				0.705	0.016	***
≥ 2.00	0.330	0.007	***				0.374	0.008	***
Insured (Uninsured)									
Insured (Uninsured)				0.587	0.014	***	0.739	0.018	***
Last Healthcare Visit < 1 Year (≥ 1 Year)									
Last Healthcare Visit < 1 Year (≥ 1 Year)				0.611	0.018	***	0.592	0.017	***
Cigarette Smoking Status (Abstainer)									
Former Smoker				1.460	0.034	***	1.365	0.032	***
Current Smoker				2.871	0.061	***	2.339	0.053	***
Alcohol use Status (Abstainer)									
Former Drinker				1.153	0.032	***	1.258	0.035	***
Current Drinker				0.935	0.022	**	1.156	0.028	***
Vigorous Exercise Status (None)									
< 75 Minutes per Week				0.745	0.023	***	0.833	0.026	***

≥ 75 Minutes per Week				0.558	0.012	***	0.645	0.015	***
Intercept	0.223	0.011	***	0.214	0.011	***	0.217	0.012	***
	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t	Avg. M.E.	Std. Error	P >  t
USB NH Black	0.094	0.002	***	0.116	0.002	***	0.091	0.002	***
Haitian Black < 10 Years	0.088	0.026	***	0.142	0.043	***	0.108	0.034	***
Haitian Black ≥ 10 Years	0.088	0.016	***	0.120	0.021	***	0.104	0.019	***
Jamaican Black < 10 Years	0.063	0.025	*	0.082	0.030	**	0.070	0.027	**
Jamaican Black ≥ 10 Years	0.061	0.010	***	0.079	0.012	***	0.070	0.011	***
Trinidadian & Tobagoan Black < 10 Years	0.098	0.052	+	0.123	0.067	+	0.117	0.063	+
Trinidadian & Tobagoan Black ≥ 10 Years	0.039	0.015	**	0.046	0.018	**	0.042	0.016	**
Guyanese Black < 10 Years	0.063	0.040		0.078	0.048	+	0.078	0.046	+
Guyanese Black ≥ 10 Years	0.022	0.011	*	0.029	0.014	*	0.026	0.012	*
Central/South African < 10 Years	0.081	0.051		0.127	0.074	+	0.103	0.061	+
Central/South African ≥ 10 Years	0.095	0.055	+	0.114	0.061	+	0.108	0.060	+
East African < 10 Years	0.032	0.012	**	0.050	0.017	**	0.040	0.014	**
East African ≥ 10 Years	0.074	0.027	**	0.110	0.041	**	0.096	0.036	**
West African < 10 Years	0.055	0.021	**	0.078	0.028	**	0.068	0.025	**
West African ≥ 10 Years	0.062	0.012	***	0.072	0.015	***	0.072	0.014	***
Other Foreign-Born < 10 Years	0.065	0.003	***	0.073	0.004	***	0.071	0.004	***
Other Foreign-Born ≥ 10 Years	0.090	0.002	***	0.100	0.003	***	0.096	0.003	***
F-Statistic	F(26,122 1)	181.52		F(31,121 6)	178.42		F(34,121 3)	238.84	
Prob > F		0			0			0	

N = 255,178

Source: 2000-2018 NHIS Family, Person, and Sample Adult files, adults aged 18 or older. Restricted to respondents who appear in the Sample Adult file

+  $p < 0.10$ ; \* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$