

An Inquiry into Disparities in Teenage Birth Rates  
Between Douglas County and Pueblo County, Colorado

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## **Abstract**

Teen pregnancy has been studied by a multitude of fields, attempting to answer a complex social issue: What are the primary causes of teen pregnancy? This thesis will explore a more specific, geographic issue: What is causing a disparity in teen pregnancy rates between Douglas County and Pueblo County, Colorado? A case study approach was taken in this research, including data analysis and interviews from staff at schools within each county, as well as public health officials.

## **Chapter 1: Introduction**

Despite a continuous decline in teenage pregnancy rates in the United States, America's teen pregnancy rate remains one of the highest among industrialized nations (Kirby, 2007). Teen pregnancy is a multifaceted social issue that does not have a silver bullet solution. To understand the complexity of the issue, teenage pregnancy must be analyzed through multiple lenses. This thesis focuses primarily on the effect of a person's location on their likelihood to become a teenage parent, as well as their access to community services and quality of sex education within the school district they attend.

The teenage birth rate in the United States in 2013 reached a historical low of 26.6 births per 1,000 girls aged 15-19, a 57% decline since its peak in 1991 (The National Campaign to Prevent Teen and Unplanned Pregnancy, 2014). The 2010 teenage pregnancy rate in the United States was 57.4 pregnancies per 1,000 girls aged 15-19, a 51% decline from its peak in 1990 (The National Campaign, 2014). In Colorado, the teenage birth rate also declined to its historic low of 24.3 births per 1,000 girls in 2012 for girls aged 15-19, a 55% decline between 1990 and 2012 (Bolden, 2014). Although national and statewide rates of teenage pregnancy and teenage birth rates have experienced steady declines since their peak in 1990, disparities still exist across counties within the state of Colorado. This thesis explores the cause behind drastic differences in teenage birth rates between Douglas County and Pueblo County, Colorado.

Although teenage pregnancy is a public health concern in the United States, discussing the topic poses great difficulties, especially in the educational setting. In the fall of 2014, approximately 49.8 million students attended public schools in the United States (National Center for Education Statistics, 2014). Students spend a considerable amount of their time in school, attending extracurricular school-related activities or interacting with peers met in a

school setting. This thesis argues the importance of comprehensive sex education offered in schools, and how implementing medically accurate and age-appropriate sex education can help to curb the teen pregnancy rate. Specifically, the research questions addressed in this thesis are:

- What are the primary causes of the disparity in teenage birth rates between Douglas County and Pueblo County, Colorado?
- What kind of sex education is being taught in schools in both counties, and could comprehensive sex education make a difference in lowering teenage birth rates?

## Chapter 2: Literature Review

### Teenage Pregnancy in the United States

Teenagers in the United States are more likely to give birth than teenagers in other industrialized nations in the world, even though teenage birth rates have been steadily declining (Kearney & Levine, 2012). “U.S. teens are two and half times as likely to give birth as compared to teens in Canada, around four times as likely as teens in Germany and Norway, and almost 10 times as likely as teens in Switzerland,” (Kearney & Levine, 2012). Figure 1 displays differences in teenage birth rates between industrialized nations for the year 1998.

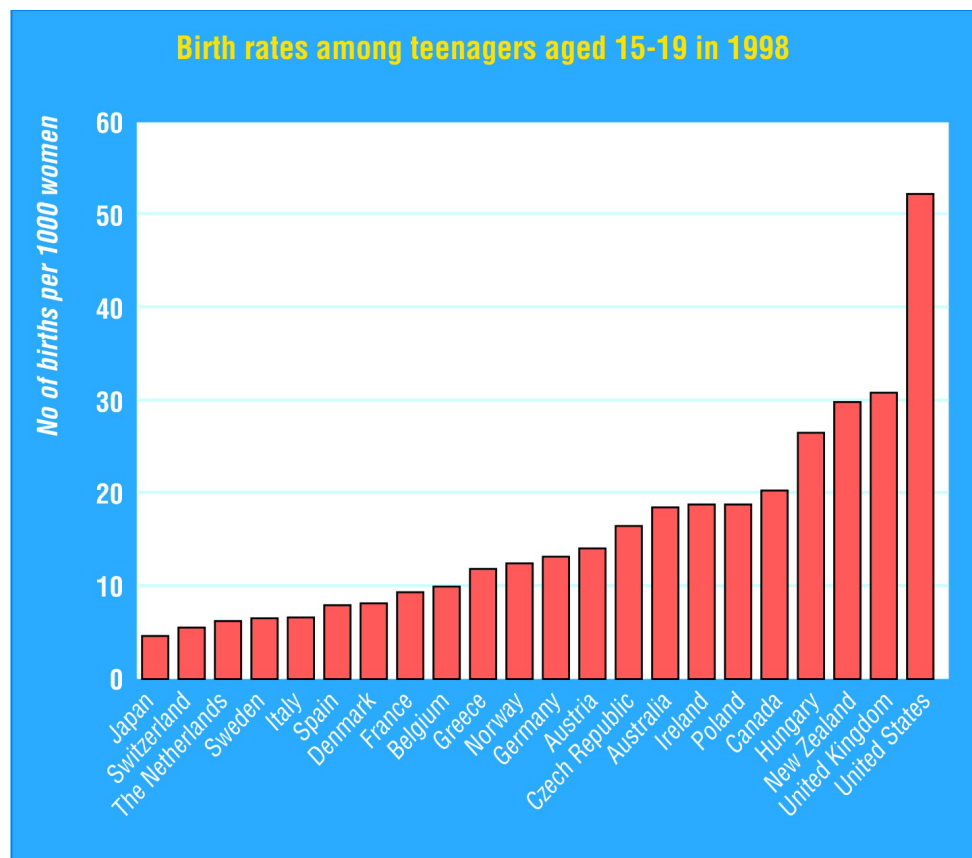


Figure 1. A bar graph showing birth rates among women aged 15-19 in industrialized countries.

From “US and UK are top in teenage pregnancy rates,” by Zosia Kmietowicz, 2002, *BMJ*, 324, p. 1354.

Teenage pregnancy has multiple consequences, which include, but are not limited to; decreased likelihood of graduating high school, even greater decrease in the likelihood of graduating college, increased chances for children of a teenage mother to experience difficulties later in life, as well as increasing likelihood of becoming a teen parent themselves, and increased public medical spending, as well as greater likelihood for increased criminal justice spending (Kirby, 2007).

The estimated public cost of teen childbearing in the United States was \$9.4 billion in 2010 alone (“Counting It Up,” 2013). It is estimated that the average annual cost to taxpayers for a child born to a teen mother is \$1,682 per year, from birth until age 15 (“Counting It Up,” 2013). The breakdown of national costs of teenage childbearing are as follows; \$2.1 billion in public sector health care costs, \$3.1 billion in child welfare costs, and \$2 billion in costs of incarceration (“Counting It Up,” 2013). Although each case of teenage pregnancy is different, and not all teenage mothers will seek federal assistance when raising their child, there is strong correlation between becoming a teenage mother and receiving federal financial assistance (Ng & Kaye, 2012).

Aside from the fiscal aspect of teenage childbearing on the country as a whole, teenage pregnancy causes difficulties for girls who become mothers as teens. 51 percent of teenage mothers receive a high school diploma by age 22, as compared to 89% percent of women who didn’t have a child as a teenager (Ng & Kaye, 2012). Teenage mothers who have a child before they reach age 18 are even less likely to graduate high school, with only 38% receiving a high school diploma and 19% receiving a GED (Ng & Kaye, 2012). As many as 30% of high school dropouts do so because of pregnancy or parenthood (Ng & Kaye, 2012). As the norm for educational attainment in the United States shifts from employers seeking a high school diploma,

to requiring a college degree, it can be assumed that teenage mothers will face even greater difficulties than their peers who are not teenage parents in finding an economically sound job with which they can support their child.

Teenage mothers also have a greater chance of living in poverty than their peers who do not have children; between 2009 and 2010, approximately 48% percent of mothers aged 15 to 19 lived below the federal poverty line (Ng & Kaye, 2012). Teenage mothers are also more likely to seek public assistance for raising their children; approximately 63 percent of teen mothers received some form of public benefits within the first year of their child's life, according to 2004 data from the Census Bureau (Ng & Kaye, 2012). Many teenage mothers are unmarried, which causes them to not receive child support, "more than half (58 percent) of custodial teen mothers have no agreement in place, either formal or informal, and received no child support in the previous year," (Ng & Kaye, 2012). If a teen mother does not receive child support from the child's father, they may seek public assistance to help support their child.

In addition to the effects that teenage childbearing has on parents, children of teenage parents also face more obstacles than those born to older parents. Children who are born to teenage parents are 50 percent more likely to repeat a grade than children of older parents, and only 77 percent of children born to teen parents will receive a high school diploma, as compared to 89 percent of their peers who were born to older parents ("Fast Facts," n.d.). Additionally, teenage sons of teenage mothers are 2.7 times more likely to become incarcerated than sons born to older mothers ("Fast Facts," n.d.).

There are a variety of risk factors associated with teenage pregnancy. A study published in *Perspectives on Sexual and Reproductive Health* in 2006 explored characteristics common of women who experience unintended pregnancy (Finer & Henshaw, 2006). The study found that



women 19 and younger had the greatest proportion of unintended pregnancies, that unmarried women are more likely to experience an unintended pregnancy than married women, and that 58% of unintended pregnancies to unmarried women ended by abortion, between the years of 1994 and 2001 (Finer & Henshaw, 2006). The unintended pregnancy rate differed greatly among income levels, from 112 per 1,000 women who had an income below the poverty line, to 29 per 1,000 women who had an income at least twice the poverty line (Finer & Henshaw, 2006). Between the years 1994 and 2001, the rate of unintended pregnancy increased 29% among women whose income was below the poverty line, while it decreased 20% among women whose income was at or above 200% of the poverty line (Finer & Henshaw, 2006). Women who are “financially disadvantaged” also report having engaging in unprotected sex at a higher rate and experiencing higher rates of birth control method failures (Finer & Henshaw, 2006). Additionally, rates of unintended pregnancy differed among racial groups, with black and Hispanic women having higher rates of unintended pregnancy, unintended birth, and abortions than white women (Finer & Henshaw, 2006).

Gold, et al., explored the ways in which income inequality can affect health, as well as the impact of the social capital on the likelihood of becoming pregnant (2002). Social capital is defined as, “social cohesion, civic engagement, and mutual trust in a community,” (Gold, Kennedy, Connell, & Kawachi, 2002). The study found that teen birth rates were higher in states where there was greater social mistrust, as well as states in which there as greater poverty and income inequality (Gold et al., 2002). This study concluded that, “In terms of adolescent sexual health, decreased social capital might weaken informal social support systems thereby causing adolescents to feel socially disconnected; lead to social policies de-emphasizing pregnancy

prevention services; or impact economic structures, meaning fewer educational or occupational opportunities to serve as incentives against childbearing,” (Gold et al., 2002).

As statistics show, teenage pregnancy in the United States is a complex social issue that has far reaching implications. Teenage pregnancy has economic effects for the individual, and the country as a whole. Women who become mothers in their teenage years face greater challenges than their peers who do not have children. Teenagers who are of a lower socioeconomic status are at a greater risk to become pregnant than their peers of higher socioeconomic status, but teenagers of all financial backgrounds attend public schools across the country. Implementing more comprehensive and inclusive sex education within all schools in the United States is one step that can be taken to help curb the national teenage pregnancy rate, as well as disparities in teenage pregnancy rates between each state.

### **Teenage Sexual Activity in the United States**

The Youth Risk Behavior Surveillance System (YRBSS) monitors risky teenage behaviors nationwide, and is an important resource for information on youth sexual activity. The YRBSS “monitors six types of health-risk behaviors that contribute to the leading causes of death and disability among youth and adults,” which includes, “sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection,” among other behaviors (“CDC YRBSS,” 2014). The YRBSS “includes a national school-based school survey conducted by CDC and state, territorial, tribal and local surveys conducted by state, territorial, and local education and health agencies and tribal governments,” (“CDC YRBSS,” 2014). Data for the 2013 national YRBS was collected from “all regular public and private schools with students in at least one of grades 9-12 in the 50 states and the District of Columbia,”

(Kann et al., 2014). Results from the nationwide 2013 YRBS report that 46.8 percent of students had engaged in sexual intercourse, from 1991-2013, there was a decrease in the prevalence of students having ever had sexual intercourse, from 54.1 percent to 46.8 percent (Kann et al., 2014). 5.6 percent of students reported that they had sexual intercourse for the first time before the age of 13, and this figure also decreased during the period 1991-2013, from 10.2 percent to 5.6 percent (Kann et al., 2014).

The percentage of students who are currently sexually active, which is determined as having had sexual intercourse with at least one person during the 3 months prior to the survey, is 34.0 percent; this figure has decreased from 37.5 percent to 34.0 percent in the 1991-2013 period (Kann et al., 2014). Approximately 15.0 percent of students reported that they had sexual intercourse with four or more persons in their life; this statistic has decreased from 18.7 to 15.0 percent over the period 1991-2013 (Kann et al., 2014). In addition to the importance for public health officials and educators to be aware of the sexual activity of teenagers, it is also critical to understand patterns of contraception and condom use. Among the 34.0 percent of students responding that they are currently sexually active, 59.1 percent reported that they or their partner had used a condom during last sexual intercourse, which is a significant increase from 46.2 percent to 59.1 percent over the period 1991-2013 (Kann et al., 2014). Among students reporting that they are currently sexually active, 25.3 percent reported “that either they or their partner had used birth control pills; an IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon); or a shot (such as Depo-Provera), patch (such as OrthoEvra), or birth control ring (such as NuvaRing) to prevent pregnancy before last sexual intercourse,” (Kann et al., 2014).

Although the percentage of students reporting that they had used some form of contraception to prevent pregnancy prior to sexual intercourse has increased since 1991, 13.7 of

students reported that neither they nor their partner had used any method to prevent pregnancy during last sexual intercourse (Kann et al., 2014). Approximately 22.4 percent of students reported that they had drunk alcohol or used drugs before last sexual intercourse (Kann et al., 2014). A majority of students, 85.3 percent, responded that they had ever been taught about AIDS or HIV infection in school, while only 2.9 percent of students had ever been tested for HIV, not including tests done with donating blood (Kann et al., 2014).

YRBSS provides insight into the sexual activity of students nationwide, as well as information on what kind of sex education respondents have received. The YRBSS data can be used to focus youth sexual health interventions, as well as better guide sex education efforts in the future. Youth sexual behavior is an important indicator of overall health, and critical to understanding and mitigating risky behaviors, such as having sex under the influence of drugs or alcohol as well as using no form of protection to prevent against unplanned pregnancies.

The Guttmacher Institute also produced an in-depth analysis of youth sexual behavior and factors contributing to unwanted pregnancy, abortion, contraceptive use, and teenage pregnancy in 37 countries, with an in-depth analysis of 6 countries in 1986 (Lottes, 2002). This report found that in the United States, factors which were “significant predictors of high adolescent pregnancy rates were restrictive ideas about teenage sexuality, lack of openness and discussion about contraception and sexual responsibility, high levels of poverty and an unequal distribution of wealth and income, high levels of religiosity, low availability of contraception education and family planning services, and high cost of such services,” (Lottes, 2002). This study is important to review to compare causes of unintended pregnancy amongst teenagers in industrialized nations.

