Maternal and Child Health
Needs Assessment
Cochise County, Arizona

Teen Pregnancy
2007-2008

Prepared by:
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1. Introduction
This report is a needs assessment of Maternal and Child Health in Cochise County Arizona, with a specific emphasis on teen pregnancy. The project was completed in December 2006 as a requirement of "CPH 586, Maternal and Child Health," a course taught by Dr. Iman Hakim at the University of Arizona Mel and Enid Zuckerman College of Public Health.

In 1998, the first Cochise County Needs Assessment on breastfeeding conducted through the CPH 586 course was completed. Follow-up assessments on breastfeeding were conducted in 2001 and 2004. Although the format of this report is modeled after the previous works for congruity and comparison, the emphasis of the present project has been altered to reflect a new area of concern, teen pregnancy.

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1.2 Acknowledgements

This project would not have been possible without the cooperation and assistance of the following:

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Marie Bryan, Counselor, Tombstone High School  
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Mark Bennet, Principal, The Berean School  
Ashok Bhatnagar, Omega Alpha

Health provider survey respondents

Finally, and most importantly, we would like to thank the high school students of Cochise County who participated in our survey, to whom this project is dedicated.
2. Cochise County

Cochise County is the eighth largest county in the state of Arizona, comprising 6,169 square miles. It is located in the southeast corner of the state, bordered by Santa Cruz County, Pima County, and Graham County, as well as Sonora, Mexico and New Mexico. The county is primarily rural with a diverse topography, including mountains, grassy highlands and large valleys.
2.1 Demographics

In 2005, the total population of Cochise County was 120,439 or about 2.1% of the total state population. The county is primarily rural with a population density of 19.1 people per square mile. Over 60% of the population resides in the seven major cities in Cochise County: Benson, Bisbee, Douglas, Huachuca City, Sierra Vista, Tombstone and Willcox.

The age distribution of the population follows a similar trend to Arizona as a whole. The largest subpopulation in both Cochise County and Arizona is the 22-44 year old age category. Children under 9 years of age and adolescents 10 to 19 years of age comprised a similar relative proportion of the population in the county and the state. However, Cochise County had a smaller relative proportion of residents in the 20-44 year category and a larger percentage of residents over the age of 45 than the state in general (see figure 2.1).

![Fig. 2.1 Population Distribution by Age in Cochise County and Arizona, 2005](image)

The birth rate for Cochise County in 2005 was 13.4 per 1,000 people. Of these live births, 38.7 percent were to unwed mothers, which is the lowest unwed birth rate among Arizona counties. However, Cochise County had a teen pregnancy rate of 30 per 1,000 women age 19 and younger and a teen birth rate of 26.7 per 1,000 women age 19 and younger. This places Cochise County seventh out of the 15 Arizona counties in terms of teen birth rates. In 2005, there were 261 births to women less than 20 years of age in Cochise County.

The death rate for Cochise County in 2005 was 846.8 per 100,000 people. Causes of death were similar to Arizona in general, with cardiovascular disease, malignant neoplasms, ischemic heart disease, accidents and chronic lower respiratory disease as the top five causes of death among both genders in all age groups.
In 2005, the U.S. Census Bureau reported that the racial and ethnic composition of Cochise County was 60.4% non-Hispanic White, 31.6% Hispanic, 3.3% African American, 2.5% Asian/Pacific Islander and 0.5% American Indian/Alaskan Native (see figures 2.2 and 2.3). This composition differs somewhat from the state in general due to several factors. First, Cochise County borders Mexico to the south. In some communities, such as Douglas, the percentage of the population that is Hispanic is much higher than the state and national averages. In fact, the 2000 U.S. Census reported that the Douglas population was 83% Hispanic. Cochise County is also one of only three counties in Arizona that does not contain an Indian Reservation. For this reason, the percentage of the population that is American Indian/Alaskan Native is considerably lower than Arizona in general.

In 2005, the U.S. Census Bureau reported that 72% of the population spoke English at home. However, only 28% of the population reported speaking English only at home. In contrast, 24% of the population reported using Spanish at home, with about 33% of those reporting speaking English less than very well. Even so, the proportion of the population that speaks Spanish at home varies throughout Cochise County. In 2000, the U.S. Census reported that 78.6% of the population of Douglas spoke Spanish at home. In contrast, only 11.0% of the population in Sierra Vista spoke Spanish at home (see figure 2.4). Nevertheless, the high percentage of the population that speaks Spanish in Cochise County demonstrates the need for bilingual services and programs in the county, in order to effectively meet the needs of the entire population.
In 2000, the US Census reported that the median housing value in Cochise County was $88,200. This was considerably lower than the median housing value for Arizona in general, which was $121,300. However, variation is evident between cities in Cochise County, with Sierra Vista reporting the highest median housing value and Douglas reporting the lowest median housing value in 2000 (see fig 2.5). The average household size in Cochise County for 2005 was 2.48.\(^2\)
The 2005 U.S. Census reported that 84.8% of the population of Cochise County ages 25 and older had a high school degree or higher. In addition, 22.1% had a bachelor's degree or higher. However, discrepancies exist between cities within Cochise County. In 2000, 45.2% of the population age 25 or older in Douglas did not have a high school diploma. In contrast, only 9.2% of the same population in Douglas had a bachelor's degree or higher. In Sierra Vista, 91.5% of the population age 25 and older had a high school diploma or higher, with 25.7% having a bachelor's degree or higher in 2000.

According to the 2005 U.S. Census, 58.7% of the population was in the labor force. The unemployment rate for Cochise County was 6.8% in that year. This was slightly higher than the rate for Arizona, which was 6.3% and similar to the national unemployment rate, which was 6.9% in 2005. In 2003, the top five employment sectors in Cochise County were government (including military and border patrol); trade, transportation and utilities; leisure and hospitality; education and health services; and professional and business services.

In 2000, the median annual household income for Cochise County was $32,105. This was below the median household income for the state of Arizona, which was $40,558. However, there are differences by city within Cochise County. In 2000, Douglas had the lowest median household income at $20,567 and Sierra Vista had the highest median household income at $38,427. However, large disparities are evident between male and female full-time incomes. In fact, the median male income in Willcox was nearly two times the median female income in 2000 (see fig 2.5).
According to the 2000 Census, 13.5 percent of the population of Cochise County was living under the poverty level. However, certain groups suffer disproportionately high poverty rates including households with children and female headed households. Douglas had the highest poverty rates in the county in all categories. In fact, the percentage of the population living under the poverty level was over three times the percentage of the population living under the poverty level in Arizona (see fig 2.6).
The Cochise County Health Department (CCHD) is the central agency for public health in Cochise County. The CCHD provides services through offices in Benson, Bisbee, Douglas, Sierra Vista and Willcox. The department also offers services in remote areas through satellite clinics and mobile units, allowing the health department to meet the needs of the rural population of Cochise County. The CCHD works in collaboration with a number of public and private health agencies and organizations in Cochise County and Arizona.
2.3 Cochise County Health Department Programs and Services

*Health Services mandated by statute to Cochise County*

**Environmental Health**
- Nuisance Control - A.R.S. §36-601
- Abatement of Nuisances - A.R.S. §36-602
- Right to Enter Premises - A.R.S. §36-603

**Nursing & Community Health Services**
- Disease Control Services & Investigations - A.R.S. §36-624
- Immunization Services - A.R.S. §36-629
- Jail and Juvenile Detainee Health Care - A.R.S. §31-201.01, A.R.S. §8-245
- Tuberculosis Control - A.R.S. §36-717

**Delegated/Contracted Responsibilities**

**Administration**
- Office of Vital Records

**Environmental Health**
- Department of Environmental Quality Delegation Agreement
- Arizona Department of Health Services Food & General Sanitation Control Delegation Agreement
- Arizona Department of Health Services Per Capita Grant

**Health Promotion & Disease Prevention**
- Arizona Department of Health Services Community Nutrition Program Contract
- Arizona Department of Health Services Steps Along The Border Initiative Contract
- Arizona Department of Health Services Women, Infants & Children Supplemental Nutrition Program (WIC) Contract
- Arizona Department of Health Services Tobacco Education & Prevention Project (TEPP) Contract
- Arizona Department of Health Services Farmer's Market Contract
- Arizona Department of Health Services Commodity Supplemental Food Program Contract

**Nursing & Community Health Services**
- Arizona Department of Health Services Adolescent Maternal & Child Health Contract