Comparison of the attitudes towards teenage sexual activities in other industrialized nations provides clues as to why U.S. teen pregnancy rates are so high. In The Netherlands, Germany, and France, youth sexual health is rooted in the values of “rights, responsibility, and respect,” and the government, as well as the majority of residents, “consider it not only a duty to provide accurate information and confidential contraceptive services to the young, but also that provision of such services and information is part of their rights,” (Lottes, 2002). In these countries, the focus of youth sexual education is not on abstinence, rather it focuses on educating adolescents to “thereby empower them to make responsible decisions,” (Lottes, 2002).

The Netherlands has historically had the lowest rates of unplanned pregnancy, abortion, and teen pregnancy in the world (Lottes, 2002). “Dutch policy makers use research, pragmatism, and an ethics approach that tries to teach responsibility in sexual decision making as the basic for their sexual health programs,” and the general opinion is “that it is impossible and quite ridiculous to try to prevent teenagers from having sex,” (Lottes, 2002).

### **Teenage Pregnancy and Youth Sexual Activity in Colorado**

Colorado recently made national news, due to the fact that the teen birth rate in Colorado had dropped to 24.3 births per 1,000 teenagers aged 15-19, a 55 percent decline between the years 1990 and 2012 (Bolden, 2014). This placed Colorado’s teen birth rate lower than the national average of 29.4 births per 1,000 girls aged 15-19 (Bolden, 2014). “In 2012, 4,152 females age 10-19 gave birth in Colorado, almost 600 fewer births than the previous year,” (Bolden, 2014). Colorado was ranked 19<sup>th</sup> in the country for teen birthrates (Kost & Henshaw, 2014). Figure 2 shows average teenage birth rates (15-19) between years 2010-2012 in all Colorado counties.

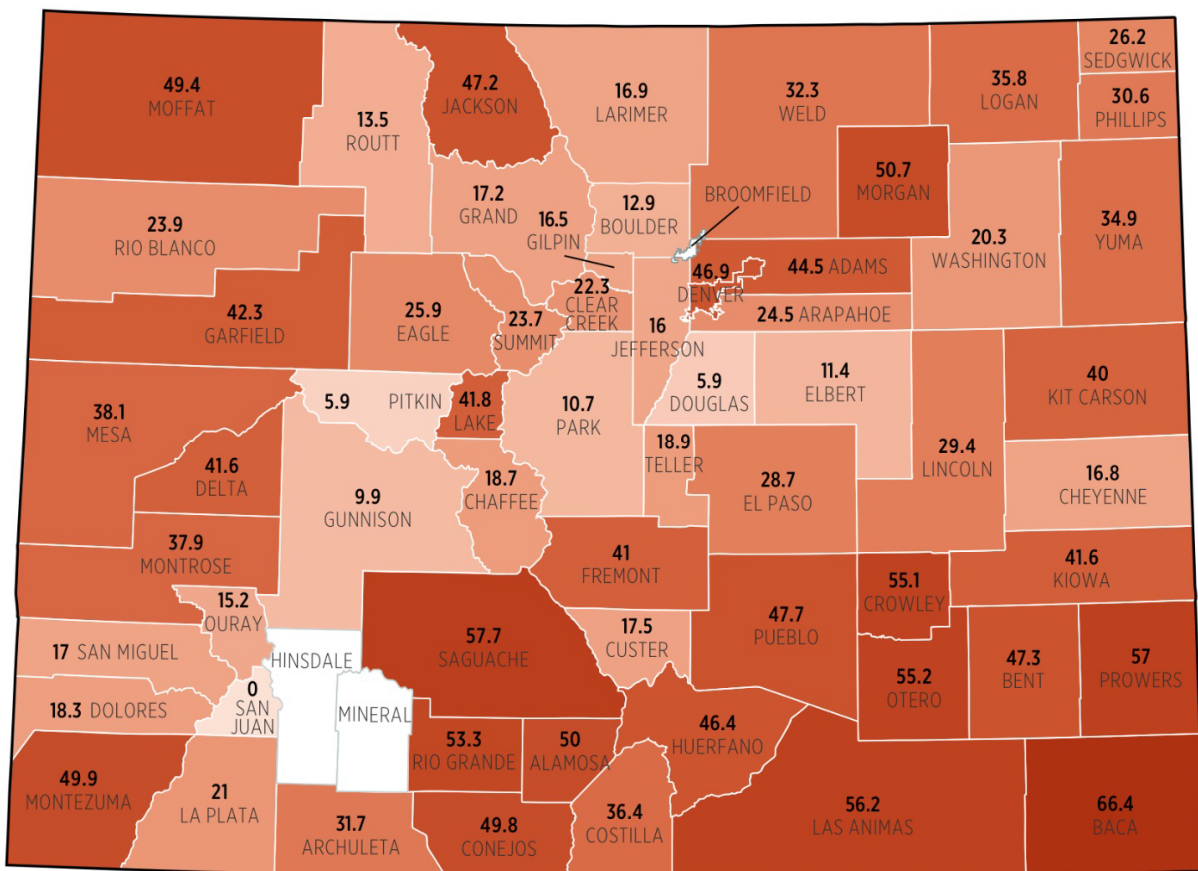


Figure 2. Map showing differences in average teen birth rate between years 2010-2012 for Colorado counties, by Bolden, 2014, *The State of Adolescent Sexual Health in Colorado*, Colorado Youth Matter.

The vast majority of Colorado counties have also experienced declines in teen birth rates. Of the 61 counties which had three or more teenage births per year, all but 3 experienced a decline in average teen birth rates since 1990 (Bolden, 2014). This thesis is a case study examining two counties, Douglas County and Pueblo County, Colorado. Douglas County has one of the lowest rates of teen pregnancy in the state of Colorado, despite a quickly growing population (CDPHE, n.d.-a; Department of Community Development, 2014). In contrast, Pueblo

County has experienced a steady decrease in the rate of teen pregnancy and teen births, but still has consistently some of the highest rates in the state of Colorado (Colorado Youth Matter, 2014b).

The teen birth rate in Colorado differs between age groups and racial groups, with the teen birth rate among Asian American/Pacific Islander and American Indian/Alaska Native 15 to 19 year olds declining the most since 1990 (Bolden, 2014). Although rates for Latina teenagers have decreased significantly in the last five years, Latina teens are still three times more likely to experience a teen birth than White, non-Hispanic teenagers (Bolden, 2014). Rates amongst the youngest teenagers in Colorado, ages 10 to 14, have decreased 75 percent from 1990 to 2012 (Bolden, 2014).

Teenage pregnancy in the state of Colorado has large economic impacts. In 2010, teenage childbearing cost approximately \$155 million in Colorado to taxpayers (“Counting It Up,” 2014). Between the years of 1991 and 2010, the 135,461 teen births that occurred cost taxpayers approximately \$4.0 billion (“Counting It Up,” 2014). Estimated costs of teenage childbearing in the state of Colorado are derived from costs associated with public health care, increased likelihood to participate in child welfare, “increased risk of incarceration and lost tax revenue due to decreased earnings and spending,” (Counting It Up,” 2014).

“The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides nutrition education, breastfeeding support, healthy food, health referrals and other services free of charge to Colorado families who qualify,” (CDPHE, 2013). The Colorado Pregnancy Risk Assessment Monitoring System (PRAMS) reports that 69.4 percent of respondents aged 15-19 in the state of Colorado received WIC assistance during their pregnancy and 65.6 percent of PRAMS respondents aged 15-19 reported that their prenatal care was paid

for by Medicaid (CDPHE, n.d.-c). 46.8 percent of new mothers aged 15-19 responded that they had a household income of less than \$16,000, 12.4 percent responded that they had a household income between \$16,000 and \$24,999 (CDPHE, n.d.-d). 71.1 percent of respondents aged 15-19 reported their pregnancies were unintended, and when asked the question, “Thinking back to just before you got pregnant, how did you feel about becoming pregnant?,” 61.4 percent of respondents aged 15-19 answered they wanted their pregnancy to occur later, and 9.7 percent of respondents answered that they never wanted their pregnancy to occur (CDPHE, n.d.-e, n.d.-f). The PRAMS survey is administered to mothers after their baby is born, so it can be hypothesized that their answers to certain questions may be skewed given the timing of their survey taking.

Based on data about teen pregnancy and abortion rates, the Guttmacher Institute estimated that in the state of Colorado in 2010, the rate of abortions for women aged 15-19 was 12 abortions per 1,000 women, as compared to the national average of 15 abortions per 1,000 women aged 15-19 (Kost & Henshaw, 2014). Similar to differences in teenage births between racial groups, abortion rates also differ. In 2010, the national teenage abortion rate for women aged 15-19 was 8 per 1,000 Non-Hispanic White women; 16 per 1,000 Black women; and 13 per 1,000 Hispanic women (Kost & Henshaw, 2014). Due to the complicated nature of teenage pregnancy and abortion, multiple factors contribute to the decline in both teenage pregnancy and teenage abortion rates, but this thesis will primarily focus on the role sex education in the public school system can have in helping to further decrease the rates of teenage pregnancy, teenage abortions, teenage births, and new cases of sexually transmitted infections (STIs).

Teenagers who are sexually active or considering becoming sexually active need access to contraceptive services in order to make responsible decisions and avoid teenage pregnancies, as well as STIs. A common behavioral pattern for sexually active teens is to keep their sexual



activity and desire for contraception from their parents. These actions place teens at an ever higher risk for teenage pregnancy and STIs, therefore teenagers need to be able to seek advice about contraception and receive contraception without their parents' consent. In the state of Colorado, laws explicitly allow minors to consent to services, due to the US Supreme Court rulings that "extended privacy rights to include a minor's decision to obtain contraceptives," (Guttmacher Institute, 2014b). Additionally, in the State of Colorado, minors may consent to STI services, prenatal care, adoption of their children, and medical care for their child (Guttmacher Institute, 2014a). Restrictions do exist on minors' rights to abortion services; a minor may obtain an abortion, but at least one parent must be notified prior to the procedure (Guttmacher Institute, 2014a).

Another major factor of teenage sexual health is the transmission STIs and HIV. Rates of STIs, HIV, and AIDS for teenagers in Colorado are shown in Table 1.

Table 1

*Rates of Infection for STIs and HIV/AIDS among Colorado Youth*

STI/HIV/AIDS Data	Rate of infection per 100,000 for ages 15-19 (2012)
Chlamydia	3050.7
Gonorrhea	258.1
HIV	1.8
AIDS	0.3

*Note.* Data from Colorado Youth Matter, 2014.

Although teenagers may not have many current cases of diagnosed HIV/AIDS, they are at a pivotal point in their life where many may become sexually active, and therefore need comprehensive education on the topic of HIV/AIDS, as well as other aspects of sexual health.

The Healthy Kids Colorado Survey (HKCS) is a behavior monitoring system, similar to the nationwide YRBSS. In 2013, over 220 schools and 40,000 youth participated in the HKCS (CDPHE, n.d.-b). In the state of Colorado in 2013, 33.1 percent of students grades 9-12 reported that they had ever had sexual intercourse (CDPHE, 2014a). The percentage of students who reported that they had sexual intercourse before the age of 13 was 3.4 percent (CDPHE, 2014a). Statewide, 9.1 percent of students reported that they had sexual intercourse with four or more people in their life, and 23.3 percent of students reported that they had sexual intercourse with one or more people during the past three months, which is also defined as being currently sexually active (CDPHE, 2014a). In the state of Colorado, among the students who identified as being currently sexually active, 22.5 percent of students reported that they had drank alcohol or used drugs before last sexual intercourse (CDPHE, 2014a). Among students who reported that they had sexual intercourse in the past three months, 63.7 percent reported that they had used a condom during last sexual intercourse, which is higher than the national average of 59.1 percent of sexually active students reporting that they had used a condom at last sexual intercourse (CDPHE, 2014a; Kann et al., 2014).

In the state of Colorado, 21.9 percent of sexually active students reported that they had used birth control pills to prevent pregnancy before last sexual intercourse, and 10.3 percent responded they used no birth control method to prevent pregnancy before last sexual intercourse (CDPHE, 2014a). The percentage of students that responded they had ever been taught in school about AIDS or HIV infection is 78 percent (CDPHE, 2014a). The HKCS is an important surveillance program in the state of Colorado, which can be used by public health officials, as well as educators to assess the level of sexual activity of teenagers in the state, and provide some insight into students exposure to critical aspects of sex education, such as HIV/AIDS education.

**Teenage Birth Rates: Pueblo County**

2013 data from the Colorado Department of Public Health and the Environment (CDPHE) reports that there were 200 live births in Pueblo County for women aged 15-19 years old, which is a fertility rate of 37.5 births per 1,000 women aged 15-19 (CDPHE, n.d.-a). This rate is higher than the state average of 24.3 births per 1,000 women aged 15 to 19, as well as higher than the national average of 29.4 births per 1,000 women aged 15 to 19 (Bolden, 2014). The majority of teen births in Pueblo County occur within the Hispanic population, although the Hispanic population is not the prominent racial group in the county (Snow, Hamby, & Smith, 2010). Births to teenage mothers in Pueblo County have declined significantly, decreasing by 39.6 percent between 1990-1992 and 2010-2012, compared with a statewide decline of 48.3 percent in teenage births between the 1990-1992 and the 2010-2012 rates (Colorado Youth Matter, 2014b). See Appendix A for a detailed map of Pueblo County, provided by the City-County Health department, displaying teenage birth rates by zip code within Pueblo County.

Pueblo County has a population of approximately 161,451, with 23.5% of the population under the age of 18 (U.S. Census Bureau, 2014b). 90.9% of Pueblo County's population self-identified as White alone, 42.3% Hispanic or Latino, 2.5% Black or African American alone, and 1% Asian alone (U.S. Census Bureau, 2014). The per capita money income in the past 12 months, estimated from 2008-2012 data from the U.S. Census for Pueblo County is \$22,164, compared to \$31,039 for the State of Colorado (U.S. Census Bureau, 2014). The median household income average from 2008-2012 data in Pueblo County was \$41,820, compared with \$58,244 for the State of Colorado (U.S. Census Bureau, 2014). 18.1 percent of people in Pueblo County live below the poverty line, compared to 12.9% for the State of Colorado, and 21 percent

of the population has a bachelor's degree or higher, compared with 36.7 percent of the State of Colorado (U.S. Census Bureau, 2014).

Data from the Colorado Pregnancy Risk Assessment Monitoring System (PRAMS) for Pueblo County from 1997 to 2011 is summarized in Table 2.

Table 2

*Comparison of PRAMS data from Pueblo County with Colorado statewide data*

PRAMS Data	Pueblo County	Colorado
Wanted pregnancy to occur later	47.9%	61.4%
Never wanted pregnancy to occur	16.3%	9.7%
Pregnancy unintended	64.2%	71.1%
On WIC during pregnancy	87%	69.4%
Prenatal care paid for by Medicaid	39.5%	65.6%
Household income less than \$16,000	57.8%	46.8%

*Note.* Data accessed from Colorado Department of Public Health and Environment Dataset:

PRAMS Estimates, Pueblo County. Accessed 10/29/2014.

It is clear from the PRAMS data that Pueblo County teen pregnancies differ from state averages in a variety of ways. Fewer teens in Pueblo County consider their pregnancy unintended than the state average, more receive state assistance through WIC, and there is a greater percentage of teens with an income less than \$16,000.