**Nursing & Community Health Services continued...**
- Arizona Department of Health Services Bio-Terrorism & Emergency Preparedness Contract
- Arizona Department of Health Services Children's Justice Fund Contract
- Arizona Department of Health Services Communicable Diseases Contract
- Arizona Department of Health Services Health Start Block Grant
- Arizona Department of Health Services HIV/AIDS Surveillance and Prevention Contract
- Arizona Department of Health Services Immunization Contract
- Arizona Department of Health Services Health Department Varnish Program Contract
- Arizona Department of Health Services Reproductive Health & Family Planning Contract
- Arizona Department of Health Services Sexually Transmitted Disease Contract
- Arizona Department of Health Services Tuberculosis Contract
- SEABHS AIDS/HIV Referrals & Counseling Contract

*(See appendix J)*
3. Health Status of the Target Population

3.1 Women of Childbearing Age (15 to 45 Years Old), Pregnant Women, Children and Infants

In 2005, 36.4% of the female population or 25,086 females were of childbearing age (15-45 years of age). In 2005, there were 1,919 pregnancies in Cochise County. A total of 1,769 pregnancies resulted in birth, 136 ended in abortion and 14 ended in fetal death. The birth rate for Cochise County in 2005 was 13.4 per 1,000 people. Of these live births, 38.7% were to unwed mothers, which is the lowest unwed birth rate among Arizona counties. However, Cochise County had a teen pregnancy rate of 30 per 1,000 women age 19 and younger and a teen birth rate of 26.7 per 1,000 women age 19 and younger. This places Cochise County seventh out of the 15 Arizona counties in terms of teen birth rates. In 2005, there were 261 births to women less than 20 years of age in Cochise County. Among women who gave birth, 50.7% of deliveries were paid for by AHCCCS (Arizona’s Medicaid System), with a higher proportion among younger mothers. About 46% of deliveries were paid for by private insurance and about 2.6% were self-paid. Over 60% of mothers who gave birth were married and 38.7% were unmarried. About 85% of women received prenatal care within the first trimester of pregnancy while about 2% received no prenatal care at all.

Table 3.1  SELECTED CHARACTERISTICS OF NEWBORNS AND WOMEN GIVING BIRTH, COCHISE COUNTY, ARIZONA, 2005

<table>
<thead>
<tr>
<th>Mother’s age group</th>
<th>Total</th>
<th>15-17</th>
<th>18-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payee for births</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>AHCCCS</td>
<td>1,769</td>
<td>5</td>
<td>79</td>
<td>177</td>
<td>542</td>
<td>492</td>
<td>324</td>
<td>120</td>
<td>27</td>
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<tr>
<td>IHS</td>
<td>897</td>
<td>5</td>
<td>69</td>
<td>142</td>
<td>305</td>
<td>203</td>
<td>114</td>
<td>48</td>
<td>9</td>
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<td>Private Insurance</td>
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<td>7</td>
<td>29</td>
<td>228</td>
<td>271</td>
<td>196</td>
<td>63</td>
<td>17</td>
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<tr>
<td>Self</td>
<td>47</td>
<td>0</td>
<td>7</td>
<td>6</td>
<td>14</td>
<td>12</td>
<td>8</td>
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<td>0</td>
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<tr>
<td>Married</td>
<td>1,078</td>
<td>1</td>
<td>6</td>
<td>43</td>
<td>300</td>
<td>361</td>
<td>254</td>
<td>91</td>
<td>20</td>
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<tr>
<td>Unmarried</td>
<td>604</td>
<td>4</td>
<td>73</td>
<td>134</td>
<td>238</td>
<td>130</td>
<td>69</td>
<td>28</td>
<td>7</td>
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<tr>
<td>Other*</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>1</td>
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<td>Prenatal care</td>
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<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>No care</td>
<td>40</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>13</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1st trimester</td>
<td>1,500</td>
<td>5</td>
<td>55</td>
<td>141</td>
<td>461</td>
<td>338</td>
<td>283</td>
<td>95</td>
<td>21</td>
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<tr>
<td>2nd trimester</td>
<td>175</td>
<td>1</td>
<td>17</td>
<td>23</td>
<td>51</td>
<td>31</td>
<td>32</td>
<td>16</td>
<td>4</td>
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<tr>
<td>3rd trimester</td>
<td>52</td>
<td>1</td>
<td>4</td>
<td>8</td>
<td>17</td>
<td>10</td>
<td>4</td>
<td>7</td>
<td>1</td>
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<tr>
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<tr>
<td>Prenatal visits</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No visits</td>
<td>40</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>13</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>1-4 visits</td>
<td>41</td>
<td>0</td>
<td>4</td>
<td>11</td>
<td>8</td>
<td>5</td>
<td>7</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>5-0 visits</td>
<td>172</td>
<td>2</td>
<td>11</td>
<td>23</td>
<td>52</td>
<td>32</td>
<td>29</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>9-12 visits</td>
<td>520</td>
<td>0</td>
<td>26</td>
<td>49</td>
<td>139</td>
<td>160</td>
<td>109</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>13+ Visits</td>
<td>993</td>
<td>3</td>
<td>34</td>
<td>95</td>
<td>327</td>
<td>279</td>
<td>175</td>
<td>61</td>
<td>16</td>
</tr>
<tr>
<td>Unknown</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weight at birth</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,500 g</td>
<td>1,624</td>
<td>5</td>
<td>65</td>
<td>158</td>
<td>498</td>
<td>462</td>
<td>302</td>
<td>109</td>
<td>12</td>
</tr>
<tr>
<td>2,500 g+</td>
<td>1,44</td>
<td>0</td>
<td>14</td>
<td>36</td>
<td>44</td>
<td>29</td>
<td>22</td>
<td>15</td>
<td>5</td>
</tr>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Reproduced from: Advanced Vital Statistics, 2005
3.2 Maternal and Child Health Indicators

3.2.1. Prenatal Care Use and Duration
Among Cochise County’s 1,769 live births, 28.7% of mothers made 9-12 prenatal care visits, and 54.8% made more than 13 visits. In the 9-12 visit range, Cochise County was under the state average by 21.4%, but was higher in the 13 or more visit range by 30.3%, this difference might be due to increased level of education among pregnant mothers and the importance of prenatal care (see Table 3.2).

Table 3.2: Number/Proportion of Prenatal Visits, 2005

<table>
<thead>
<tr>
<th>County of Residence</th>
<th>Total Number of Prenatal Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No visits</td>
</tr>
<tr>
<td></td>
<td>Count</td>
</tr>
<tr>
<td>Arizona</td>
<td>95,798</td>
</tr>
<tr>
<td></td>
<td>2,248</td>
</tr>
<tr>
<td></td>
<td>24,798</td>
</tr>
<tr>
<td>Cochise</td>
<td>1,769</td>
</tr>
<tr>
<td></td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>993</td>
</tr>
</tbody>
</table>

In 2005, Cochise County reported that 84.8% of mothers in the county received prenatal care in their first trimester of pregnancy, which was much higher than the state average of 77.7% and not too far short of the Healthy People 2010 goal of 90%. Among 20 to 24 year old pregnant women, 30.7% received prenatal care in their first trimester compared to only 3.6% of pregnant women 15 to 17 years old.

3.2.2. Birth Rates by Age and Ethnicity
Of the 1,810 births in Cochise County in 2004, the highest proportion (16.02%) was born to White non-Hispanic mothers ages 20 to 24, followed by White non-Hispanic mothers ages 25 to 29 (14.4%), followed by Hispanic or Latino mothers ages 20 to 24 (13.9%) (see Table 3.3).

Table 3.3 Births by Mother’s Age and Race/Ethnicity, 2004

<table>
<thead>
<tr>
<th>Mother’s Age Group</th>
<th>15-17</th>
<th>18-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45+</th>
<th>Unknown</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>1,810</td>
<td>6</td>
<td>164</td>
<td>610</td>
<td>482</td>
<td>309</td>
<td>127</td>
<td>34</td>
<td>2</td>
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<tr>
<td>White non-Hispanic</td>
<td>892</td>
<td>0</td>
<td>73</td>
<td>290</td>
<td>261</td>
<td>165</td>
<td>14</td>
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<tr>
<td>Hispanic/ Latino</td>
<td>751</td>
<td>0</td>
<td>75</td>
<td>253</td>
<td>182</td>
<td>120</td>
<td>50</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Black/A. American</td>
<td>80</td>
<td>4</td>
<td>8</td>
<td>35</td>
<td>20</td>
<td>9</td>
<td>3</td>
<td>1</td>
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<tr>
<td>American Indian</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Asian/P. Islander</td>
<td>40</td>
<td>0</td>
<td>2</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>4</td>
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</tr>
<tr>
<td>Other/unknown</td>
<td>35</td>
<td>0</td>
<td>6</td>
<td>14</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
3.2.3. Birth Outcomes and Complications

In 2004, there were 2,002 pregnancies and 1,810 live births. 181 of those pregnancies were terminated by abortion and 11 ended in fetal deaths from other causes (see Tables 3.4 and 3.5).