2013 data shows that among teenagers ages 15-19, Pueblo County has a chlamydia rate of 2516.6 infections per 100,000 (men and women combined), compared to the statewide rate of

1798.2 infections per 100,000 (men and women combined) (Colorado Youth Matter, 2014b).

The gonorrhea rate for youth 15-19 is 143.81 infections per 100,000 (men and women combined), as compared to the statewide rate of 177.3 infections per 100,000 (men and women combined) (Colorado Youth Matter, 2014). The HIV rate for youth 15-19 is 8.99 infections per 100,000 (men and women combined), compared to the statewide rate of 1.8 infections per 100,000, and the AIDS rate is 0.0 infections per 100,000, as compared to the statewide rate of 0.3 infections per 100,000 (Colorado Youth Matter, 2014).

Title X Family Planning clinics provide a wide variety of health services to communities, such as “reproductive exams, contraception, pregnancy testing, screening for cancer and STI/HIV, and referrals to other health and social services,” in Pueblo County and around the state (Colorado Youth Matter, 2014). Title X Family Planning clinics are an important community resource, and critical to help improve youth sexual health by providing confidential assistance and determining charges based on the client’s ability to pay (Colorado Youth Matter, 2014). There are many other additional community resources available to help serve the youth community, including; Pueblo City-County Health Department, Planned Parenthood of the Rocky Mountains, and school-based health centers located at: Central High School, East High School, Risley Middle School, Heroes K-8 Academy, and Pueblo County High School (Colorado Youth Matter, 2014).

Due to consistently high rates of births to teenage mothers within Pueblo County, there have been multiple research projects examining the dynamics contributing to higher rates. In 2010, The Pueblo City-County Health Department contracted a research team to explore the factors associated with higher rates of teenage pregnancy in Pueblo County, and this study included interviews and focus groups with teenagers in the county (Snow et al., 2010). 48

individuals participated in the focus groups for this study, and those who were sexually active, but not pregnant or parenting, provided a variety of reasons for *not* using birth control, such as their partner using the withdrawal method, not having sex on a regular basis, or being under the influence of drugs or alcohol (Snow et al., 2010). Teens who had not experienced a pregnancy explained that although there are reproductive health services available in Pueblo County, many do not know how to access those services, and teens in this group also displayed a sense of understanding “the practical implications of having a child due either to exposure to children, childbearing, or teen parents themselves,” (Snow et al., 2010). Teens who were either pregnant or parenting explained in focus groups that prior to becoming pregnant, the occurrence of pregnancy was not thought or worried about very much, pregnancy and raising a child were much harder than expected, and that after having a child, these teens were more motivated to “improve their educational, emotional, and financial circumstances,” (Snow et al., 2010).

Among all individuals who participated in focus groups, two common themes arose: the need for increased education about birth control options and proper use of various methods of birth control, and “barriers to preventing pregnancy were less about cost and availability, and more about making it a topic of conversation with parents, peers, and partners,” (Snow et al., 2010). Participants in the study were asked about the level of sex education in schools, and “agreed that there was very little sex education in school aside from seeing ‘scary pictures about STDs’,” (Snow et al., 2010). Additionally, female participants felt that sex education could be useful, could help increase access to information, and “schools were an ideal place to include information about birth control, condoms, or pregnancy prevention messages,” (Snow et al., 2010). This study provided important insight into the dynamics of teen pregnancy and teen

parenting in Pueblo County, and revealed the unique needs of teenagers in Pueblo County in terms of sexual health.

### **Teenage Birth Rates: Douglas County**

CDPHE reports that in 2013, there were 53 births to mothers aged 15-19 in Douglas County, which is a fertility rate of 4.4 live births per 1,000 women aged 15-19 (CDPHE, n.d.-a). This rate falls far below the state average of 24.3 births per 1,000 girls aged 15-19, as well as the national average of 29.4 births per 1,000 girls aged 15-19 (Bolden, 2014). Douglas County experienced a 64.7 percent decline in average teen birth rates between 1990-1992 and the 2010-2012, compared to a 48.3 percent decrease statewide for the same time period (Colorado Youth Matter, 2014a).

The US Census Bureau estimated the 2013 population of Douglas County, Colorado was 305,963 persons, with 28.9 percent of the population under the age of 18 (U.S. Census Bureau, 2014a). “Between 2000 and 2010, the population of Douglas County increased 62.4%, which made Douglas County the fastest growing county in Colorado, and the 16<sup>th</sup> fastest growing county in the nation,” (Department of Community Development, 2014). 91.6 percent of Douglas County’s population self-reported as White alone, 8.1 percent Hispanic or Latino, 4.1 percent Asian alone, and 1.4 percent Black or African American alone (U.S. Census Bureau, 2014a). The per capita money income in the past 12 months, estimated from 2008-2012 data, in Douglas County is \$43,195, compared to \$31,039 for the state of Colorado (U.S. Census Bureau, 2014a). The median household income is \$101,108, compared to \$58,244 for the state, and 4.0 percent of the population is estimated to be living under the federal poverty line, compared to 12.9 percent for the state (U.S. Census Bureau, 2014a). The percentage of residents of Douglas County which

have a bachelor's degree or higher is 54.8 percent, compared to 36.7 percent for the state of Colorado (U.S. Census Bureau, 2014a). PRAMS data from Douglas County is summarized in Table 3.

Table 3

*Comparison of PRAMS data between Douglas County, Pueblo County, and the state of Colorado*

PRAMS Data	Douglas County	Pueblo County	Colorado
Wanted their pregnancy to occur later	66.7%	47.9%	61.4%
Never wanted pregnancy to occur	6.3%	16.3%	9.7%
Pregnancy unintended	73.1%	64.2%	71.1%
On WIC during pregnancy	57.7%	87%	69.4%
Prenatal care paid for by Medicaid	39.5%	39.5%	65.6%
Household income less than \$16,000	18.5%	57.8%	46.8%

*Source: Colorado Department of Public Health and Environment Dataset. PRAMS Estimates from Douglas County.*

*Accessed 10/29/2014*

Rates of STIs and HIV in Douglas County are lower than most state averages, with a chlamydia rate for ages 15-19 of 731.58 infections per 100,000, as compared to a statewide rate of 1798.2 infections per 100,000 (males and females combined) (Colorado Youth Matter, 2014a). The gonorrhea rate in Douglas County for ages 15-19 is 28.32 infections per 100,000, as compared to the state average of 177.3 infections per 100,000 (males and females combined)



(Colorado Youth Matter, 2014a). The HIV rate for ages 15-19 in Douglas County is 0.0 infections per 100,000, compared to the statewide rate 1.8 infections per 100,00, and the AIDS rate is 4.72 infections per 100,000, as compared the to the statewide rate of 0.3 infections per 100,000 (Colorado Youth Matter, 2014a).

Title X Family Planning clinics play an essential role in communities by providing resources and services for sexual health. Title X Family Planning clinics in Douglas County include; Tri-County Health Department located in Caste Rock, CO, the Tri-County Health Department located in Lone Tree, CO, and Planned Parenthood of the Rocky Mountains, located in Parker, CO (Colorado Youth Matter, 2014a). There are no school-based health centers in Douglas County, Colorado (CO Youth Matter, 2014a).

### **A Brief History of U.S. Policies and Funding Sources for Sex Education**

Sex education and its funding have come from a variety of governmental sources, as well as groups promoting certain views on sex education. Sex education in the United States has reflected what some would consider religious beliefs while denying scientific research on the effectiveness of delivering students more medically accurate information. “Between fiscal years 1987 and 1998, the federal government provided more than \$1.5 billion to education programs focused solely on abstinence until marriage. Federal guidance prohibited programs using these funds to discuss contraceptive methods, except to emphasize their failure rates,” (Lindberg & Maddow-Zimet, 2012).

In 1981, The Adolescent Family Life Act (AFLA) was signed into law as Title XX of the Public Health Service Act (SIECUS, n.d.-a). AFLA was created to help support pregnant and parenting teens and their families, as well as promoting ideas such as chastity and self-discipline

(SIECUS, n.d.). Within AFLA, pregnancy prevention programs focused on discouraging premarital sex (SIECUS, n.d.). In Fiscal Year 1997, those receiving funds through AFLA had to adhere to a specific eight-point definition of abstinence education, which was found within the Title V abstinence-only until marriage program (SIECUS, n.d.). AFLA has received more than \$200 million in federal funds since its creation, “from Fiscal Year 2005-Fiscal Year 2009, abstinence-only-until-marriage programs under AFLA received \$13 million a year,” (SIECUS, n.d.). In December of 2010, all discretionary funding for abstinence-only-until-marriage programs was eliminated under AFLA; this was the “first time since 1981 that abstinence-only-until-marriage programs did not receive dedicated federal funding through AFLA,” (SIECUS, n.d.).

The Temporary Assistance for Needy Families Act (TANF) was signed into law in 1996, which enacted Title V, Section 510(b) of the Social Security Act, and created new federal funding to provide grants to states for the purpose of providing abstinence-only-until-marriage education to students (SIECUS, n.d.). TANF was “originally administered by the Maternal and Child Health Bureau (MCHB) at the U.S. Department of Health and Human Services (HHS). Similar to AFLA, this program was enacted quietly, without public or legislative debate,” (SIECUS, n.d.). Title V abstinence-only-until-marriage programs were distinctly different than other funding sources for abstinence programs; the focus shifted away from abstinence promotion as a way to prevent pregnancy to “promoting abstinence from sexual activity outside of marriage, at any age,” (SIECUS, n.d.). Congressional staff members whom had influence on drafting the abstinence education section of the bill stated that this provision “was intended to align Congress with the social tradition...that sex should be confined to married couples,” (SIECUS, n.d.). \$50 million in federal funds are allocated by the HHS each year to states with

low-income youth populations for abstinence-only-until-marriage programs, and states which accept federal funds “must match every four federal dollars with three state-raised dollars,” and are then responsible to distribute funds to organizations or schools which use the money to fund abstinence-only-until-marriage programs (SIECUS, n.d.). Every state, except California, has accepted Title V funding at some point (SIECUS, n.d.). Title V abstinence-only-until-marriage fund receivers must adhere to specific guidelines, which are:

**Section 510 (b) of Title V of the Social Security Act, P.L. 104-193**

For the purposes of this section, the term “abstinence education” means an educational or motivational program which:

- A.** has as its exclusive purpose teaching the social, psychological, and health gains to be realized from abstaining from sexual activity;
- B.** teaches abstinence from sexual activity outside marriage as the expected standard for all school-age children;
- C.** teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
- D.** teaches that a mutually faithful monogamous relationship in the context of marriage is the expected standard of sexual activity;
- E.** teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
- F.** teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child’s parents, and society;

- G.** teaches young people how to reject sexual advances and how alcohol and drug use increase vulnerability to sexual advances, and
- H.** teaches the importance of attaining self-sufficiency before engaging in sexual activity (SIECUS, n.d.-a).

One central criticism of Title V funded programs is that contraception cannot be discussed, except in regards to their failure rates (SIECUS, n.d.). In Fiscal Year 2005, control over the funding for Title V was moved to the Administration for Children and Families (ACF), and in Fiscal Year 2007, ACF administered more program guidance and required that Title V funded programs focus on delaying sexual initiation in youth ages 12-29, although the National Center for Health Statistics reported that over 90% of people ages 20-29 had already had sexual intercourse (SIECUS, n.d.).

Before Fiscal Year 2010, the federal government had never allocated funds specifically for comprehensive sex education, despite overwhelming evidence that more comprehensive sex education is effective in influencing behavior and is supported by most parents, educators, and medical professionals (SIECUS, n.d.-b). In Fiscal Years 2010 and 2011, funding was eliminated for two-thirds of the remaining abstinence-only-until-marriage programs, and \$190 million in new funding was provided for two new programs to help prevent teen pregnancy, STIs, and HIV in a more comprehensive sex education approach (SIECUS, n.d.-b). Additionally, in December 2009, President Barack Obama signed the Consolidated Appropriations Act of 2010, which created the President's Teen Pregnancy Initiative (TPPI) and provided \$100 million in funding (SIECUS, n.d.-b).

When the Patient Protection and Affordable Care Act was signed into law on March 23, 2010, the Personal Responsibility Education Program (PREP) was created (SIECUS, n.d.-b). PREP “provides young people with medically accurate and age-appropriate sex education in order to help them reduce their risk of unintended pregnancy, HIV/AIDS, and other STDs through evidence-based and innovative programs,” (SIECUS, n.d.-b). Under PREP, states can receive grants to help expand comprehensive sex education in their state (SIECUS, n.d.-b). Such state programs must include education that teaches “both abstinence and contraception for the prevention of pregnancy and [STDs], including HIV/AIDS,” and they must also include at least three “adulthood preparation subjects” that include: healthy relationships, adolescent development, educational and career success, financial literacy, or healthy life skills (SIECUS, n.d.-b). PREP funded programs must replicate or “substantially incorporate elements of effective programs that have been proven on the basis of rigorous scientific research to change behavior,” SIECUS, n.d.-b). Additional funding for schools is available from the CDC through a program called the Division of Adolescent and School Health (DASH), which focuses on HIV/STD prevention programs (SIECUS, n.d.-b).

The standard for sex education in the United States is greatly determined by the location in which the sex education is being delivered. Grants to states may dictate stipulations for what the money can be used for, but these stipulations generally still allow for some flexibility in the delivery of material and allow states, or schools themselves, to make those determinations. The quality of sex education in the United States has been determined by funding sources, ideology, and politics, and this thesis argues for a shift towards medically accurate, age-appropriate comprehensive sex education as the standard for all students.

**Colorado in Context: State Sex Education Legislation and Funding**

In the state of Colorado, House Bill 07-1292, Concerning the Adoption of Science-Based Content Standards for Instruction Regarding Human Sexuality, was signed into law in May of 2007 by Governor Ritter, which required that schools who provided sex education must “provide science-based information,” while having an “emphasis on abstinence from sexual activity,” (The Healthy Colorado Youth Alliance, 2011). This act requires that if sex education is taught it must also include information about the effectiveness of condoms, as well as other forms of contraception (The Healthy Colorado Youth Alliance, 2011). Some standards included in HB 07-1292 are listed below. For a full text of the bill, see Appendix B.

- Parents should be involved in conversations with teens about sex
- Programs should “emphasize abstinence and teach that sexual abstinence is the only certain way and the most effective way to avoid pregnancy,” and STDs
- Help students work on skills for responsibility and decision making, including how to resist peer pressure, how to avoid “unwanted verbal, physical, and sexual advances,” and avoid making assumptions about people’s sexuality based on their physical appearance
- Programs should be age-appropriate and medically accurate
- Teach benefits and side effects of contraceptives (The Healthy Colorado Youth Alliance, 2011).

The Comprehensive Human Sexuality K-12 Education Act (HB 1081) was signed into law in 2013, and it expanded and provided further definition of the guidelines in HB 07-1292, as well as created “the comprehensive human sexuality education grant program,” although there is not funding yet allocated to this program (CDPHE, 2014b). Additionally, “the interagency Youth Sexual Health Team, convened by the Colorado Department of Public Health and the

Environment, is designated as the oversight entity for the program,” (CDPHE, 2014d). Any grants provided through the new program created under HB 13-1081 must be used for comprehensive sexuality education only, although the bill itself does not allocate any state funding, it charges the Youth Sexual Health Team with the duty of finding potential funding sources (CDPHE, 2014d).