Table 3.4: Birth Outcomes by Age of Mother, Arizona, 2004

<table>
<thead>
<tr>
<th>Arizona State</th>
<th>Birth Outcomes by Age of Mother</th>
<th>Total</th>
<th>&lt;15</th>
<th>15-17</th>
<th>18-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45+</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancies</td>
<td></td>
<td>106,252</td>
<td>233</td>
<td>4,955</td>
<td>8,975</td>
<td>30,118</td>
<td>28,333</td>
<td>21,026</td>
<td>9,828</td>
<td>2,299</td>
<td>133</td>
<td>352</td>
</tr>
<tr>
<td>Births</td>
<td></td>
<td>93,396</td>
<td>188</td>
<td>4,227</td>
<td>7,448</td>
<td>25,780</td>
<td>25,618</td>
<td>19,293</td>
<td>8,779</td>
<td>1,948</td>
<td>109</td>
<td>6</td>
</tr>
<tr>
<td>Abortions</td>
<td></td>
<td>12,301</td>
<td>44</td>
<td>703</td>
<td>1,473</td>
<td>4,202</td>
<td>2,598</td>
<td>1,614</td>
<td>969</td>
<td>332</td>
<td>23</td>
<td>343</td>
</tr>
<tr>
<td>Fetal Deaths</td>
<td></td>
<td>555</td>
<td>1</td>
<td>153</td>
<td>48</td>
<td>252</td>
<td>165</td>
<td>128</td>
<td>80</td>
<td>19</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Table 3.5: Birth Outcomes by Age of Mother, Cochise County, 2004

<table>
<thead>
<tr>
<th>Cochise County</th>
<th>Birth Outcomes by Age of Mother</th>
<th>Total</th>
<th>&lt;15</th>
<th>15-17</th>
<th>18-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-34</th>
<th>35-39</th>
<th>40-44</th>
<th>45+</th>
<th>Unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancies</td>
<td></td>
<td>2,002</td>
<td>1</td>
<td>99</td>
<td>189</td>
<td>676</td>
<td>529</td>
<td>324</td>
<td>141</td>
<td>37</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Births</td>
<td></td>
<td>1,810</td>
<td>0</td>
<td>82</td>
<td>164</td>
<td>610</td>
<td>482</td>
<td>309</td>
<td>127</td>
<td>34</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Abortions</td>
<td></td>
<td>181</td>
<td>1</td>
<td>17</td>
<td>24</td>
<td>60</td>
<td>46</td>
<td>13</td>
<td>14</td>
<td>2</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Fetal Deaths</td>
<td></td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Of the 1,021 identified complications of labor and/or delivery reported in Cochise County in 2004, the most common was dysfunctional labor (18.8%), followed by Meconium (11.2%) (see Table 3.6).

Table 3.6: Complications of Labor and/or Delivery

<table>
<thead>
<tr>
<th>Complication of Labor and/or delivery</th>
<th>Arizona</th>
<th>Cochise County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>26,651</td>
<td>960</td>
</tr>
<tr>
<td>Febrile</td>
<td>1,016</td>
<td>i</td>
</tr>
<tr>
<td>Meconium</td>
<td>3,385</td>
<td>108</td>
</tr>
<tr>
<td>Rupture of membrane</td>
<td>1,676</td>
<td>65</td>
</tr>
<tr>
<td>Abruption placenta</td>
<td>364</td>
<td>14</td>
</tr>
<tr>
<td>Placenta previa</td>
<td>262</td>
<td>18</td>
</tr>
<tr>
<td>Other bleeding</td>
<td>348</td>
<td>2</td>
</tr>
<tr>
<td>Seizures</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Precipitous labor</td>
<td>808</td>
<td>20</td>
</tr>
<tr>
<td>Prolonged labor</td>
<td>664</td>
<td>21</td>
</tr>
<tr>
<td>Dysfunctional labor</td>
<td>870</td>
<td>181</td>
</tr>
<tr>
<td>Breech malpresentation</td>
<td>3,036</td>
<td>45</td>
</tr>
<tr>
<td>Cephalopelvic dispr.</td>
<td>667</td>
<td>24</td>
</tr>
<tr>
<td>Cord prolapse</td>
<td>130</td>
<td>1</td>
</tr>
<tr>
<td>Anesthetic complic.</td>
<td>85</td>
<td>1</td>
</tr>
<tr>
<td>Fetal distress</td>
<td>1,966</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>16,628</td>
<td>785</td>
</tr>
</tbody>
</table>
3.2.4. Service Utilization

The Cochise County Health Department (CCHD) provides many nursing and community health services for county residents. In the fiscal year 2005-2006 annual report, the Cochise County Health Department reported offering services in car safety, teen sexual and pregnancy education, and breastfeeding. 105 families received car seat services including car seat safety training, 199 women received education on breastfeeding, and 68 teens were educated on puberty, maturation, sexuality, and pregnancy. The CCHD reported that the county had three cases of Tuberculosis (TB), which were treated successfully by staff. A separate contract was in place to address prevention and control of the spread of Human Immunodeficiency Virus (HIV) and AIDS. Surveillance, control activities, health education and risk education programs were conducted. The Cochise County Health Department made HIV testing accessible by offering off site testing, in addition to the five Health Department sites. The HIV prevention program provided confidential testing and/or counseling for 383 contacts. In addition to communicable disease, CCHD contracts for diabetes education services. The diabetes education program provided classes for the treatment and self care of clients with diabetes and their families. The goal of the CCHD Reproductive Health and Family Planning contract is to empower men and women of childbearing age, through educational and medical services, to choose when they wish to bear children. In the fiscal year 2005-2006 annual report, the Health Department reported conducting 464 pregnancy tests and 114 individuals were screened, tested or diagnosed for sexually transmitted disease. The Cochise County Board of Supervisors established and approved the use of emergency contraception. Currently emergency contraception is offered through CCHD at a cost of $10 for people who do not qualify for free health services.

Arizona Women, Infants and Children (WIC) is a federally funded program administered by the Arizona State Department of Health, Office of Chronic Disease Prevention and Nutrition Services. WIC provides nutrition education and resources, health screening, and breastfeeding education and support. The Cochise County Health Department is working with WIC to provide lactation counseling and support for the hospital. WIC has 7 locations in Cochise County. Each month from October 2005 to September 2006, an average of 5000 women, children, and infants were enrolled in the Cochise County WIC program. On average, 87% of WIC enrolled individuals in the county actually participate in WIC programs. This year, the Farmer’s Market Nutrition Program opened one more site in addition to the Bisbee and Sierra Vista locations, giving WIC clients more locations to redeem their Farmer’s Market vouchers. This program provides an incentive to WIC clients to consume more fresh fruits and vegetables.

3.2.5. Newborn Intensive Care Program

Nurse case management services for newborn intensive care infants and their families following hospital discharge are provided by the Cochise County Health Department’s Public Health Nursing Program. Infants, children and adolescents who are classified as high risk are identified and provided appropriate intervention and case management services to reduce their risk and improve their health care accessibility. For the year 2004, 5,340 newborns were admitted to newborn intensive care units (NICUs) in Arizona compared to 59 newborns admitted to NICUs in Cochise County.
3.2.6. Maternal Transport Program
The Arizona Department of Health Service Public Health Prevention Services Office of Women’s and Children’s Health oversees the High Risk Perinatal/Newborn Intensive Care Program. This program is a comprehensive, statewide system of services dedicated to reducing maternal and infant mortality and morbidity. The program provides a safety net for Arizona families, to ensure the most appropriate level of care surrounding birth, as well as early identification and support for the child’s developmental needs. Maternal and Neonatal Transport Services provide medical consultation and case management related to treatment/stabilization and, if needed, maternal and/or neonatal transport to higher level(s) of care. Infant transport back to the community hospital near the family after the acute hospitalization allows families to visit and learn to care for their baby. Most individuals are transported to the University Medical Center or Tucson Medical Center in Tucson, and some are transported to Phoenix Children’s Hospital. Some providers call the transport hotline, while others may contact doctors in Tucson or Phoenix directly.7