Funding in Colorado which has been used for pregnancy prevention programs, as well as HIV/STD prevention programs, has all come from federal agencies including the Office of Adolescent Health and the Administration on Children, Youth, and Families in the U.S. HHS, DASH funding from the CDC, as well as “a portion of the block grant from the Maternal and Child Health Bureau in the U.S. Department of Health and Human services to support youth sexual health,” (CDPHE, 2014d). HB 13-1081 does not define curricula for schools or determine how schools deliver sex education, nor does it create new sex education programs; it creates a program through the CDPHE, which will provide grants to schools which have education programs that fulfill the standards set in HB 07-1292, as well as further defines terms that were used in HB 07-1292 (CDPHE, 2014d). While both HB 07-1292 and HB 1081 cite the effectiveness of comprehensive sex education to positively influence teenage sexual behavior, neither require sex education to be taught: all state laws in Colorado regarding sexuality education follow an “if, then” standard; *if* schools teach sexuality education, *then* they must follow specific guidelines. This thesis argues that comprehensive sexuality education should be mandated by the state, and includes an opt-out option for parents who would prefer to discuss sexuality at home with their children.

In January 2009, The Colorado Organization on Adolescent Pregnancy, Parenting, and Prevention (COAPPP) released an analysis of HIV/AIDS and sexuality education in classrooms

across Colorado (COAPPP, 2010). The study analyzed how well schools adhered to the guidelines set out for sex education in HB 07-1292, whether or not they were delivering their students any form of sex education, and whether or not each school district had policy in regards to what should be taught in sex education (COAPPP, 2010). COAPPP found that many school districts had policies written in regards to sexuality education which were in line with the guidelines set out by HB 07-1292, although 45% of urban respondents and 30% of rural participants in the survey stated that they were unfamiliar with HB 07-1292, and of the participants who were familiar with HB 07-1292, “many reported confusion around its stipulations and concern that their school districts do not support programs that comply with the law,” (COAPPP, 2010). The 2008 Colorado School Health Profiles Survey indicated that 73% of schools in the state of Colorado provide some form of HIV/AIDS prevention education, 70% of schools “provide instruction on human sexuality,” and “an overwhelming number of participants in COAPPP’s online survey believed that their sexuality education programs are aligned with standards set by the law,” (COAPPP, 2010).

However, COAPPP found that sexuality and HIV prevention education in Colorado classrooms does not actually comply with the standards set out by HB 07-1292 in many cases (COAPP, 2010). The study found that although 50-66% of schools do provide instruction on many important aspects of sexual health, that instruction on the full range of birth control options that are available, how to properly use a condom, “communication skills to negotiate or demand condom use, and compassion for persons living with HIV/AIDS,” is lacking (COAPPP, 2010). Of those asked about the time spent on HIV prevention and sexuality education within their schools, 63% of rural respondents and 59% of urban respondents stated that their schools spend “too little” time on these topics (COAPPP, 2010). Additionally, the study found that teachers



were not receiving an adequate amount of training on the topics most frequently addressed in sexuality education; the Colorado School Health Profiles Survey of 2008 reported that “only 20% of schools (combined middle and high schools) reported that their lead health education teacher received professional development on HIV in the last two years, and only 29% received professional development on human sexuality,” (COAPPP, 2010). This study was an important assessment on the quality and availability of sexuality education within the state of Colorado, and reveals a clear need for improvement to ensure that students across the state receive high quality, comprehensive sexuality education.

### **Evidence Supporting Comprehensive Sex Education**

Although neither the federal government nor state of Colorado require sex education to be taught in schools, many schools provide some level of physical education, which frequently include some discussion of sex education, whether its focus is on remaining abstinent until marriage, or discussing contraception methods and safe sex practices. Numerous studies have measured the effectiveness of different types of sex education, as well as what populations are most receptive to certain approaches to sex education. Many organizations, such as the National Campaign to Prevent Teen and Unplanned Pregnancy, Sexuality Information and Education Council of the United States (SIECUS), and Planned Parenthood, promote comprehensive sex education as the most effective way to deliver students scientifically based information about sexuality, which also gives youth the ability to make informed decisions about their own health.

In 2007, The National Campaign to Prevent Teen and Unplanned Pregnancy released its study on the effects of different kinds of sex education programs on teenage sexual activity, titled *Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and*

*Sexually Transmitted Diseases* (Kirby, 2007). Kirby used statistical analysis to explore studies of 56 curriculum-based programs, 8 of which were abstinence only programs, and 48 were comprehensive sex education programs (2007). Kirby found that none of the programs caused teenagers who participated to initiate sex at an earlier age, and some of the programs caused a delay in sexual initiation: 40 percent of programs “significantly delayed the initiation of sex among one or more population subgroups for at least six months,” 24 found no impact on sexual initiation, and “no study found that programs hasten the initiation of sex,” (Kirby, 2007).

*Emerging Answers* also found STD/HIV education programs did not increase the frequency of sex; 30 percent of the programs analyzed reported that there was a decline in the frequency of sex, 70 percent found no change in the frequency of sex, and no programs caused an increase the frequency of sexual activity amongst participants (Kirby, 2007). It is critical for advocates of comprehensive sex education to continue to promote it for its effectiveness. The report also found that none of the programs reported an increase in sexual risk-taking, which includes amount of sexual activity, use of condoms, and number of partners, although only one of the programs that measured post-education pregnancy rates found a significant decrease. Of the studies analyzed in Kirby’s meta-analysis of sex education research, only 10 measured the programs’ impact on STD rates, and of those programs, one found an increase in STD rates, three found no impact, and two found significant decreases of STD rates (Kirby, 2007). The one increase reported could have been due to the fact that the program encouraged the students to be tested for STDs, and thus resulted in an apparent increase in rates (Kirby, 2007).

Although Kirby’s study did not find overwhelming evidence to support the claim that teen pregnancy can be decreased through sex education, the study was extremely relevant, especially in helping to provide a counterargument for abstinence only sex education. It is clear

from the study that comprehensive sex education does not increase rates of sexual activity, or cause teenagers to initiate sex at an earlier age. These results should encourage educators, parents, and administrators to provide comprehensive sex education for students. Teenagers have a right to information about their own bodies, and can make responsible and informed decisions about their own lives. Comprehensive sex education provides an opportunity for students to ask information in a safe environment about topics that are important to their health and wellbeing. Sexual health is a natural, integral part of development and rather than restrict or forbid conversation about it, sexual health should be accepted and encouraged as a natural part of becoming an adult.

A 2008 study on the effect of sex education on sexual initiation and teenage pregnancy published in the *Journal of Adolescent Health* found that “when comparing adolescents who reported receiving a comprehensive sex education with those who received an abstinence-only education, comprehensive sex education was associated with a 50% lower risk of teen pregnancy,” (Kohler et. Al, 2008). This study found that abstinence-only education “had no significant effect in delaying the initiation of sexual activity or in reducing the risk for teen pregnancy and STD,” and the results were “marginally associated with decreased likelihood of a teen becoming sexually active compared to with no sex education,” (Kohler, 2008). This finding is extremely important for comprehensive sex education because it defeats a major argument of abstinence-only education, by proving that teaching teenagers about safe sex practices does not cause them to have sex at younger ages.

Another significant report which has provided evidence for comprehensive sex education advocates on the ineffectiveness of abstinence-only education is *Impacts of Four Title V, Section 510 Abstinence Education Programs* (Trenholm et. Al 2007). The report, authorized by

Congress, analyzed the effectiveness of abstinence education programs on “youth behavior, including sexual abstinence, risks of pregnancy and sexually transmitted diseases (STDs), and other related outcomes,” (Trenholm, 2007). The study focused on four different programs, which were implemented in urban areas, Miami and Milwaukee, and rural areas, Powhatan, Virginia and Clarksdale, Mississippi (Trenholm, 2007).

None of the programs in this study were found to have any significant impact on teenagers choosing to remain abstinent from sexual activity, students in both the control group and in abstinence-only programs had similar numbers of sexual partners (Trenholm, 2007). Abstinence-only education programs also did not have a statistically significant effect on participants’ intent to abstain from sexual activity before marriage, which is taught to be the standard of sexual activity in most abstinence-only education programs (Trenholm, 2007). Students who participated in abstinence-only education were not found to have lower rates of STDs, pregnancies, or birth than the control groups (Trenholm, 2007). This study, which was conducted by the federal government on programs which they funded, found that the Title V abstinence education programs did not accomplish their desired effect of having an impact on students remaining abstinent until marriage, lowering STD or pregnancy rates, and reducing the number of sexual partners (Trenholm, 2007).

The combination of evidence from the Trenholm and Kirby studies provide a strong argument for comprehensive sex education. Abstinence-only education does not prevent students from engaging in sexual activity, and comprehensive sex education does not cause students to engage in sexual activity at higher rates than those in other forms of sex education. As youth grow up, it is natural to become curious about sexual activity. It is apparent that students make the decision whether or not to engage in sexual activity on their own, regardless of the type of

sexual education they receive. This thesis argues that it is a teenagers right to make decisions about their own bodies, and to be provided with medically-accurate and age appropriate information so that they can make informed decisions. If a student decides to engage in sexual activity, they should understand the risks associated with that decision and have the ability to access contraception or protection in order to practice safe sex. As mentioned earlier, many states, including Colorado, have legal protections for minors to seek contraceptive services in private. The sex education that students receive should provide students with the information that they need to make responsible, informed decisions about their own sexual activity.

Schools have the unique ability to bring students of all backgrounds, ethnicities, and socioeconomic levels together on a regular basis. This provides the opportunity to promote comprehensive sex education with the ability to reach the largest audience of youth. “Schools have an essential role in promoting adolescent sexual and reproductive health,” and “schools can help young people establish healthy behaviors that endure into adulthood,” (Schalet et al., 2014).

### **Differences in Content: Abstinence-Only vs. Comprehensive Sex Education**

Major differences exist between what kinds of information are provided to students of abstinence-only education compared to comprehensive, or evidence-based, sex education. A primary difference is the lack of discussion of effective contraception methods in abstinence-only education programs. Comprehensive sex education programs stress abstinence, but provide students the information they need to make responsible, informed decisions whenever they choose to become sexually active. They “provide medically accurate information about the health benefits and side effects of all contraceptives, including condoms, as a means to prevent pregnancy, and reduce the risk of contracting STIs, including HIV/AIDS,” promote conversation

between students and parents about sex, as well as helping teach students communication skills to express their feelings and limits in relationships (Sexuality Information and Education Council of the United States [SIECUS], 2009).

In contrast to comprehensive sex education, abstinence-only sex education does not include discussion of contraception methods, other than to discuss their failure rates. For example, *Game Plan*, a commonly used curriculum for abstinence-only education, does not promote the use of contraceptives for teens. No contraception device is guaranteed to prevent pregnancy. Additionally, students who do not choose to exercise self-control to remain abstinent are not likely to exercise self-control in the use of a contraceptive device,” (SIECUS, 2009). While this statement provides some degree of truth, that no contraception device is guaranteed to prevent pregnancy, many forms of contraception are over 99% effective, and multiple forms of contraception can be used together to effectively protect against pregnancy. Additionally, strong scientific evidence exists to support the fact that “consistent and correct use of the male latex condom reduces the risk of sexually transmitted disease (STD) and human immunodeficiency virus (HIV) transmission,” (Centers for Disease Control and Prevention [CDC], 2014).

*Worth The Wait*, another abstinence-only sex education curriculum states that, “Condoms can never protect someone from the emotional problems that can result from multiple sexual partners and premature sexual activity,” (SIECUS, 2009). Abstinence-only education not only shames students who may have already engaged in sexual activity prior to participating in classes, but it also fails to address the concept that someone’s decisions about engaging in sexual activity is their own. Abstinence-only education promotes religious values, by teaching that sex

outside of marriage or sex with multiple partners is wrong, and fails to give students medically accurate information about the effectiveness of contraception methods.

Federal funding for abstinence-only education outlines the topics to be discussed, which include the promotion of abstaining from sexual activity until one is in a monogamous, married relationship. Many abstinence-only education programs also provide students with medically inaccurate information, for example, *Reasonable Reasons to Wait*, a third abstinence-only sex education program, states “AIDS can be transmitted by skin-to-skin contact,” and “Cervical cancer is positively correlated with promiscuous behavior and kills approximately 5,000 women a year,” both of which are entirely medically inaccurate (SIECUS, 2009b)

Additionally, many abstinence-only education programs promote gender stereotypes, whether directly or indirectly, through the word choices in their curriculum, while using “fear and shame to motivate,” focusing primarily on traditional family structures, rather than including information about same-sex relationships (SIECUS, 2009b). *HIS* teaches students that, “If [a girl] has been involved in sexual activity...sexually, she is no longer a virgin, she is no longer pure, unspoiled, fresh,” (SIECUS, 2009b). *Worth the Wait* promotes gender stereotypes by teaching students that “Males will often have their first intercourse experience with a woman to whom he feels no particular attachment while females tend to have their first sexual experience with a man they love and may want to marry,” (SIECUS, 2009b). Statements such as this promote the stereotype that men are only interested in sex and not relationships, and that women are emotional and only associate sex with marriage. Sexuality is an integral part of overall health, and both men and women engage in sexual activity while in committed relationships, or have sex without attachment because they desire to do so. Abstinence-only education promotes gender stereotypes by equating one’s gender to their emotions and feelings about sexual activity.

Finally, abstinence-only sex education programs promote a heterosexual family structure as the cultural norm, using shame as a tactic to promote this idea. *WAIT Training* teaches that, “Studies show that two married, biological parents have the means and the motivation to appropriately monitor and discipline boys in ways that reduce the likelihood that they will pose a threat to the social order,” (SIECUS, 2009b). This statement contains many levels of stereotyping which could be offensive to students involved in a variety of family structures. For example, by stating that “biological” parents have a better ability to effectively parent their children, a student who is adopted could feel left out. *Heritage Keepers* teaches students that, “People who live together before marriage experience ‘significantly more difficulty in their marriage with adultery, alcohol, drugs and independence [not wanting to depend each other for anything] than those who do not live together,” (SIECUS, 2009b). This statement discriminates against students who have a family structure that does not represent a traditional, heterosexual structure. Students who live with unmarried parents, one parent, same-sex parents, in foster homes, with grandparents, or in any “non-traditional” living situation, could be made to feel ashamed for their home life through statements commonly found in abstinence-only training manuals. Rather than promote sexual health as an integral part of overall health, teach inclusiveness and acceptance of all people, and provide medically accurate and age appropriate information to students, abstinence-only education programs generally are forbidden to discuss contraception effectiveness, and promote sexual activity within a monogamous, married relationship as the expected standard of sexual activity.



**Criticisms of Comprehensive Sex Education**

Although major steps have been made in the funding sources for sex education in the United States, many believe that the “evidence-based” comprehensive programs that are promoted through the federal government to receive new funding do not go far enough to be inclusive of LGBTQ youth, do not address sexuality as a part of overall health, and do not promote acceptance and inclusivity. Although there is increasing support for evidence-based sex education, the government still funds abstinence only sex education programs “that remain at odds with scientific thinking about adolescent sexual health,” (Schalet et al., 2014) . While evidence-based sex education is a step in the right direction, “The exclusive focus on pregnancy and disease prevention in the definition of sexual health leaves out aspects of adolescent sexual health that researchers argue are critical, such as sexual orientation and gender beliefs,” (Schalet et al., 2014).