3.2.7. Mortality of Target Populations
There were 11 perinatal, 9 neonatal and 4 post-neonatal deaths recorded in Cochise County in 2004. There were 13 infant deaths recorded. The leading cause of infant mortality in Cochise County was non-specific congenital malformations (not of heart, central nervous system or respiratory system; 2 deaths), followed by maternal complications (2 deaths) and short gestation/low birth weight (2 deaths). The overall infant mortality rate for Cochise County was 7.2 per 1000 live births. Eight children (age 1 to 14) died in Cochise County in 2004. The leading cause among these deaths was motor vehicle accidents (5 deaths), followed by malignant neoplasms (2 deaths). The leading causes of death among adolescents (age 15-19) were motor vehicle accident (1 death) and suicide (1 death).7

3.2.8. Immunizations Status
The Cochise County Health Department provides access to immunizations, and adjusts the fees for services based on family income relative to the Federal Poverty Guidelines. Immunizations for children under the age of 18 are offered free of charge. For adults whose income is above 150% of the Federal Poverty Guidelines the following are the costs for immunization services: hepatitis-B, $33 per dose; Flu shots, $15; measles, mumps and rubella (MMR), $47; and tetanus-diphtheria, $17. The Cochise County Health Department Annual Report states that 5,742 immunizations were given to children in the fiscal year 2005-2006. In that same year 2,684 individuals received flu shots, 393 adults received immunizations for tetanus-diphtheria and MMR, and 235 adults were immunized for hepatitis B. Arizona’s immunization rate as of September 2006 is 79% and the U.S. rate is 81%. The Arizona Immunization Program Office (AIPO) works with the public and private sector to reach the Year 2010 goal of immunizing 90% of Arizona’s children by age two with the recommended vaccines.9
### 3.2.9 Domestic Violence

Acts of domestic violence are not part of the U.S. Federal Bureau of Investigations Uniform Crime Reporting System, which law enforcement agencies are required to comply with. According to Arizona Department of Public Safety, there were 355 arrests for “Offenses Against Family/Children” in Cochise County in 2005, 50 of which were arrests of minors. Although this is an incomplete indicator of the level of domestic violence occurring in Cochise County, it allows for some comparison. There were 3,352 such arrests statewide (of which 384 were juvenile arrests), meaning that Cochise County represents 10.6% of all such arrests statewide. The estimated population of the State of Arizona in 2005 was 5,829,839 of which 120,439 live in Cochise County. The population of Cochise County represents 2.1% of the state population. Innumerable confounding factors could influence the number of arrests for “Offenses Against Family/Children” in Cochise County. Any statements made about the number of those arrests compared to other counties or the state as a whole would be an assumption. However, it is possible that Cochise County may experience a higher rate of domestic violence in its population than the state as a whole. If so, the high proportion of arrests to population in Cochise County could be reflective of this trend.

### 3.2.10. Infant and Child Hospitalizations

In 2004, 41,710 children (>15 yrs) were hospitalized in the State of Arizona. This constitutes 6.6% of all hospitalizations in 2004, and a rate of 299.5 hospitalizations per 10,000 infants and children in Arizona. The top five principle diagnoses of Arizona infants and children, as recorded at hospital discharge in 2004, were (in descending order): diseases of the respiratory system; injury and poisoning; conditions originating in the perinatal period; diseases of the digestive system; and symptoms, signs and ill-defined conditions.

### 3.2.11. Hospitalizations for Other Ambulatory Sensitive Conditions

Ambulatory care sensitive conditions are those conditions that, if treated early in a primary care setting, would not likely require hospitalizations. Conditions are included in this measure if the principle diagnosis code indicates any of the following: immunization preventable conditions, convulsions, severe ear, nose and throat (ENT) infections, tuberculosis, COPD, bacterial pneumonia, asthma, diabetes, hypoglycemia, gastroenteritis, kidney/urinary infection, dehydration, iron deficiency anemia, nutritional deficiencies, pelvic inflammatory disease, and dental conditions. Analysis is limited only to those conditions in which the child is alive upon hospital discharge. In Arizona, 10,964 infants and children were hospitalized for respiratory diseases in 2004. There was a slight difference in the distribution of respiratory conditions between bronchitis/broncholitis, and asthma compared to pneumonia cases. Of the 163 people in Cochise County who were hospitalized for asthma in 2005, 30 were infants and children and 16 were women of childbearing age.
3.2.12. Child Abuse and Neglect
From October 1, 2005 to March 31, 2006 (the most recent reporting period available), there were 455 investigations of child abuse by Arizona's Child Protective Services in Cochise County, representing 2.6% of the 17,559 investigations in the state as a whole. If the proportion of the number of investigations to population size is an indicator of the incidence of child abuse for a given county, then amount of child abuse occurring in Cochise County would appear to be proportionate to its population size, given that Cochise County represents 2.1% of the state population.12
3.3 National Performance Measures

**National Performance Measure #1**

The percent of screen positive newborns who received timely follow-up to definitive diagnosis and clinical management for condition(s) mandated by their state-sponsored newborn screening programs.

Arizona rank: tied for first out of 51†
Progress: On target

During the years 2002 through 2005, Arizona has been effective in providing early intervention for children with special health care needs. During all four years, 100% of screen positive newborns received timely follow-up and clinical management for the state-mandated conditions. The 2010 objective is 100%, and Arizona has met this objective ahead of schedule.

**National Performance Measure #2**

The percent of children with special health care needs age 0 to 18 years whose families partner in decision making subjective all levels and are satisfied with the services they receive.

Arizona rank: 46/51
Progress: Behind target

During the four years from 2002 to 2005, the percentage of families with children with special health care needs (CSHCN) in Arizona who felt involved in health decisions and are satisfied with health services remained constant, at 51.4%. The state did not meet the 2005 objective of 54%, and is currently behind schedule in achieving the 2010 objective of 59%.

**National Performance Measure #3**

The percent of children with special health care needs 0 to 18 received coordinated, ongoing, comprehensive care within a medical home.

Arizona rank: 39/51
Progress: Behind target

In 2005, 50.5% of Arizona’s CSHCN had a medical home. The state has fallen behind its goals and failed to achieve the 2005 objective of 51.5%. This measure has remained unchanged since 2002, and Arizona is therefore behind schedule in making progress.

†Ranking is out of the 50 states plus the District of Columbia.
towards the 2010 objective of 54%.

**National Performance Measure #4**

The percent of children with special health care needs age 0 to 18 whose families have adequate private and/or public insurance to pay for the services they need.

Arizona rank: 27/51
Progress: Behind target

In 2005, the families of 60.8% of Arizona’s CSHCN had adequate insurance to cover needed services. Despite having made no gains in this measure since 2002, Arizona is close to achieving its 2010 objective of 61%.

**National Performance Measure #5**

Percent of children with special health care needs age 0 to 18 whose families report the community-based services systems are organized so they can use them easily.

Arizona rank: 40/51
Progress: Behind target

70.9% of Arizona families with CSHCN feel that the community-based service systems are easy to use. Arizona did not reach its 2005 goal of 73%, and having made no progress since 2002, Arizona has fallen behind its schedule to achieve the 2010 objective of 78%.

**National Performance Measure #6**

The percentage of youth with special health care needs who received the services necessary to make transitions to all aspects of adult life, including adult health care, work, and independence.

Arizona rank: 11/51
Progress: Behind target

In 2005, 5.8% of CSHCN in Arizona received the necessary services to help them transition to independent adult life. The state’s objective is fixed at 6% through 2010, and Arizona has narrowly failed to meet this objective since it was set in 2003.

**National Performance Measure #7**

Percentage of 19 to 35 month olds who have received full schedule of age appropriate immunizations against Measles, Mumps, Rubella,
Polio, Diphtheria, Tetanus, Pertussis, Haemophilus Influenza, and Hepatitis B.

Arizona rank: 39/51
Progress: Ahead of target

Though low in the national rankings, Arizona is doing well against its own targets for immunizing 19 to 35 month olds. In 2005, 78.6% of 19 to 35 month olds received the full schedule of necessary immunizations, besting the objective of 78%. More importantly, the state has made incredible improvements in this area, achieving an increase of nearly 13% since 2001, when only 65.7% of Arizona's 19 to 35 month olds were receiving these immunizations.

National Performance Measure #8

The rate of birth (per 1,000) for teenagers aged 15 or 17 years.

Arizona rank: 48/51
Progress: Behind target

The birth rate among females aged 15 to 17 years in Arizona was 35.8 per 1,000 in 2005, which fell short of the state's objective of 35. There has been very little change in this measure during the last four years, and the state must put resources towards this goal if they are to achieve the 2010 objective of 32 births per 1,000 teenagers.

National Performance Measure #9

Percent of third grade children who have received protective sealants on at least one permanent molar tooth.