It is critical to provide students with information about STIs, HIV/AIDS, pregnancy, and self-esteem building as a part of sex education, but most evidence-based sex education programs do not leave room for discussions of sexuality as a part of overall health. Discussions of sexuality should include the feelings associated with one’s self and others in sexual and non-sexual experiences, as well as “maintaining a positive body image, developing self-efficacy in sexual decision-making and interactions, and forming mutually respectful romantic relationships,” (Schalet et al., 2014). Sex education should not promote heterosexual relationships as the only acceptable type of relationship; instead it should include discussions about sexual orientation, beliefs about gender, gender stereotypes, and how to be accepting and inclusive of all people, regardless of their sexual orientation or beliefs. “Contemporary LGBTQ and gender nonconforming youth “come out” or disclose their identities at younger ages than

prior cohorts and have distinct sexual health needs,” (Schalet et al., 2014) . Federally funded, evidence-based sex education programs need to go further to include a discussion of sexuality, as a part of overall health, and programs need to be inclusive of all students’ needs.

## **Conclusion**

Although teen pregnancy rates in the United States have steadily declined since 1991, rates still remain some of the highest in the world among industrialized nations (Kirby, 2007). STD rates among teens in the United States remain high, with almost 4 million new cases of STDs occurring each year among teenagers (Kirby, 2007). In the state of Colorado, a large disparity in teen birth rates exists between counties, especially Douglas County and Pueblo County (Bolden, 2014). This thesis argues that comprehensive, evidence-based sex education should be mandated by the state in all schools, though parents should have the ability to opt their students out of this education if they would rather discuss it at home.

The effectiveness of abstinence-only education versus comprehensive sex education has been studied, and the evidence suggests that abstinence-only education fails at its intention of delaying sexual activity among participants (Kirby, 2007). Additionally, research on comprehensive sex education has shown that teaching students about safe sex practices does not increase their level of sexual activity; in some cases it has shown to delay initiation of sexual activity among participants (Kirby, 2007). Comprehensive sex education should include discussions about sexuality, sexual orientation, and inclusiveness of all people, regardless of their sexual orientation or beliefs.

Evidence-based, comprehensive sex education should be implemented in all schools across Colorado. This type of sex education could help to prevent unintended pregnancy among

teens, decrease rates of STIs and HIV/AIDS, as well as helping increase awareness and acceptance of all groups, including the LGBTQ community. Although teen pregnancy is a complicated issue, comprehensive sex education could provide students with the information they need to make responsible and educated decisions about their own lives and relationships. Schools have the ability to reach many students, of all different socioeconomic statuses, ethnicities, and beliefs, therefore they are the most logical place for comprehensive sex education to occur. Abstinence-only education has proven to be ineffective, promotes ideas which are rooted in religious beliefs, rather than medically-accurate information, therefore should not be the standard of sex education.

### **Chapter 3: Methods**

This thesis used information from multiple sources, including online academic journals, publications from centers which study teenage pregnancy and sex education, state and federal data sets, school and district websites, as well as multiple, in-depth phone interviews. The study areas included District 60 and District 70 in Pueblo County, Colorado, and the Douglas County School District in Douglas County, Colorado. The data for this thesis was collected in two ways: a document review and interviews, conducted through both phone and email. For the document review, documents from each school district in regards to the following topics were analyzed for content: district policies on sex education, graduation requirements, course descriptions, faculty and administrative policies, statewide regulations and standards, and current curricula. These documents were analyzed to attempt to understand whether schools provided sex education at all, the similarities and differences between each counties' schools on sex education requirements and standards, as well as how well each district adheres to state standards in regards of health education. Documents were all found online through school, district, and state websites.

The second source of information for this thesis was in-depth interviews with a variety of people who work either directly with teens at school, public health officials, or those working in a community resource which supports teen health. Both emails and phone calls were used to contact potential interviewees. Phone interviews were recorded with permission from the interviewee, then reported in this thesis in relation to the topic of sex education and its implementation in both counties. The criteria for contacting potential interviewees included those who either taught sex education, health, physical education, or classes which may cover sex education in some way; counselors at both middle schools and high schools; administration at schools and district level; those working in county public health departments; or those working at

nonprofit or community resources for teenage sexual health or education. Interviews followed a protocol with a detailed set of questions (see Appendix C).

Emails were sent to faculty at schools within all three districts being studied, that asked what kind, if any, sex education was provided to students within in the schools; faculty were asked, if they were willing, to respond either through email or phone calls. Only faculty or related public health workers whom were willing to be interviewed over the phone were contacted further. Table 4 summarizes contact made with interviewees in both counties, including both formal, in-depth interviews, as well as brief emails or phone calls.

Table 4

*Interview contacts from Pueblo and Douglas Counties*

Job Type	Pueblo	Douglas
Teachers	7	14
Counselors	4	5
School Nurses	3	1
Administration	3	1
School District	1	1
Public Health Official	3	-
Total	21	22

## Chapter 4: Results

### Overview of District Policies and Guidelines

In 2008, the State Board of Education expanded “physical education standards to include health education,” as well as revised standards to more explicitly define what is expected of students at each different grade level (Colorado Department of Education, n.d.). The comprehensive health education standards defined by the CDE include: physical and personal wellness, emotional and social wellness, and prevention and risk management (CDE, 2009). CDE defines expectations as, “the concepts and skills of a standard,” and the following are high school expectations, which relate to sexual health:

- Use a decision-making process to make healthy decisions about relationships and sexual health
- Support others in making positive and healthful choices about sexual activity
- Access valid information and resources that provide information about sexual assault and violence (CDE, 2009)

These expectations build on the knowledge students are expected to gain from middle school courses in comprehensive health education. Grade level expectations for 6<sup>th</sup>-8<sup>th</sup> grade can be found in Appendix D.

These standards, in conjunction with the guidelines set out by both HB 07-1292 and HB 1081, provide a groundwork for what kind of sexual education students in the Colorado should receive, but unfortunately schools aren’t *required* to adhere to these guidelines and standards are poorly enforced. Neither the CDE content standards nor HB 07-1292 and HB 1081 contain inclusivity of people of all sexual orientations, discussion of gender identity, or gender roles, as expected topics for comprehensive sex education. Although the state of Colorado has

made steps in the right direction towards providing students a more comprehensive sex education through legislation, many districts do not completely fulfill the standards or adhere to the guidelines set out by the state, and thus leave many Colorado youth without important information.

Pueblo County has two school districts; District 60, or the Pueblo City School District, which consists of seventeen elementary schools, five middle schools, two K-8 schools, four high schools, 3 magnet schools, two charter schools, and serves approximately 18,000 students (Pueblo County, 2014a). District 70 serves the rest of the communities within Pueblo County, and the district consists of four high schools, six middle schools, twelve elementary schools, two charter schools, one alternative middle school, one alternative high school, seven preschools, and serves over 8,000 students (Pueblo County, 2014b).

In the Pueblo City School district (District 60), “a structured, district-wide sex education curriculum” does not exist in the schools, according to the public relations officer for the district. The District 60 High School Course Description Guide states that 2 credits of Health and Physical Education are required for graduation, but students can be exempt from ½ health credit if requested by the parent or student (Pueblo City Schools, 2014). In 2011, District 60 changed its graduation requirements, moving health from its own required course, to be combined with physical education; this change allows students to take PE classes to fulfill the 2 required credits for graduation, rather than requiring them to take a separate health class (Pueblo City Schools, 2010). An elective class, “On Your Own,” can be taken to fulfill ½ credit of the 2 total Health and Physical Education credits required for graduation (Pueblo City Schools, 2014). “On Your Own” covers topics such as “responsible relationships, human reproduction, abstinence, contraceptives and STDs,” (Pueblo City Schools, 2014). There is a class called Human

Development/Parenting that covers topics related to sex education, but it is an elective class, which does not fulfill the Health and PE requirements, and is offered at only two high schools within the district (Pueblo City Schools, 2014). The class is described as including, “a study of the reproductive systems and how to keep them healthy in preparation for creating healthy babies. The units following these include contraception, birth defects, pregnancy, child birth, care and concerns of the new mothers,” among other skills (Pueblo City Schools, 2014).

District 70 requires students, prior to graduating from high school, to complete 1.5 credits of Physical Education, and requires ½ credit of health, but students may be exempt from any or all of this based on their own beliefs, or the beliefs of their parents (Pueblo County School District 70, 2009). In contrast to District 60, the District 70 Board of Education has the following standards outlined on their district’s family life/sex education:

- Parents have the prime responsibility to assist their children in developing moral values
- The schools should support and supplement parents’ efforts in these areas by offering students factual information and opportunities to discuss concerns, issues and attitudes inherent in family life and sexual behavior including inquiring about traditional moral values
- The school district shall teach about family life and sex education in regular courses on anatomy, physiology, health, home economics, science and so on. If a separate family life or sex education program is developed, it shall be a non-required, noncredit course (Pueblo County School District 70, 2009).

Pueblo County also has a community health plan, which includes teen pregnancy as a priority for improvement within the county (Pueblo City-County Health Department [PCCHD], 2013).



The plan includes objectives that have the potential to lower teen birth rates in Pueblo County, and those objectives are as follows:

- Increase access to medical services and information on health and human services
- Positive youth development
- Implement comprehensive reproductive and health education (PCCHD, 2013).

Information received from a public health official working on these objectives suggested that the health department has not met all of its goals in terms of teen pregnancy objectives, and some activities listed in the community health improvement plan either took longer to implement than intended or have not yet occurred.

The CDE Schoolview Data Center monitors the courses that are offered at schools throughout the state, as well as provides different measures of student health and wellness. According to CDE data, 39.9% of all schools within Pueblo District 60 provide comprehensive health education. This thesis has focused on sex education at the middle school and high school levels, and the CDE reports that the following middle schools and high schools within District 60 have comprehensive health education: Central High School, Risley Middle School, Roncalli STEM Academy (middle school), South High School, W.H. Heaton Middle School, and East High School (CDE, n.d.). Although the CDE reports that all of these schools offer students a comprehensive sex education, responses from interviewees revealed a less structured system of comprehensive health education, which includes sex education, in District 60. The CDE reports that 62.5% of schools within District 70 in Pueblo County offer students comprehensive health education courses, and of those schools, the schools which this thesis covers include: County High School, West High School, Rye High School, Beulah Middle School, Vineland Middle School, and Skyview Middle School (CDE, n.d.-a). Interviews within both District 60 and

District 70 have provided a slightly different understanding of sex education than the CDE data suggests.

Douglas County, Colorado consists of one school district, the third largest in the state, which has 48 elementary schools, 2 magnet schools, 9 middle schools, 9 high schools, 12 charter schools, 1 alternative high school, 1 alternative programming school, 1 night high school, 1 online school, 64 preschool locations, 128 preschool sessions, and serves 67,000 students (Douglas County School District [DCSD], 2014). Douglas County School District (DCSD) does not require students to take health as a requirement for graduation from high school; students are required to take one credit of PE, and a ½ credit of health can be applied to this requirement (DCSD, 2009). High school students within Douglas County are also required to complete 20 hours of community service prior to graduating (DCSD, 2009). Similar to both school districts within Pueblo County, parents must be notified of any content on human sexuality prior to instruction, and have the ability to exempt their students from those discussions if they are in contrast to their personal beliefs (DCSD, 2006). In DCSD, there are classes other than a standard health class that are electives, and cover sexual health in some way. These classes include: Healthy Decisions for Teens, Nutrition and Wellness, Child Development/Psychology, Contemporary Issues in Health, and Relationships.

According to CDE data, 70.59% of schools within DCSD offer comprehensive health education to their students, and of those schools, the following are included in this thesis's analysis: Castle Rock Middle School, Cimarron Middle School, Cresthill Middle School, Mesa Middle School, Mountain Ridge Middle School, Ranch View Middle School, Rocky Heights Middle School, Sagewood Middle School, Sierra Middle School, Castle View High School, Chaparral High School, Douglas County High School, Legend High School, Mountain Vista

High School, Rock Canyon High School, and Thunderridge High School (CDE, n.d.-b). In DCSD, 100% of middle schools provide comprehensive health education, and 78% of high schools provide comprehensive health education, according to CDE data, but interviews within the district have revealed that these numbers might underestimate the actual number of schools which have classes that cover sex education, in some way (CDE, n.d.-b). An analysis of course guides for each high school within DCSD reveals that every high school within the district offers at least one class that covers sex education in some way. *Healthy Decisions*, a class which, “examines teen issues of high school,” and includes a unit on human sexuality, is available for students at every high school to take, although there is no district curriculum for this class, so each teacher may cover topics to varying degrees (Castle View High School, 2014). Although these classes were not reported under the Comprehensive Health courses section of the CDE data portal, an interview with a teacher of *Healthy Decisions* has provided an in-depth understanding of topics that are covered in this course, which includes contraception, STDs, pregnancy, and relationships. However, a teacher of *Healthy Decisions* did address the fact that the class may be taught differently depending on the teacher and topics may vary.

### **What Kind of Sex Education is Provided in Schools**

Of the seventeen school employees who responded to this inquiry in Pueblo County, all but two reported that there was some form of sex education at their schools, although respondents did not represent all of the schools within the county. Some responses contradicted each other, and rules regarding what is taught on this topic seemed undefined, or varied from teacher to teacher. Two faculty members from the same high school responded and one stated that health was now a part of PE class and described the merger of the required health credit with

the PE credit from 2011, while the other teacher reported that health *was not* taught within their PE classes, but topics in relation to sex education were covered in the class, *On Your Own*. The respondent that stated that health was a part of PE, explained that it is up to the PE teachers how they cover the topic of sex and the teachers don't have a set curriculum required by the school on this topic.

In Pueblo County, District 60 does not require health for graduation, so students may or may not receive information about sex, depending on class choice. A high school staff member stated that they believed students understanding of sex has declined due to the change in requirement for health. Further complicating the issue, the classes, which may discuss aspects of sexual health, are not offered at all of the schools and it is up to teachers how to teach these topics. One clear message was repeated throughout the interviews: it is up to the teachers how they teach their class; there is no exact standard or curriculum that is required or used. This flexibility leads to inconsistency, which means some students graduate from high school without ever receiving critical information regarding their health. In District 70, health is required for graduation from high school, but when the unit about contraception is taught, a county health official comes to teach that portion of the class, these presentations have grown shorter over time, with some respondents saying that this part of the students' education about sexual health may only last one hour.

Teachers from a variety of subjects may mention something on the topic of sex education within their various lessons, such as a unit on reproduction and childbirth within a science class, or an abstinence-focused discussion on sex within their PE class. *On Your Own* is an elective class, offered at two high schools in Pueblo City District 60. A teacher of *On Your Own* explained that class discussions on the topic of sex include the responsibility that comes with

sexual activity, methods of contraception including the morning-after pill, as well as the inefficiency of the withdrawal method. The teacher then stated, “I believe I am one of the few left in Pueblo that teach this.” From the widely varied responses of teachers within the county, it seems highly likely that this teacher’s assumption is true.

Of the three public health officials who were asked about sex education within Pueblo County, all responded that to their knowledge, sex education was being provided to students in some of the schools, two public health officials had previously taught units on contraception in conjunction with the school health classes. Schools can invite the county public health department to come provide the instruction on contraception methods, but the interviewees explained that they are limited in exactly what they can discuss with students. At a presentation in one high school, the official was asked to end her presentation before she could demonstrate to students how to effectively put on a condom, and was not allowed to provide students with condoms at the end of the presentations. Multiple interviewees reported that the county used to come in to teach multiple lessons, sometimes over the course of a week, but that now the county comes for one day, and only gives a one-hour presentation.

Public health officials in Pueblo County were asked about the challenges that they have faced in trying to provide comprehensive sex education in schools. All responded that there are multiple challenges facing administration in both districts, so sex education is sometimes moved towards the bottom of the list of priorities. One previous public health official stated that in some schools the mindset may be, “Who cares about sex ed when you are just trying to keep your schools open?” There was some momentum in District 60 supporting a district wide policy on sex education, but members of the school board changed, and the momentum died down. A public health official, currently overseeing the implementation of sections of the Pueblo County

Community Health plan, stated that about five years ago, the school board was approached about the CDE standards and how they were failing to meet some of these standards. The school board acknowledged that it was an issue, and needed to change, but there was no follow through from the administration with implementation of the standards. All of the public health officials mentioned the influence of outside groups on teaching abstinence-only curriculum within the schools; these groups provide the curriculum and teachers, so the school doesn't have to provide training on the topic. However, schools are often unaware that these curricula do not meet CDE health standards.

Four respondents mentioned the impact of District 60's "turnaround" status on availability of other resources, such as health education. District 60 schools have been identified by the state as having low test scores, and had four years to "turnaround" their performance on basic subjects. Multiple interviewees mentioned this as one reason for a recent focus on the importance of other subjects over health education, although all expressed their disagreement with the notion that health education is not an important and influential part of a students' education. At one high school, the nurse mentioned that the principal had recently removed health classes in order to provide more AP classes for students. Limited resources were mentioned in multiple interviews as a reason for either the elimination of health classes, or a great cutback on the length of these classes.

All respondents from Pueblo County who discussed the content of their sex education mentioned abstinence as the focus, although they also reported that contraception was covered. Since a sex education or health class was not directly observed for this thesis, it remains unclear the true focus of the sex education classes which are provided to students in Pueblo, or how different aspects of sexual health are discussed. Additionally, the ability of teachers to determine

what they cover in their discussions of sex education suggests that teachers could insert their own opinions and biases about certain aspects of sexual health, whether consciously or subconsciously.

Of the nineteen people within Douglas County asked about sex education at their schools, all responded that there was some form of sex education at their school, whether covered in health class, PE, electives, or science classes. Douglas County School District differs from the school districts within Pueblo County, because it requires its middle school students to take health, but health is not a requirement for graduation from high school. Interviews from Douglas County revealed a clear system of organization between the health and wellness teachers at the middle school level, where health is required for students. Multiple teachers explained that they meet with their fellow health and wellness teachers at least once a week, in some cases are accountable to a specific member of the administration for the content of their classes. At the high school level, teachers explained that because health is not required, students may receive this information from a variety of sources, depending on what classes they take. An interview with a teacher of *Healthy Decisions*, explained that this class is offered at all the high schools, but the content and way in which topics are discussed is up to the teacher, and is therefore highly varied.

Interviews with faculty at schools within both Douglas and Pueblo County revealed that levels of sex education are varied between schools, even in the same district. Of the three districts analyzed for this thesis, only one requires health for graduation from high school (Pueblo District 70), and one requires health in middle school (DCSD). All who were interviewed also mentioned that teachers have a great deal of flexibility in how they cover topics related to sexual health, and that there was no required additional training on these topics

throughout the teachers' careers. DCSD middle school teachers seem to have the most coordination on the topic of health; multiple interviewees explained how the health and wellness teachers meet frequently to discuss ideas, topics to cover in class, as well as give advice to fellow teachers. It is clear that there are more classes, which may cover sexual health in some way, available to students in DCSD at the high school level than in both Pueblo County school districts, based off of interviews, as well as document analysis. The most common similarity between sex education in both districts is the teachers' influence on what is discussed.

### **Trainings/Curricula Used**

In both Pueblo County and Douglas County, various curricula were mentioned as either the current guide for teachers on the topic of sex education, or having previously been used to teach about sex education. *WAIT Training* was mentioned in both counties as a source for information on this topic. In Douglas County, *Get Real* was also mentioned as a curriculum being used at the middle school level, which is created and distributed through the same organization as *WAIT Training*; *The Center for Relationship Education*, located in Denver, CO. *WAIT Training* has received harsh criticism of advocates for comprehensive sex education for its lack of medically accurate information in regards to how diseases are contracted and the effectiveness of various modes of contraception. A teacher in DCSD also mentioned that the organization *Friends First* had provided its adult identity-mentoring program to students at their school. All teachers who were asked about curriculum said that it was left up to them to develop their own curriculum, and most teachers mentioned that each teacher will go about it differently, emphasizing the importance of different portions of the lessons. Multiple teachers in both



counties mentioned that they had attended a weekend seminar from *WAIT Training* at some point.

It was made extremely clear, in both counties, that teachers have the ultimate responsibility in determining what ends up in the curricula that is taught to students in regards to sex education. Some teachers have attended training, others reach out to other teachers for advice, most rely on their college education and teaching experience to guide their decisions in regards to these topics. All of the teachers asked within both counties attested to the quality of the teachers teaching these subjects, although some other staff members, such as nurses, questioned to what extent certain teachers were actually covering these subjects, and commented that a great deal of the material that is presented is dependent on the comfort of the teacher in regards to this subject.

Teachers did not mention state standards for health curriculum as a guide for their development of sex education curriculum, although two faculty members at the middle school level in Pueblo County stated that they believe that their school is adhering to those standards. Public health officials within Pueblo County all stated that they did not believe schools were adhering to the CDE standards, although the public health official overseeing the goals in the community health plan for Pueblo County stated that they believe schools are more aware of the CDE standards now. Although adherence to CDE standards was not a main question in the interviews, it remains surprising that more teachers did not mention the standard due to fact that they are statewide standards for overall health curriculum. However, interviewees within both district were asked if they believed that their school was delivering age-appropriate, medically accurate information (part of the state standards) to students on, they all responded yes.

Without a clear, consistent, and organized system of determining age-appropriate, medically accurate, and inclusive content that is *required* for teachers to cover in their curricula on the topic of sex education, students may either be receiving mixed messages on this subject, or may not be receiving the information they need to make educated and responsible decisions about their own health. Douglas County teachers seem to have a more organized system of exchanging and sharing information at the middle school level, but this same organization and coordination between health and wellness teachers does not exist at the high school level. In Pueblo County, in both District 60 and District 70, there does not seem to exist the same level of coordination among educators who are distributing this information. Some teachers may not mention anything about sex within their PE classes, where health is covered in some schools within District 60, while some may cover extensive information about various options for contraception, including the morning after pill, in an elective class, like *On Your Own*.

### **Suggestions for Improvement of Sex Education**

Multiple suggestions for the improvement of sex education were shared from all of the sources within Pueblo County; such as requiring students within District 60 to take health or a program from the Colorado Department of Education to provide oversight on how well schools adhere to health standards. Many interviewees cited fear of consequences from parents or their schools' administration as a barrier to broaching the topic of sexual health with students. Staff at schools within Pueblo County consistently stated that they believed that students having education on this topic was important, and all teachers who were asked, stated that they believed health should be both a middle school and high school requirement. Aside from the aspect of

sexual health, discussing health overall is important for students' wellbeing and performance in school.

DCSD respondents more frequently stated that they believed their school was doing a good job presenting material on the topic of sexual health, they did not have many recommendations for change, aside from high school teacher's suggestion that a district wide set curriculum should exist for sex education. A teacher in DCSD stated that if health were required, it would change the way certain topics are discussed. Because their class was not required, they had a lot of flexibility and freedom in their ability to cover many aspects of sexual health, they believed that if their class was required, there would not be as much flexibility or discussion of topics such as the wide array of contraceptive methods.

Respondents from both counties stated that they would like to see more coordination around the issue of sex education within their schools, although DCSD middle school faculty mostly stated that they believed their schools were doing a good job providing students with sex education. Within schools where health was not a requirement for graduation, respondents overwhelmingly stated they believed it should be required, and explained the various benefits of health education, aside from teaching about sexual health.

### **Other Resources for Students**

Within Pueblo County, there are school-based wellness centers located at schools within both District 60 and District 70. Central High School, East High School, Heroes K-8 Academy, Pueblo County High School, and Risley International Academy of Innovation all have school-based wellness centers. These school based wellness centers "provide comprehensive primary health care/behavioral health services" similar to those students would receive at other medical

facilities (Pueblo Community Health Center, n.d.). A nurse from Pueblo District 60 explained that school wellness centers serve students without private insurance. Wellness centers can provide a wide variety of services, which include, writing prescriptions for birth control, and handing out condoms, but “not without a talk.” The nurse stated that condoms are also provided at middle school wellness centers. Although wellness centers provide a great place for students to seek medical advice and care, students who have private insurance must seek care elsewhere. This has the possibility to leave some students in a difficult position if they are without transportation; there are many other places within Pueblo County to receive free birth control, STI testing, pregnancy testing, and more, but students may not have a form of transportation other than their parents, with whom they may feel uncomfortable discussing these topics.

All respondents within both Pueblo and Douglas counties explained students have multiple resources within schools to seek answers in regards to sexual health such as; wellness centers, school nurses, counselors, or the teachers themselves. Within schools that had a part-time nurse, teachers said students rarely interact with the nurse, other than to receive treatment for illness or take medicine. In those schools, students would more likely approach a teacher or counselor for advice, if they felt comfortable. From Pueblo County teachers’ explanations of schools with wellness centers, these schools seem to be like most likely place that students would speak to a medical professional, such as a nurse, to receive information about sexual health.

Teachers within both counties were asked if their school had any set protocol from the administration to guide conversations with students in regards to sensitive topics, such as sexual health. They responded that within a private context, there was no set protocol. Some teachers at the middle school level, in both counties, said they would contact parents, depending on the nature of the inquiry from the student. Additionally, teachers from both counties said they would

encourage students to speak to their parents about their issue, but would also give them options of where they could go to receive further information and services.

Although Pueblo County has many community resources that support pregnant teens and teen parents, they lack programs within the schools that support teen moms specifically. Both District 60 and District 70 have a policy on pregnant students, which says they may continue in school as long as physically possible, then they are to meet with a counselor to help coordinate the rest of their credits (District 70 Board of Education, 2014; Pueblo City Schools Board of Education, 2013). There are also online options for students within both districts. In comparison, DCSD students have the ability to take classes online through The Colorado Cyber School, as well as at the Eagle Academy, which offers classes in the afternoon and evening (DCSD, 2014). Additionally, teen moms in DCSD have the option to participate in the Winning in New Growth Situations (WINGS) program. The WINGS Teen Parent Program meets once a week, and discuss a wide variety of topics, such as prenatal issues, nutrition, exercise, baby nutrition, parenting, bringing the baby home, and more, according to the WINGS program director.

The WINGS program is voluntary, but teen parents can earn an elective credit by participating. Teen parents, as well as siblings of teen parents, occasionally participate in the program. The director stated that many times the impact of a teen pregnancy on other members of the family is not discussed or considered, and through their more than 20 years directing the program, they have seen sisters of teen mothers become teen mothers themselves. The director of the program discussed throughout their time in this position, they have been amazed what wonderful parents her students have become, as well as surprised that the most common reason they hear for teens becoming pregnant is, “I didn’t think it would happen to me.” Teens from all backgrounds and socioeconomic classes have participated in the program since its inception, and

the director has seen many former students grow up and send their kids off to college. The WINGS program provides support for pregnant teens, teen parents, as well as gives lessons on topics relevant to their experiences. Additionally, the WINGS program provides a panel of teen moms periodically to answer questions to students at the high school, as a resource for advice from the students who have experienced teenage pregnancy themselves.

Pueblo County has numerous community resources students for pregnant teens and teen parents, but no program specifically for teen parents within the school systems. Douglas County does not have as many community resources for pregnant teens or teen parents, but it does have some, as well as the WINGS program, which is a part of DCSD. Students within both counties can seek advice from faculty at their schools, but schools in Pueblo County, which have a wellness center located in them, seem to be the easiest place for students to receive information about sexual health. However, although students can receive prescriptions, for birth control, for example, within the school wellness centers, they would still have to pick the prescriptions up off campus. This may limit some students' access to contraception if they do not have a form of transportation.

### **Factors Contributing to Local Rates of Teenage Pregnancy**

When asked about the underlying reasons behind teenage pregnancy rates in Pueblo County, as compared to the rest of the state, a variety of opinions were expressed. The most common response was that in Pueblo, there is not the same stigma against teen mothers as may exist in other communities, because it is a more common occurrence. Generations of teen mothers reside within the community: the grandma was a teen mother, the students' parent was a teen mother, so if they become a teen mother, it is not looked down upon, and they also have a

support system in place. Of those asked this question, five out of six responded that they believe that the lower socioeconomic status of the community has an effect on the teen pregnancy rate. Many discussed a lack of opportunity within the community, so teens may feel that they do not have much to aspire to outside of becoming a parent, or as a way to take control of their lives, they decide to have a child. One respondent explained that some of the teen pregnancies they had encountered during their career were not an accident, “it was a decision,” and “these kids don’t see a future for themselves.” Some teachers mentioned that they do not believe students are receiving enough education on this topic, but everyone in Pueblo County who was asked about rates of teenage pregnancy discussed how complex the issue is; no one stated that they believed there was one specific solution would could help with this issue. The nurses whom were asked about this both responded that they believe that education is critical, and health education overall should be given more of a priority.

Teachers in District 70 in Pueblo, which serves more rural communities, stated that they believed parents were more involved in their schools because they are smaller. One middle school faculty member explained that if rumors were going around their school, teachers and parents are likely to hear about it because of the small class sizes. They said they received calls with concerned parents saying they had heard rumors about a student being pregnant, and the faculty member said they would address these issues with the student directly. Additionally, the faculty member had also worked in inner-city schools previously, and noted a difference in parent involvement between inner-city and rural schools.

In Douglas County, seven respondents explained they believed that parents had the greatest influence on the low teenage pregnancy rate within their county. All stated parents are very involved in the students’ school life and have very high expectations for students to

continue on to college. Some also responded they believe that the higher socioeconomic status of many residents within the county contributes to low rates. However, a few teachers mentioned they believe abortions may be another reason that Douglas County has lower rates of teenage births. None explicitly stated this as fact, but explained it would make sense given the stigma that may exist against teen mothers within their community.

The responses from interviewees within both counties reflected the conclusions from the literature: teenage pregnancy is a complex issue, with many contributing factors. Respondents from Pueblo County cited a more accepting attitude towards teen parents, as well as a lack of opportunity within the community as factors, which they believe contribute to higher rates. Douglas County respondents overwhelmingly cited the influence of parents on low rates, as well as the influence of living in a more affluent community as contributing to their county's lower rates.

### **Limitations**

The major limitation of this study was time. If this project had lasted over two semesters, schools could have been visited, more teachers interviewed, and sex education classes could have possibly been observed. Although many contacts were made and great information received, there were some schools that could not be reached for contract, despite multiple attempts. Another limitation was that this entire project was completed alone, rather than with a team of people who could have helped coordinate information between sources and locations.