Arizona rank: 26/51
Progress: Ahead of target

In 2005, 36.2% of Arizona's third grade children had protective sealants, well ahead of its goal of 25%. The state's 2010 objective is 37%, and they appear to be well on their way to meeting this goal.

National Performance Measure #10

The rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children.

Arizona rank: 32/51
Progress: Ahead of target

In 2004, 58 children aged 14 years or younger died in motor vehicle accidents. The rate
of deaths for both 2004 and 2005 was 4.5 per 100,000 children. This is better than the state’s 2005 objective of 5 per 100,000, and Arizona appears to be making good progress towards the 2010 goal of 3.5 per 100,000.

**National Performance Measure #11**

The percent of mothers who breastfeed their infants at 6 months of age.

Arizona rank: 18/51
Progress: Target not established

The older breastfeeding performance measure, the “percentage of mothers who breastfeed their infants at hospital discharge” was retired. There are therefore no trends to report for this indicator. In 2005, Arizona was behind the target for the retired indicator with only 72.4% of mothers breastfeeding at hospital discharge, relative to the goal of 80%.

In 2005, 37.6% of mothers breastfeed their infants at six months of age. No objective was established for that year, however this is approaching the 2006 objective of 38%, and appears to be reasonably on target to reach the 2010 objective of 39%. Still, even the 2010 objective seems unreasonably low, and far more needs to be done to encourage breastfeeding.

**National Performance Measure #12**

Percentage of newborns who have been screened for hearing before hospital discharge.

Arizona rank: 12/51
Progress: Behind target

In 2005, Arizona screened 98.2% of newborns for hearing impairment, just shy of the objective of 98.5%. The 2010 objective for this measure is 99%, and the state appears to be making good progress towards this goal.

**National Performance Measure #13**

Percent of children without health insurance.

Arizona rank: 47/51
Progress: Behind target

In 2005, 14.7% of Arizona’s children were without health insurance. The objective for 2010, and for each of the years from 2002 to 2005, is 14%; Arizona has failed to meet this objective or make any notable progress with this area for four years in a row.
National Performance Measure #14

Percentage of children, ages 2 to 5 years, receiving WIC services with a Body Mass Index (BMI) at or above the 85th percentile.

Arizona rank: 5/51
Progress: Target not established

The goal related to this measure is to reduce the proportion of 2 to 5 year olds that are at risk for overweight or obesity. In 2005, 35.1% of children receiving WIC services in Arizona had a BMI at or above the 85th percentile. No target was established for 2005, however, the state is approaching the 2006 objective of 35%. The 2010 objective for this measure is 34.5%.

National Performance Measure #15

Percentage of women who smoke in the last three months of pregnancy.

Arizona rank: 10/51
Progress: Target not established

In 2005, 5,128 women reported smoking in the last three months of pregnancy. This is 5.4% of the woman who gave birth in Arizona during that calendar year. No target was yet established for this measure for 2005; the 2006 objective is 5%, and the 2010 objective is 4%.

National Performance Measure #16

The rate (per 100,000) of suicide deaths among youths aged 15 through 19.

Arizona rank: 40/51
Progress: Behind target

Suicide rates among Arizona’s youth aged 15 to 19 have been generally rising since 2001. In 2005, there were 11.8 suicides per 100,000 youth, which is far greater than the 2005 objective of 9.5%, and the 2010 objective of 9.8%. Clearly, this is an area that demands greater attention.

National Performance Measure #17

Percent of very low birth weight infants delivered at facilities for high-risk deliveries and neonates.
Arizona rank: 21/51
Progress: Behind target

In 2005, 81.6% of Arizona’s very low birth weight infants were delivered at facilities for high-risk deliveries and neonates. The state fell just short of its 2005 objective of 82%, but has made fairly steady progress with this indicator since 2001. The objective for 2010 is 84%.

**National Performance Measure #18**

Percent of infants born to pregnant women receiving prenatal care beginning in the first trimester.

Arizona rank: 45/51
Progress: Behind target

In 2005, 76.3% of Arizona’s infants were born to women who received prenatal care beginning in the first trimester. Though not far behind the 2005 objective of 78%, Arizona is performing poorly on the national stage, with some states reporting first trimester prenatal rates as high as 90%. Nevertheless, Arizona has been making some progress since 2001, and the 2010 goal of 80% seems achievable.
3.4 State Performance Measures:

1. Proportion of low-income women who receive reproductive health/family planning services:

- As of 2004, 10.8% of low-income women received reproductive health/family planning services in Title V and Title X funded clinics. The target is to increase that proportion to 17.9%. This proportion is up from 7% in 1997.  

2. Hospitalizations for nonfatal injuries and poisonings per 100,000 children age 15-19:

- In 2003, there were 627.4 hospitalizations per 100,000 children age 15-19 for nonfatal injuries and poisonings. Arizona was successful in reducing this number to below the target of 680 hospitalizations. This number is considerably lower than the number in 1992 of 736.1. 

6. Preventable child deaths per 100,000 children under age 18:

- In 2003 there were 16.5 preventable child deaths per 100,000 children under the age of 18. This number has been successfully reduced to below the target of 17.5 and has decreased considerably from a peak of 24.6 deaths in 1997. 

7. Hospitalizations for ambulatory care sensitive conditions per 100,000 children age 1-14:

- In 2003 there were 568.7 hospitalizations for ambulatory care sensitive conditions per 100,000 children age 1-14, which is above the set target of 515. Arizona has not achieved this target in any year since 1997. Ambulatory care sensitive conditions are those that could have been prevented had the child received adequate primary care.
3.5 State Outcome Measures:

Infant deaths per 1,000 live births:

- In 2004, there were 6.7 infant deaths per 1000 live births in Arizona. The infant mortality rate has declined steadily since 1994 with only a slight increase between 2002 and 2004. The infant mortality rate in 2004 was 7.2 for Cochise County. The Healthy People 2010 goal is to have an infant mortality rate of 6.0.

The ratio of the African-American infant mortality rate to the white infant mortality rate:

- In 2004, the ratio of the African-American infant mortality rate to the White infant mortality rate was 2.24 with rates of 12.1 to 5.4 for African-Americans and Whites respectively. Comparable numbers are not available for Cochise County because there were fewer than 10 infant deaths in each of these racial groups. The state 2010 goal is to have a ratio of 1.8.

The neonatal mortality rate per 1,000 live births:

- In 2004, the neonatal mortality rate per 1000 live births was 4.5 in Arizona, only a slight reduction from the rate of 4.7 in 1994. The neonatal mortality rate was 5.0 in Cochise County in 2004. The rate for Arizona is slightly lower than the U.S. neonatal mortality rate of 4.7 from 2003. The Healthy People 2010 goal is to have a neonatal mortality rate of 2.9.

The post-neonatal mortality rate per 1,000 live births:

- In 2004, the post-neonatal mortality rate per 1000 live births was 2.2 in Arizona and Cochise County. Both rates reflect decreasing trends. In 1994 the rate was 3.2 for Arizona and 5.9 for Cochise County. As of 2003, the post-neonatal mortality rate for the U.S. was 2.3. The Healthy People 2010 goal is to have a post-neonatal mortality rate of 1.2.

Perinatal mortality rate per 1,000 live births:

- The perinatal mortality rate per 1000 live births for Arizona was 6.3 in 2004. The perinatal mortality rate for Cochise County was similar to Arizona's at 6.1 in 2004. The Healthy People 2010 goal is to have a perinatal mortality rate of 4.5.