## **Chapter 5: Conclusion and Recommendations**

Although Colorado has experienced a steady decline in teenage birth rates over time, geographic disparities in rates of birth to teenage mothers still exist between Colorado counties (Bolden, 2014). This thesis sought to explore the cause of a disparity in teenage birth rates between Pueblo County and Douglas County, Colorado, through a literature review covering a wide variety of subjects related to teenage sexual behaviors, legislation surrounding sex education in both the US as well as Colorado, and factors which may lead some teens to be at a greater risk to become pregnant than others. This thesis also analyzed primary documents from both counties' schools and school districts, as well as state guidelines, regulations, and laws, which determine standards for sex education across the state. The goal of this thesis was first to understand the cause of a difference in births to teenage mothers between Pueblo County and Douglas County, then to assess the level of sex education in both counties, and determine whether or not the sex education in each county has helped to lower the teen pregnancy rate. Finally, this thesis analyzed what could be changed within each county, in terms of sex education, to help provide teenagers with better resources regarding their sexual health, and potentially lower the teenage pregnancy rate.

It can be concluded, through rigorous analysis of all forms of evidence from both counties, that teenage pregnancy is an extremely complex social issue that has multiple causes, as well as many potential things that could help to lower rates. Douglas County has a higher socioeconomic status than the state average, and a higher status than Pueblo County, which has been cited through both interviews and evidence, as one cause of lower teen pregnancy rates. Douglas County does not have a district-wide curriculum for sex education at the high school level, nor are students required to take health at the high school level. Students within Douglas

County do, however, have multiple elective classes offered at every school within the district in which topics regarding youth sexual health are covered. Douglas County School District does have an organized system of health and wellness education at the middle school level, where students are required to take health, but this same organization and coordination does not exist at the high school level. Students within Douglas County are exposed to topics related to sexual health at the middle school level, although each student may have different experiences based on who their teacher was and what school they attend.

The primary difference between Douglas County and Pueblo County students in terms of sex education, is that students in Douglas County are have more options to take classes in which these topics are discussed, as well as having a lower amount of students at risk for becoming teen parents. Although a perfectly organized and consistent system of sex education does not exist within Douglas County, they have lower rates of teen pregnancy because of other social and cultural factors, primarily the higher socioeconomic status of the community.

Pueblo County has rates of births to teenage mothers that are higher than both the state and Douglas County (Bolden, 2014). Pueblo County has two school districts, which have different rules and regulations in terms of teenage pregnancy, as well as different levels of need within the communities they serve. Rates of teenage births are statistically higher in the areas of the county in which District 60 schools are located. District 60, which serves students within the City of Pueblo, does not require health for either middle school or high school students. There are health classes offered at some schools within District 60, but not all, and there is no district wide policy or required curriculum for teachers in regards to sex education. District 70, which serves the more rural parts of Pueblo County, does require students to take health for graduation, with a portion of the health classes at the high school level taught by a public health official, and

contraception is covered to some degree. Within both districts, teachers were consistently mentioned as the primary decision maker in terms of what was covered in terms of sex education, and a variety of classes may discuss this topic on some level.

In both school districts in Pueblo County, there seemed to be a lack of communication, consistency, and cooperation between teachers, school administration, and the school district on the subject of sex education. Each school appears to have the ability to determine what is taught in regards to sex education, and within schools, the responsibility to cover these topics seems to be passed along to individual teachers. Rates of birth to teenage mothers are statistically higher within Pueblo County than the state average as well as Douglas County rates, and although this topic has received varying levels of attention from multiple sources, no clear, organized plan to address this problem has been implemented, although there are many different organizations which cite this as an issue to be solved. The county has a community health plan, which states that a primary objective is to lower the teenage pregnancy rate, but only a few of the factors have been addressed.

Pueblo County does not lack people who are passionately working to improve sex education and resources for students within the community, but it does lack cooperation between the sources of education and resources on the topic. Students in Pueblo County, within District 60 particularly, are at a higher risk to become teen parents than their peers in other counties. Some students may go through all of middle and high school without being exposed to important information in regards to their sexual health that could aid them in making responsible, educated decisions about their personal relationships. Due to a lack of requirement for health within District 60, students may not have the benefit of receiving information in regards to sexual health, based on their class choices, therefore may be at a greater risk to engage in risky

behaviors. In conclusion, a clear and organized system of sex education does not exist within Pueblo County, although District 70 does have a requirement for students to take health, the amount of time spent discussing sexual health is limited.

At the outset of this thesis, it was hypothesized that one county would have a clear lack of any form of sexual education, while the other had highly effective sexual education, but to conclude: that is not the primary cause of a difference in teenage birth rates between the counties. Thorough analyses of statistics, documents, regulations, curricula, and personal interviews from members within each county have contributed to the conclusion that rates of teenage pregnancy within both counties have multiple factors. Within Douglas County, youth are at a lower risk for teenage pregnancy due to the higher socioeconomic status of the community as a whole, parents who are extremely involved in students' lives, a wide variety of extracurricular activities available to students, as well as a community standard for pursuing college education. Students within Douglas County also have more opportunities to be exposed to sexual education, whether through their required middle school health classes, or a variety of elective classes at the high school level. Within Pueblo County, students are at a higher risk to become teenage parents due to a lower socioeconomic status of the community, a more socially accepted attitude towards teenage pregnancy, and a lack of opportunity for careers within the community. Schools within Pueblo County face resource limitations, as well as the influence of state determinations of poor academic achievement within some schools. Schools within District 60 in Pueblo County lack a clear and consistent plan for sex education for students in their district, and are under stresses from the state to make other academic achievements a priority. Schools within District 70 do require students to take health as a requirement for graduation, but

the level of education on the topic of sexual health is limited and varies between schools, as well as teachers.

This thesis argues that comprehensive, evidence-based, age-appropriate, and medically accurate sexual education can have positive influences on youth, in terms of delaying initiation of sexual activity, increasing use of contraception methods, reducing the number of sexual partners, and decreasing the number of unintended pregnancies amongst teenagers. Both Douglas County and Pueblo County could benefit from a more organized system of sex education within their schools. The state of Colorado has established guidelines for sex education, which fulfill the objectives stated above, but these guidelines are not mandated. Additionally, the Colorado Department of Education has established health standards, which include comprehensive sex education in the curricula. The state of Colorado should join the 22 other states in the United States, which require sex education for their students, and mandate that all school districts have comprehensive sex education provided to students within their schools. The state could provide grants to communities in which finances limit their ability to add additional courses. The state of Colorado should establish a branch of the Colorado Department of Education which monitors schools and makes sure that they are correctly adhering to the guidelines set out within the laws regarding sex education, as well as the content standards for health education. Additionally, the state should allow schools to choose from a list of evidence-based, comprehensive sex education programs, which have been approved by the CDC, to replicate in their districts.

Teenage pregnancy is a complex social issue, that has many contributing factors, as well as possible solutions. This thesis argues that because evidence exists to support the effectiveness of comprehensive sex education, it should be a required class for students. Lowering teenage pregnancy rates can have positive influences on individuals, schools, communities, the state, and

the country as a whole, by lowering public costs associated with teenage parents, and by increasing the education level of youth within the state of Colorado. Education is not the sole answer to the public health concern of teenage pregnancy, but it can help have a positive impact on teenager's ability to make responsible, informed decisions about their health, and in turn, positively affect those around them.

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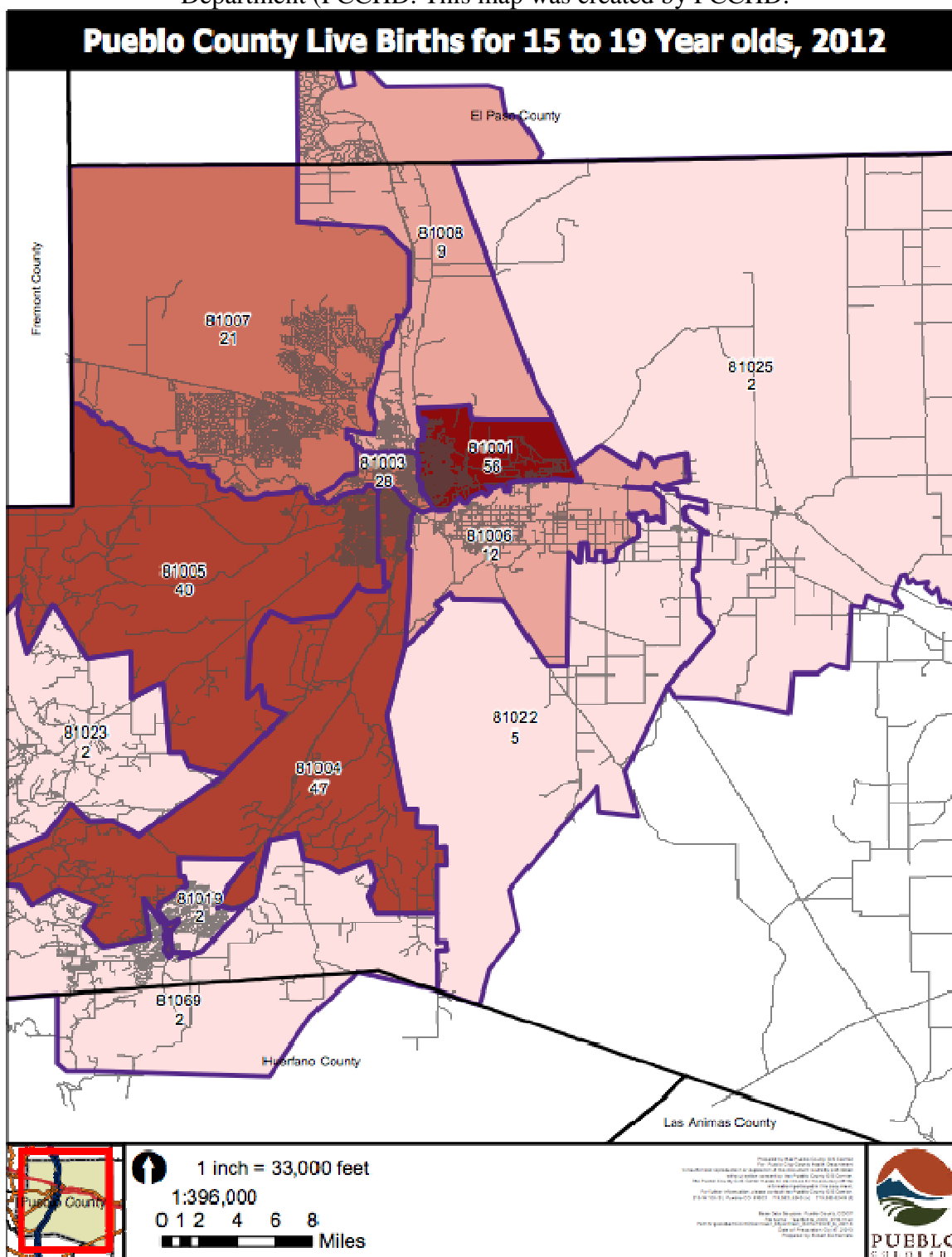
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Map provided by the public health planner the Pueblo City-County Community Health Department (PCCHD). This map was created by PCCHD.





## Appendix B

The following is the full text of Colorado HB 07-1292: Concerning the Adoption of Science-Based Content Standards for Instruction Regarding Human Sexuality

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**NOTE:** This bill has been prepared for the signature of the appropriate legislative officers and the Governor. To determine whether the Governor has signed the bill or taken other action on it, please consult the legislative status sheet, the legislative history, or the Session Laws.



HOUSE BILL 07-1292

BY REPRESENTATIVE(S) Todd, Butcher, Casso, Kerr A., Massey, McKinley, Merrifield, Solano, Carroll M., Green, Labuda, Levy, Madden, McGihon, Pommer, and Marshall;  
also SENATOR(S) Windels, Bacon, and Boyd.

CONCERNING THE ADOPTION OF SCIENCE-BASED CONTENT STANDARDS FOR  
INSTRUCTION REGARDING HUMAN SEXUALITY.

*Be it enacted by the General Assembly of the State of Colorado:*

**SECTION 1. Legislative declaration.** (1) The general assembly hereby finds that:

(a) The United States has one of the highest teenage pregnancy rates in the developed world, and the state of Colorado ranks twenty-second in the nation in total teen pregnancies, with approximately twelve thousand one hundred thirty girls becoming pregnant before their eighteenth birthdays each year;

(b) The state of Colorado ranks twenty-ninth in the nation in total incidences of sexually transmitted diseases;

(c) It is estimated that twenty percent of teen pregnancies in

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*Capital letters indicate new material added to existing statutes; dashes through words indicate deletions from existing statutes and such material not part of act.*

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Colorado will result in abortions.

(2) The general assembly further finds that:

(a) Current research documents the fact that those individuals who receive early, comprehensive, age-appropriate, and medically accurate education regarding the health benefits and other benefits derived from sexual abstinence, family planning, and birth control are more likely to delay sexual activity and engage in such activity with a higher degree of responsibility and safety; and

(b) Comprehensive sex education programs that complement the involvement and instruction of parents and respect the diversity and values of the state provide Colorado's youth with a foundation of information to help them make responsible, healthy, and informed decisions.

(3) Therefore, the general assembly hereby declares that the objective of this act is to reduce the incidence of sexually transmitted diseases, pregnancy, and abortion among teenagers by ensuring that school districts and teen pregnancy prevention programs that offer instruction and information concerning human sexuality provide teenagers the science-based information they need to make responsible and healthy decisions, with a primary emphasis on abstaining from sexual activity. For teenagers who become sexually active, school districts and teen pregnancy prevention programs that offer instruction concerning human sexuality shall both encourage such teenagers to return to abstinence and teach the effective use of condoms or other means of contraception.

**SECTION 2.** 22-1-110.5, Colorado Revised Statutes, is amended BY THE ADDITION OF THE FOLLOWING NEW SUBSECTIONS to read:

**22-1-110.5. Education regarding human sexuality - prior written notice to parent - content standards.** (5) EXCEPT AS DESCRIBED IN SUBSECTION (9) OF THIS SECTION, A SCHOOL DISTRICT, CHARTER SCHOOL, OR INSTITUTE CHARTER SCHOOL THAT OFFERS A PLANNED CURRICULUM THAT INCLUDES INSTRUCTION CONCERNING HUMAN SEXUALITY SHALL, IN OFFERING SUCH A CURRICULUM, MAINTAIN CONTENT STANDARDS FOR THE CURRICULUM THAT ARE BASED ON SCIENTIFIC RESEARCH, WHICH CONTENT STANDARDS SHALL:

PAGE 2-HOUSE BILL 07-1292

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(a) ENCOURAGE PARENTAL INVOLVEMENT AND FAMILY COMMUNICATION;

(b) EMPHASIZE ABSTINENCE AND TEACH THAT SEXUAL ABSTINENCE IS THE ONLY CERTAIN WAY AND THE MOST EFFECTIVE WAY TO AVOID PREGNANCY AND SEXUALLY TRANSMITTED DISEASES AND INFECTIONS, INCLUDING BUT NOT LIMITED TO INSTRUCTION REGARDING HIV/AIDS, HEPATITIS C, THE LINK BETWEEN HUMAN PAPILLOMAVIRUS AND CANCER, AND THE AVAILABILITY OF THE HUMAN PAPILLOMAVIRUS VACCINE;

(c) INCLUDE INSTRUCTION TO HELP STUDENTS DEVELOP SKILLS FOR MAKING RESPONSIBLE AND HEALTHY DECISIONS ABOUT HUMAN SEXUALITY, PERSONAL POWER, BOUNDARY SETTING, AND RESISTING PEER PRESSURE, INCLUDING HOW TO AVOID:

(I) UNWANTED VERBAL, PHYSICAL, AND SEXUAL ADVANCES;

(II) MAKING UNWANTED VERBAL, PHYSICAL, AND SEXUAL ADVANCES; AND

(III) MAKING ASSUMPTIONS ABOUT A PERSON'S SUPPOSED SEXUAL INTENTIONS BASED ON THAT PERSON'S APPEARANCE;

(d) INCLUDE DISCUSSION OF HOW ALCOHOL AND DRUG USE IMPAIRS RESPONSIBLE AND HEALTHY DECISION-MAKING;

(e) BE AGE-APPROPRIATE, CULTURALLY SENSITIVE, AND MEDICALLY ACCURATE ACCORDING TO PUBLISHED AUTHORITIES UPON WHICH MEDICAL PROFESSIONALS GENERALLY RELY;

(f) PROVIDE INSTRUCTION ABOUT THE HEALTH BENEFITS AND POTENTIAL SIDE EFFECTS OF USING CONTRACEPTIVES AND BARRIER METHODS TO PREVENT PREGNANCY, INCLUDING INSTRUCTION REGARDING EMERGENCY CONTRACEPTION AND THE AVAILABILITY OF CONTRACEPTIVE METHODS; AND

(g) FOR SCHOOL DISTRICTS THAT HAVE ESTABLISHED A CHARACTER EDUCATION PROGRAM PURSUANT TO SECTION 22-29-103, PROMOTE THE GUIDELINES OF BEHAVIOR ESTABLISHED IN THE CHARACTER EDUCATION PROGRAM.