Child death rate per 100,000 children age 1-14:

- The child death rate per 100,000 children age 1-14 for Arizona was 20.4 in 2004. This rate is much lower than the child death rate of 33.8 for Cochise County in 2004. The state 2010 goal is to have a child death rate of 22.
4. Teen Pregnancy in Cochise County

4.1 Introduction

The Cochise County Health Department has expressed concern over the issue of teenage pregnancy in Cochise County. Although there is an abundance of data on pregnancy rates in the county and its major cities, much of these data are not entirely current and there remains a paucity of data on the sexual behavior and attitudes of teenagers in Cochise County and their perceptions of teenage pregnancy. Although the Youth Risk Behavior Survey was conducted as recently as 2005, the report does not contain results for individual counties and only reflects statewide trends. To date, only one survey has been conducted to assess the sexual behavior and attitudes of Cochise County teens. This survey was conducted by a biology class at Bisbee High School in April of 2006. The survey found that three fourths of the seniors were sexually active and that more than 81% of the students surveyed wanted more information on sexually transmitted diseases and methods of contraception. (see Appendix G)

The importance of understanding the causes of teenage pregnancy in Cochise County lies in the fact that teenage pregnancy creates a large financial, medical, and social burden on its community's members, the state, and even the nation. In 2004 alone, teen childbearing cost Arizona taxpayers $252 million; $48 million of this cost was for public health care, $32 million for child welfare, and $88 million for lost tax revenue. This burden is also evident in the fact that 76.4% of all labor and deliveries to females 19 or younger in Cochise County were paid for by AHCCS in 2004. There is an extensive collection of literature, which cites the many negative medical and social consequences of teenage pregnancy. Olausson et al. found in their study on teenage pregnancy and its long-term socioeconomic consequences that teenage pregnancy poses a risk for socioeconomic disadvantage later in life as measured by an increased odds of low educational attainment, high parity, dependency on welfare, and single living arrangements. In a literature review of the medical consequences of teenage pregnancy conducted by Aubrey J. Cunnington in The Journal of Family Planning and Reproductive Health Care, intra-uterine growth retardation, anemia, low birth weight, prematurity, pregnancy-induced hypertension, and neonatal mortality were all found to be the most frequently cited medical consequences of teenage pregnancy. While the distinction between the causes and consequences of teenage pregnancy are sometimes unclear, it does remain clear that teenage pregnancy has an adverse outcome on various measures of well-being.

Teenage Pregnancy Rates:

As of 2004, Arizona had the fifth highest teenage birth rate for 15-19 year old females in the United States. With a teen pregnancy rate of 60.1 per 1000 females aged 15-19, Arizona was well above the national teenage birth rate of 41.1 per 1000. Earlier data from the year 2000, ranked Arizona as the state with the second highest teen pregnancy rate and the third highest teen birth rate in the United States. In 2004,
Hispanic or Latino females aged 15-19 in Arizona had a pregnancy rate of 120.1 per 1000, compared to a rate of 35.3 for White non-Hispanic females. Of all racial and ethnic groups, the Hispanic or Latino group had the highest teenage pregnancy rate in Arizona. In 2004, Yuma County had the highest teenage pregnancy rate in Arizona for 15-19 year old females of 87.6 pregnancies per 1000 females (age 15-19). Graham County had the lowest rate of 42.5 pregnancies per 1000 females (age 15-19). Cochise County had the fifth lowest teenage pregnancy rate in the state of 61.9 pregnancies per 1000 females in the 15-19 age group. Cochise County also had the fifth lowest birth rate for 15-19 year old females of 52.9 births per 1000 females. This is compared to Yuma County who has the highest birth rate in this age category of 83.5 births per 1000 females. In 2004, 12.7% of all live births in the state of Arizona were to teenage females 19 or younger. Rural counties had a higher percentage of live births to teenagers than did urban counties, 15.5 versus 12.2 respectively. Cochise County is considered a rural county. Pregnancy rates in Cochise County for females 19 years and under have declined since 1994. In 1994 the pregnancy rate was 39.7 per 1000 females 19 and under. As of 2004, this rate had declined to 30.0.

In 2004 alone, there were 289 pregnancies to females 19 or younger in Cochise County and only 246 of these pregnancies resulted in birth. Of the 43 pregnancies that did not result in birth, 42 were terminated by induced abortions. Community Health Profiles from 2003 are available for all of the major cities in Cochise County. In 2003 Huachuca City had the highest birth rate for females aged 15-19 years of 161.5 per 1000 females. Benson had the lowest birth rate per 1000 females aged 15-19 years of 46.55.

<table>
<thead>
<tr>
<th>City</th>
<th>Birth Rate per 1000 females aged 15-19 years in 2003 (from lowest to highest)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benson</td>
<td>46.5</td>
</tr>
<tr>
<td>Sierra Vista</td>
<td>59.4</td>
</tr>
<tr>
<td>Bisbee</td>
<td>78.9</td>
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<tr>
<td>Douglas</td>
<td>85.8</td>
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<tr>
<td>Tombstone</td>
<td>105.4</td>
</tr>
<tr>
<td>Wilcox</td>
<td>159.5</td>
</tr>
<tr>
<td>Huachuca City</td>
<td>161.5</td>
</tr>
</tbody>
</table>

(Table 4.1 was adapted from Arizona Community Health Profiles, 2003)
Teenage Sexual Behavior:

In order to fully understand teenage pregnancy in a community, it is imperative to look at the sexual behaviors and attitudes which may be the root of the problem. The 2005 Arizona Youth Risk Behavior Survey surveyed various public and charter high schools around the state of Arizona. The findings of the survey are as follows:
- 42.8% of high school students had ever had sexual intercourse.
- 5.7% of students who had sexual intercourse had done so for the first time before the age of 13.
- 13.5% of students had sexual intercourse with four or more people during their life.
- 30.2% had sexual intercourse with one or more people during the last three months.
- 23.4% of students who had sexual intercourse during the past three months had drank alcohol or used drugs before their last episode of sexual intercourse.
- 55.1% of students who had sexual intercourse during the past three months had used a condom during their last episode of sexual intercourse.
- 15.3% of students who had sexual intercourse during the past three months used birth control pills to prevent pregnancy before their last episode of sexual intercourse.
- 79.8% was the percentage of students who had ever been taught in school about AIDS or HIV infection.

Statistics from 2005 show that in the 15-19 age group, the rates of reported cases of gonorrhea, chlamydia, early syphilis and genital herpes were 250.3, 1526.3, 4.6, and 36.3 per 100,000 people respectively. Unfortunately, similar statistics are not available for Cochise County alone. These statistics demonstrate that Arizona youth are engaging in sexual behaviors and practices that are putting them at risk for sexually transmitted diseases and pregnancy.

Sexual Education:

In order to better understand why Arizona and Cochise County youth are putting themselves at risk, it is necessary to understand where they are receiving education on sexual issues and if there are gaps in this education. Currently, education on sexuality or sexually transmitted diseases is not mandated. Under R7-2-303 in the Comprehensive Health Education Standards from the Arizona Department of Education, schools that do choose to offer sex education must comply with several requirements. In common schools, an elective lesson on sex education may be offered as a supplement to a health course only at the written request of the parents. All sex education lessons must first be approved by the local governing board, and are subject to input from the community at a minimum of two public hearings. R7-2-303 also requires that the sex education lessons in common schools be taught to boys and girls separately. In high schools, a course in sexual education may be offered as long as the local governing board approves the lessons, allows the public to see the instruction materials, and as long as the lessons do not include tests or surveys questioning the beliefs, practices, family life, morality, values, or religion of the individuals taking the course. For both common schools and
high schools the content of the instruction should place an emphasis on abstinence, stress the consequences of STDs, stress and discuss the possible emotional and psychological consequences of adolescent sexual intercourse and pregnancy, "promote honor and respect for monogamous heterosexual marriage", and advise the students of "Arizona law pertaining to the financial responsibilities of parenting, and legal liabilities related to sexual intercourse with a minor". This last point is also stressed in Arizona Revised Statute 15-711.

Arizona Revised Statute 15-716 concerns instruction on AIDS. Common, high, and unified school districts are allowed to develop their own course for grades K-12. Requirements of these courses include medical accuracy, the promotion of abstinence, the discouragement of drug abuse, and the dispelling of myths regarding AIDS and its transmission. The promotion of a homosexual life-style is not allowed in any course of study on AIDS. Students may also be excused from any instruction relating to AIDS at the request of the parent. Arizona Revised Statute 15-102 regarding parental involvement specifically states that parents who object to any learning material that they deem harmful to their child may withdraw their child from that course of study. This includes objection "to a material or activity because it questions beliefs or practices in sex, morality or religion". If sexual education is offered at a school, the school must develop its own curriculum. For the schools that do choose to offer sexual education, they usually offer it as a section in their health curriculum or as a section in an elective life skills course that students are not required to take, rather than an entire isolated and semester long course. Often times this sexual education mainly focuses on the anatomy and physiology of the human reproductive system and its development and not on methods of contraception and protection from sexually transmitted diseases.

The Arizona Department of Health Services currently offers a Comprehensive Sexuality Education Program and an Abstinence Education Program. Currently, the Comprehensive Sexuality Education Program is only being funded in Gila, Maricopa, Pinal, Yuma, Pima, and Yavapai counties. The goal of this program is to reduce the number of first and repeat pregnancies to girls aged 15-19, and to reduce the incidence of STDs among teens 15-19 years of age. The Cochise County Health Department offers contraception counseling as part of their Family Planning clinics to all Cochise County residents, as well as HIV counseling, testing, and education. The Cochise County Health Department also offers maturation classes to schools should they request them. The maturation classes place much of their focus on human development and the reproductive system, however; if students have questions in regards to issues such as sexually transmitted diseases and contraception, the teacher may answer them. The County Health Department also receives $6000 a year to hold teen mazes. Teen mazes are social events which address various social issues facing teenagers. These events are usually held twice a year; once in the eastern half of the county, and once in the western half of the county. Issues such as teen pregnancy, sexually transmitted diseases, and methods of contraception have been addressed at the mazes (Renee Lee; Director of Maternal, Adolescent and Child Health, Cochise County Health Department; oral communication; November 2004). Churches and other social organizations may offer their own type of sexual education. Currently there is no Planned Parenthood in Cochise County. Care Net
Pregnancy in Sierra Vista, a non-governmental organization that handles crisis pregnancies, offers four hour long sexual education courses which emphasize abstinence. Care Net has done presentations in multiple schools and churches throughout the county. This may not be an exhaustive list of the agencies and organizations that offer reproductive health education outside of the Cochise County Health Department and the schools.

Based on all of the data that suggest there is a problem with teen pregnancy in the state and in the county, we have developed a survey that questions teens about their own and their friends' sexual behavior, beliefs, and attitudes. The teens surveyed were asked about their perceptions of teenage pregnancy in their respective communities, the consequences of sexual activity, and their knowledge of methods of contraception and sexually transmitted infections. Assessing the sexual behavior and beliefs of teens in Cochise County is imperative to understanding the impact that current sexual behavior of teens in Cochise County is having on the teen pregnancy rates and the current risk that teens are at of becoming parents in the near future. The main objective of this survey was to identify areas and characteristics which put teenagers in Cochise County at high risk for becoming teenage parents and to identify possible gaps in services or education that may be partly responsible for the prevalence of teenage pregnancy rates in order to develop and implement targeted interventions to prevent and reduce teenage pregnancy.
4.2 Methodology

4.2.1 Survey of at Risk Population:

Two questionnaires were developed to survey the population in Cochise County. The first questionnaire targeted high school students in Cochise County to determine their perception of teen pregnancy, education currently available and gaps in sexual education. The questionnaire contained 74 questions in eight topic areas including personal information, sexual education, behavior, abstinence, contraception, teen pregnancy, sexually transmitted diseases, and thoughts and reactions (see Appendix D).

The personal information section was developed to create a foundation for understanding the general demographics of the students surveyed and to determine if any correlations exist among certain subgroups of the population and sexual behavior. Questions focused on age, gender, parental education level, race/ethnicity, religious affiliation, and relationship status.

The sexual education section polled students on the educational resources available in regards to sexual education and the efficacy of this education. Questions were developed to determine if education is available at specific schools in Cochise County, if students had taken sexual education at school and if they believed sexual education should be offered at school. In addition, students were asked to list other people or places where they have received sexual education and if they believe sexual education is useful.

The behavior section questioned students about their sexual behavior. This section included direct questions regarding sexual behavior, age of initiation and number of sexual partners. In addition, students were asked to give generalized estimations of the behavior of most teens their age to determine their perceptions of teen sexual behavior in a more indirect manner.

The abstinence section was designed to determine if students have received education regarding abstinence and what their perceptions of abstinence are. Specific questions asked students to rate their opinion of the usefulness and practicality of abstinence, as well as an estimate of their friends’ opinions and practice of abstinence.

The contraception section questioned students about their use and familiarity with contraceptives. This section included several open-ended questions asking students to list as many contraceptives as they could, as well as all the forms of contraceptives they had ever used. Such questions provide evidence of the extent of education students have received, as well as their general understanding of contraceptive methods.

The teen pregnancy section was designed to demonstrate the general prevalence of teen pregnancy in high schools, as well as student’s perceptions of teen pregnancy. Students were asked if they had ever been pregnant or fathered a child, at what age, and if
the pregnancy ended in childbirth. In addition, questions focused on the perceptions of students regarding the number of students in their school who had been pregnant, if they knew of students who dropped out of school because of a pregnancy and if they felt that teen pregnancy was a problem in their community.

The sexually transmitted disease section was developed to determine students’ awareness of STDs and methods of protection from STDs. This section included open-ended questions in which students were asked to list all of the STDs and all the methods of protection they were familiar with. Students were also asked about their perceived risk of getting an STD.

Finally, the section on thoughts and reactions allowed students to express their perceptions of the questionnaire itself. Students were asked to rank their comfort level while taking the questionnaire to determine the general reactions of students. Students were also given the opportunity to express any comments or concerns they had for the survey directors.

A total of 16 schools in Cochise County were contacted in September 2006 to participate in the survey of teen sexual behavior. School principals and/or superintendents were emailed a copy of all survey materials including the questionnaire and the instructions for facilitators (see Appendix C). All individuals were informed about the purpose of the project as a collaboration between the University of Arizona Mel and Enid Zuckerman College of Public Health and the Cochise County Health Department. Additional meetings were held with specific principals and superintendents to discuss the project in detail. After five weeks of communication, a total of eight schools agreed to participate in the survey.

A total of 1146 questionnaires were distributed to eight schools. However, one school was not able to provide the researchers with the completed questionnaires due to school board regulations. In addition, one school did not meet the deadlines for completing the questionnaires, leaving an additional 165 questionnaires outstanding. Finally, several questionnaires were not included due to substantial fallacy. A total of 340 participants from six schools and one juvenile detention center were included in the final data analysis.

The schools that participated and were included in the final results were the following:

The Berean School, Sierra Vista
The Center for Academic Success, Douglas
The Douglas Juvenile Detention Center
Omega Alpha, Douglas
PEPP Tec, Bisbee
PEPP Tec, Douglas
Valley Union High School, El Frida
The Cochise County Teen Sexual Behavior Survey is exempt from IRB approval. The research project was exempt because it was conducted as part of the Maternal and Child Health course at the University of Arizona Mel and Enid Zuckerman College of Public Health under the direction of Dr. Iman Hakim. Although the questionnaires were developed by the researchers, the survey was administered through the high schools that participated. Researchers were not present during the completion of questionnaires. Each school determined their own standards for parental consent and school board review in accordance with school board regulation. Students were informed through the questionnaire cover sheet about the purpose of the survey. In addition, students were informed that participation was voluntary, completely anonymous, and confidential.

Questionnaires were delivered by hand to all of the included schools on November 3, 2006. Administrators received the requested number of questionnaires, instructions for facilitators, a letter with the pertinent deadlines and communication information, and envelopes and or boxes to collect the questionnaires for confidentiality. Questionnaires were collected on November 13, 2006.

Due to the nature of the teen sexual behavior survey, questionnaires were screened for validity after collection. The research team reviewed all debatable questionnaires to decide whether any should be excluded. Only questionnaires exhibiting substantial fallacy were excluded from the analysis. Some examples include statement of ages that were not possible, a substantial number of inappropriate or nonsensical responses, failing to answer over 50 percent of the questionnaire, withholding a substantial proportion of demographic information, and the use of names in combination with any of the above.

Questionnaires were entered into a standardized Excel data spreadsheet which was then transferred to Stata 9 for analysis. Statistical analyses were performed using Intercooled Stata 9.2 for Windows. Data were checked for accuracy and consistency by a team review of the data by hand, and by using Stata's "Inspect Variable" tool. All problem data were corrected by referencing the relevant source questionnaire.

Associations between categorical data were conducted via Fisher's exact test; the \( \chi^2 \) test was used in cases where the number of categories exceeded Stata's capacity for Fisher's exact test. The Kruskal-Wallis test was used for associations between Linkert scale and categorical data, Linkert scale and discrete data, and associations between categorical and discrete data. Comparisons of two Linkert scales were made with Goodman and Kruskal's gamma and Kendall's tau- \( \beta \). The Mann-Whitney ranksum test was used to evaluate associations between binary and ordinal, and binary and discrete data. Linear regression was applied to comparisons of discrete data in cases where scatterplots revealed a likely linear association and the data could reasonably be said to behave as if they were continuous. Similarly, logistic regression was used only in those cases where comparison of group means revealed a likely association and the discrete data behaved as if they were continuous. All \( p \)-values were calculated using two-sided hypothesis tests.
4.2.2 Survey of Health Providers:

The second questionnaire targeted health care providers (doctors and nurses) in Cochise County to determine their perception of teen pregnancy and its effect, if any, on the community as a whole. The questionnaire contained 16 questions on several topics including contraception use, sexual education, behavior of pregnant teen mothers, options providers are willing to discuss in the case of unintended pregnancy, perceptions of providers in regards to teen sexual behavior, and their compliance with scheduled appointments.