(6) NOTHING IN SUBSECTION (5) OF THIS SECTION SHALL BE INTERPRETED TO PROHIBIT DISCUSSION OF HEALTH, MORAL, ETHICAL, OR RELIGIOUS VALUES AS THEY PERTAIN TO HUMAN SEXUALITY, HEALTHY RELATIONSHIPS, OR FAMILY FORMATION.

(7) SCHOOL DISTRICTS, CHARTER SCHOOLS, AND INSTITUTE CHARTER SCHOOLS ARE ENCOURAGED TO INVOLVE TEACHERS, SCHOOL NURSES, PARENTS, AND COMMUNITY MEMBERS IN THE DEVELOPMENT OF THE CONTENT STANDARDS REQUIRED BY SUBSECTION (5) OF THIS SECTION AND TO INTEGRATE AVAILABLE COMMUNITY RESOURCES INTO PROGRAMS PROVIDING INSTRUCTION REGARDING HUMAN SEXUALITY.

(8) AS USED IN THIS SECTION, UNLESS THE CONTEXT OTHERWISE REQUIRES, "SEXUAL ABSTINENCE" MEANS NOT ENGAGING IN ORAL, VAGINAL, OR ANAL INTERCOURSE OR GENITAL SKIN-TO-SKIN CONTACT.

(9) A SCHOOL DISTRICT, CHARTER SCHOOL, OR INSTITUTE CHARTER SCHOOL THAT IS RECEIVING UPON THE EFFECTIVE DATE OF THIS SUBSECTION (9) DIRECT OR INDIRECT FUNDING FROM THE FEDERAL GOVERNMENT FOR THE PROVISION OF AN ABSTINENCE EDUCATION PROGRAM PURSUANT TO 42 U.S.C. SEC. 710 SHALL NOT BE REQUIRED TO ADOPT CONTENT STANDARDS FOR THE PROVISION OF SUCH INSTRUCTION AS DESCRIBED IN SUBSECTION (5) OF THIS SECTION IN ANY YEAR THAT THE SCHOOL DISTRICT, CHARTER SCHOOL, OR INSTITUTE CHARTER SCHOOL RECEIVES SUCH FUNDING.

**SECTION 3.** 22-25-104 (3) (a), Colorado Revised Statutes, is amended to read:

**22-25-104. Colorado comprehensive health education program - role of department of education - recommended curriculum guidelines - allocation of funds - rules and regulations.** (3) (a) With the assistance of parents, school districts, the department of public health and environment, the Colorado commission on higher education, and other interested parties, the department of education shall develop recommended guidelines for the implementation of local comprehensive health education programs. THE GUIDELINES DEVELOPED PURSUANT TO THIS SUBSECTION (3) SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 22-1-110.5.

**SECTION 4.** 22-25-110 (2), Colorado Revised Statutes, is amended to read:

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**22-25-110. Funding of existing programs - operation of other health education programs.** (2) Nothing in this article shall be interpreted to require a school district or board of cooperative services to establish a local comprehensive health education program nor shall it be interpreted to prevent a school district or board of cooperative services from offering a health education program which is not operated under the requirements of this article; except that any school district or board of cooperative services offering such a health education program shall:

(a) Comply with the public information requirements contained in section 22-25-106 (4); ~~and~~

(b) Establish a procedure to exempt a student, upon request of the parent or guardian of such student, from a specific portion of the health education program on the grounds that it is contrary to the religious OR PERSONAL beliefs and teachings of the student or the student's parent or guardian; AND

(c) UNLESS THE SCHOOL DISTRICT OR BOARD OF COOPERATIVE SERVICES IS RECEIVING DIRECT OR INDIRECT FUNDING FROM THE FEDERAL GOVERNMENT FOR THE PROVISION OF AN ABSTINENCE EDUCATION PROGRAM PURSUANT TO 42 U.S.C. SEC. 710 AS DESCRIBED IN SECTION 22-1-110.5 (9), COMPLY WITH THE REQUIREMENTS SPECIFIED IN SECTION 22-1-110.5 (5) REGARDING THE ADOPTION OF SCIENCE-BASED CONTENT STANDARDS FOR INSTRUCTION REGARDING HUMAN SEXUALITY.

**SECTION 5.** 25.5-5-603 (2) (b), Colorado Revised Statutes, is amended to read:

**25.5-5-603. Program - teen pregnancy and dropout prevention.** (2) (b) Such services may include, but shall not be limited to, the following services or combination of services:

(I) Intensive individual or group counseling, which includes a component on SEXUAL ABSTINENCE AND delayed parenting;

(II) Vocational, health, and educational guidance;

(III) Public health services such as home visits or visiting nurse services; AND

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(IV) INSTRUCTION CONCERNING HUMAN SEXUALITY; EXCEPT THAT THE DEPARTMENT, IN PROVIDING A TEEN PREGNANCY PREVENTION PROGRAM PURSUANT TO THE PROVISIONS OF THIS PART 6 THAT PROVIDES INSTRUCTION CONCERNING HUMAN SEXUALITY, SHALL ADOPT SCIENCE-BASED CONTENT STANDARDS TO ENSURE THAT ANY INSTRUCTION CONCERNING HUMAN SEXUALITY THAT IS PROVIDED SATISFIES THE REQUIREMENTS OF SECTION 22-1-110.5 (5), C.R.S., AS IF THE PROGRAM WERE PROVIDED BY A SCHOOL DISTRICT.

**SECTION 6. Effective date.** This act shall take effect July 1, 2007.

**SECTION 7. Safety clause.** The general assembly hereby finds,

## Appendix C

The following questions were used in formal interviews with participants from both Pueblo and Douglas counties.

### Interview Questions

- 1) What is your role at your school/organization?
- 2) How long have you been working at this position?
- 3) What do you think is the most important part of your job?
- 4) What policy/program/school/organization do you think is having the greatest influence on lowering the teen pregnancy rate in Douglas/Pueblo county?

*Now I'd like to ask you a few questions about how sex education programs are being implemented at your school...*

- 5) Is health a requirement for students at your school?
- 6) What is the focus of the school's health class?

*Probes:*

- a) Is it primarily on relationship building and self-esteem skills?
- b) Is the focus on safe-sex methods?
- 7) Do you think the students/population your school is serving receiving age-appropriate, medically accurate sex education?

*Probe:*

- a) Is there anything you would change to better serve/teach your students/ target population?
- b) What is the best way to deliver students a comprehensive sex education?
- 8) Does your school use an opt-in or opt-out method for sex education?
  - a) Are students more likely to attend health or sex education classes if the school uses an opt-in method or an opt-out method?
- 9) Does your school provide health or sex education, or does someone from the health department or a private organization come to deliver this information?
- 10) What experience do the teachers who are teaching the material have in the topic of comprehensive sex education?

*Probes:*

- a) What preparation have they had?
- b) What additional preparation might be useful so that there will be more comprehensive sex education delivered to students?

- 11) Are there any district policies determining whether sex education is taught in schools, or is this decision left up to each individual school?
- 12) What role does the administration at your school play in determining the kind of sex education that is delivered to the students?
- 13) If your school does not have any form of sexual education provided to students, has it ever been discussed?

*Probes:*

- a) What are the factors limiting such education to occur?
- b) Parents? The administration?

*For middle school interviews ONLY:*

- 14) How are decisions made in regards to what is taught in health classes at the middle school level?
- 15) Do the wellness teachers have frequent meetings where they can discuss the best practices, what works for them in their classrooms, and any difficulties they are experiencing in the classroom?
- 16) Is the level of discussion with middle school students adequate to equip them with the knowledge to avoid teen pregnancy as they get older?

*Now I'd like to ask a few questions about the reception sex education has had by parents/teachers/administration...*

- 17) Has your school experienced any difficulty from parents in regards to delivering medically accurate, comprehensive sex education?
  - a) How have these parental concerns been addressed?

*Now I would like to ask a few questions about the physical and counseling resources available to students at your school...*

- 18) Is there a clinic at your school?
- 19) Are students in your school able to receive contraception or advice about contraception from a school nurse or counselor?
- 20) Are teachers at your school allowed to give advice to students about birth control methods if a student approaches them privately?

*Finally, I would like to ask a few questions about the county as a whole...*

- 21) What do you feel are the primary reasons that Douglas County/Pueblo County has a low/high rate of teen pregnancy?



*Probes:*

- a) Is this related to the quality of education? Socioeconomic status? Lack of information?
- b) Norms around teen pregnancy (Pueblo)?
- c) What are the most important factors contributing to the low/high teen pregnancy rate?

## Appendix D

The following is the full text of grade level expectations for comprehensive health education from the CDE, as mentioned in the text.

### Comprehensive Health Grade Level Expectations at a Glance

Standard	Grade Level Expectation
<b>Eighth Grade</b>	
2. Physical and Personal Wellness	<ol style="list-style-type: none"> <li>1. Describe the physical, emotional, mental, and social benefits of sexual abstinence, and develop strategies to resist pressures to become sexually active</li> <li>2. Analyze how certain behaviors place one at greater risk for HIV/AIDS, sexually transmitted diseases (STDs), and unintended pregnancy</li> <li>3. Describe the signs and symptoms of HIV/AIDS, and other sexually transmitted diseases (STDs)</li> <li>4. Promote and enhance health through disease prevention</li> </ol>
3. Emotional and Social Wellness	<ol style="list-style-type: none"> <li>1. Access valid school and community resources to help with mental and emotional health concerns</li> <li>2. Internal and external factors influence mental and emotional health</li> </ol>
4. Prevention and Risk Management	<ol style="list-style-type: none"> <li>1. Analyze influences that impact individuals' use or non-use of alcohol, tobacco, and other drugs</li> <li>2. Access valid sources of information about alcohol, tobacco, and other drugs</li> <li>3. Demonstrate decision-making skills to be alcohol, tobacco and drug-free</li> <li>4. Analyze the factors that influence violent and non-violent behavior</li> <li>5. Demonstrate ways to advocate for a positive, respectful school and community environment that supports pro-social behavior</li> </ol>
<b>Seventh Grade</b>	
2. Physical and Personal Wellness	<ol style="list-style-type: none"> <li>1. Analyze factors that influence healthy eating behaviors</li> <li>2. Demonstrate the ability to make healthy food choices in a variety of settings</li> <li>3. Compare and contrast healthy and unhealthy relationships (family, peer, and dating)</li> <li>4. Analyze the internal and external factors that influence sexual decision-making and activity</li> <li>5. Define sexually transmitted diseases (STDs), including human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS)</li> </ol>
3. Emotional and Social Wellness	<ol style="list-style-type: none"> <li>1. Demonstrate effective communication skills to express feelings appropriately</li> <li>2. Develop self-management skills to prevent and manage stress</li> </ol>
4. Prevention and Risk Management	<ol style="list-style-type: none"> <li>1. Analyze the consequences of using alcohol, tobacco and other drugs</li> <li>2. Demonstrate safety procedures for a variety of situations</li> </ol>

## Comprehensive Health Grade Level Expectations at a Glance

Standard	Grade Level Expectation
<b>Sixth Grade</b>	
2. Physical and Personal Wellness	<ol style="list-style-type: none"> <li>1. Access valid and reliable information, products, and services to enhance healthy eating behaviors</li> <li>2. Access valid and reliable information regarding qualities of healthy family and peer relationships</li> <li>3. Comprehend the relationship between feelings and actions</li> <li>4. Analyze how positive health behaviors can benefit people throughout their life span</li> </ol>
3. Emotional and Social Wellness	<ol style="list-style-type: none"> <li>1. Understand how to be mentally and emotionally healthy</li> </ol>
4. Prevention and Risk Management	<ol style="list-style-type: none"> <li>1. Analyze the factors that influence a person's decision to use or not use alcohol and tobacco</li> <li>2. Demonstrate the ability to avoid alcohol, tobacco, and other drugs</li> <li>3. Demonstrate self-management skills to reduce violence and actively participate in violence prevention</li> <li>4. Demonstrate ways to advocate for safety, and prevent unintentional injuries</li> </ol>
<b>Fifth Grade</b>	
2. Physical and Personal Wellness	<ol style="list-style-type: none"> <li>1. Demonstrate the ability to engage in healthy eating behaviors</li> <li>2. Explain the structure, function, and major parts of the human reproductive system</li> <li>3. Describe the physical, social, and emotional changes occurring at puberty</li> <li>4. Demonstrate interpersonal communication skills needed to discuss personal health problems to establish and maintain personal health and wellness</li> <li>5. Comprehend concepts, and identify strategies to prevent the transmission of disease</li> </ol>
3. Emotional and Social Wellness	<ol style="list-style-type: none"> <li>1. Analyze internal and external factors that influence mental and emotional health</li> </ol>
4. Prevention and Risk Management	<ol style="list-style-type: none"> <li>1. Access valid information about the effects of tobacco use and exposure to second-hand smoke, and prescription and over-the-counter drugs</li> <li>2. Demonstrate pro-social behaviors that reduce the likelihood of physical fighting, violence, and bullying</li> <li>3. Demonstrate basic first aid and safety procedures</li> </ol>
<b>Fourth Grade</b>	
2. Physical and Personal Wellness	<ol style="list-style-type: none"> <li>1. Demonstrate the ability to set a goal to enhance personal nutrition status</li> <li>2. Examine the connection between food intake and physical health</li> <li>3. Explain that the dimensions of wellness are interrelated and impact personal health</li> </ol>
3. Emotional and Social Wellness	<ol style="list-style-type: none"> <li>1. Identify the positive behaviors that support relationships</li> <li>2. Comprehend concepts related to stress and stress management</li> </ol>
4. Prevention and Risk Management	<ol style="list-style-type: none"> <li>1. Identify positive and negative uses for medicines</li> <li>2. Demonstrate the ability to use interpersonal communication skills to avoid using tobacco</li> <li>3. Demonstrate skills necessary to prevent a conflict from escalating to violence</li> </ol>