Questions in regards to contraception asked providers how likely sexually active teens are to use contraception, what type is the most common form of contraception among teen users, and if providers require parental consent to prescribe contraception to teenagers.

In the case of unintended teen pregnancy, providers were asked if they discuss options with their patients in regards to abortion or adoption and how comfortable they are to discuss these options.

Providers were asked about their comfort level in talking about sexual behavior with teens. They were also asked if they offer sexual health education to female teens, and if they feel that teenagers in the community are adequately educated on sexual health and the consequences of engaging in risky sexual behaviors.

Questions were included on how health providers think that pregnant teenagers feel about their unexpected pregnancy and if they take their situation seriously. Providers were asked if their pregnant teenage patients encounter any difficulties or are surprised by the difficulties accompanied by pregnancy. They were also asked if most pregnant teenagers comply with their scheduled doctor's appointments.

Finally, providers were asked if they perceive teen pregnancy in their community as a problem.

A total of 19 providers in Cochise County were contacted by phone in October 2006 to participate in the survey on teen sexual behavior. Of those, 12 providers agreed to participate in the survey. Providers were faxed a copy of the survey accompanied by a cover letter informing them about the purpose of the project as a collaboration between the University of Arizona Mel and Enid Zuckerman College of Public Health and the Cochise County Health Department. Providers were given a deadline of November 17th, 2006. Only two providers responded by the deadline. Further calls were made to inform providers of a deadline extension, providing them with an opportunity to complete their questionnaires. Two additional questionnaires were received by November 27th, 2006, for a total of four participants in the provider survey.
4.3 Results:

Demographics

The respondents were 46.6% male (n=157) and 53.4% female (n=180), with a mean age of 15.9 years old (range = 13-21; see Figure 4.2). There were 100 ninth-graders (29.9%), 102 tenth-graders (30.4%), 80 eleventh-graders (23.9%), and 53 twelfth-graders (15.8%). The sample was primarily Hispanic/Latino (61.9%) and White/non-Hispanic (30.7%); the remainder of the sample was divided between those who identified themselves as Multi-racial (3.9%), American Indian/Alaska Natives (2.4%), Black/African Americans (0.9%), and Hawaiian Native/Pacific Islander (0.3%). 51.5% indicated that they were Catholic, 34.2% were Christian (non-Catholic); 58.2% indicated that they were practicing members of their religion.

152 subjects live with both their Mom and Dad (44.7%), 103 live with only their Mom (30.3%), 37 live with their guardian(s) (10.9%), 18 live with only their Dad (5.3%), and 13 live alone (3.8%). The average number of siblings is 2.9. Parents were most commonly employed full-time (Fathers=62.4%; Mothers=42.8%), though 32.0% of Mothers did not work.

Sexual Education and Abstinence

While only 24.6% indicated that sexual education was offered at their school,

Figure 4.3: Mean responses to abstinence perceptions questions
51.1% said that they have taken sexual education, and 78.5% say they have received sexual education outside of school, most commonly from their family. 86.2% said they thought that sexual education classes should be offered and 84.2% said that they thought that sexual education is useful.

69.4% of students have learned about abstinence. Students were asked to rank their perceptions on abstinence related issues on a five-point Linkert scale; the average responses to these questions is shown in Figure 4.3.

**Sexual Behavior**

137 subjects (42.9%) indicated that they have had sexual intercourse; of those, 67.4% have had intercourse in the past three months. The average age of sexual debut was 14.0 years old (median=14 years; range: 6 to 18 years; 95% confidence interval: 13.7 to 14.4 years; see Figure 4.4), and the average number of lifetime partners was 4.9 (median=3; range: 1 to 70; 95% CI: 3.4 to 6.4; see Figure 4.5). When asked to rate their feelings about having had sex on a five-point Linkert scale, the mean (and median) response corresponded with “somewhat happy”. When asked to rank the perceptions about the behavior of their peers, the average response for how many of their friends have sex corresponded to “some”, and the median estimate for when they believe that most people first have intercourse was 15 years of age.

Figure 4.4: Distribution of age of sexual debut Figure 4.5: Distribution of number of partners

**Contraception**

69 subjects indicated that they had ever used contraceptives; this is 50.4% of those who have had sexual intercourse. The most popular forms of contraception were condoms (n=42; 30.7% of those who have had sex) and oral contraceptives (“the pill”)(n=24; 17.5% of those who have had sex). When asked how many of their friends they believe use contraceptives, the mean response was 2.6 out of 5, corresponding to roughly half-way between “few” and “some”.

As a basic test of knowledge of contraceptives, students were asked to list all of the forms of contraceptives with which they are familiar. The average number of contraceptives listed was 0.93 (median=0; range: 0 to 7). The most commonly listed contraceptives were condoms (35.6% of respondents) and oral contraceptives (32.1% of
Sexually Transmitted Diseases (STDs)

295 students (89.4%) had heard of STDs. However, when asked to list the STDs that they had heard of, the average number of STDs listed was only 1.7. The most common response was HIV/AIDS (61.5% of respondents), followed by herpes (38.8% of respondents), gonorrhea (20.9% of respondents), syphilis (15.6% of respondents), and chlamydia (8.8%).

When asked to ways to protect themselves from getting STDs the average number of effective methods listed was 1.1. 53.2% of respondents listed condoms, 42.9% listed abstinence, and 2.6% listed some form of partner selection (i.e., monogamy, getting tested before engaging in sexual activity, etc...); 23.1% of respondents listed at least one ineffective means of STD protection (e.g., birth control pills).

Only 3.4% of respondents indicated ever having an STD, and when asked to estimate how many of their friends have had an STD on a five-point Likert scale, the average response was 1.3, which corresponds to an average response between "none" and "few". When asked to rate how they perceived their risk of getting an STD on a five-point Likert scale, the average response was 2.0, which corresponds to "low risk".

Teen Pregnancy

Students were asked a variety of questions regarding their perceptions of issues related to teen pregnancy. Figure 4.6: Distribution of responses to questions of teens' perceptions of teenage pregnancy

68.9% said they believe that there is a lot of teen pregnancy in their community, and 57.0% believe that teen pregnancy is a problem in their community. 16.1% of those surveyed felt that there were advantages to being a teen parent. Students were also asked to rate their perceptions of two statements and one question related to teenage pregnancy on five-point Likert scales; the distributions of their responses to these perceptions are shown in Figure 4.6.

Students were asked questions regarding their perceptions of the amount of teen pregnancy in their school. When asked how many people they believe have been pregnant in their school, the mean response was 5.3 people (median=3; range: 0 to 40). 80.0% of those surveyed indicated that they knew someone who has dropped out of school as the result of becoming pregnant; 75.0% said that they had a friend who had kept their baby, 27.4% had a friend who had an abortion, and 5.9% had a friend who had
given a baby up for adoption.

13 students (4.3%) indicated that they had either been pregnant or fathered a child. The mean age of pregnancy was 14.8 years old (median=15 years; range: 13 to 17). 30.8% of those who had been pregnant or fathered a child indicated that pregnancy was planned, and 53.8% (n=7) said that the pregnancy ended in childbirth; in every case of childbirth, the parents indicated that they kept the baby (i.e., none of the babies were put up for adoption). 4 pregnancies (30.8%) ended in miscarriage, and 2 (15.4%) ended in abortion.

**Comfort**

At the end of the questionnaire students were asked how they felt while taking the survey. This question was asked to assess how comfortable teens are discussing matters related to sex and sexuality. The question was asked on a five-point Linkert scale, and the mean response was 3.3, which corresponds to a response between “neutral” and “comfortable”. Only 19% of those surveyed indicated that they felt either “very uncomfortable” or “uncomfortable”; 81% felt either “neutral”, “comfortable”, or “very comfortable” (see Figure 4.7).

**Sociodemographic Predictors and Perceptions Associated with Having Had Sexual Intercourse**

Age was significantly related to having had intercourse: logistic regression reveals that for each additional year of age, the odds of being sexually active increases by 1.76 fold (OR=1.76; p<0.001; 95% CI: 1.45, 2.15). Moreover, differences in age account for almost 9% of the variability in having had intercourse ($r^2=0.085$). Males were more likely to indicate that they have had intercourse (48.65% of males: 37.87% of females; $p=0.055$). Males also reported having had a greater number of partners (mean=5.8) than did females (mean=3.9) ($p<0.005$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test).

Rates of sexual activity were highest among those who live alone (63.6%) and lowest among those who live with both parents (35.0%); among those living with a single parent, 47% were sexually active; these differences were statistically significant ($p=0.033$ via Pearson’s $\chi^2$). Moreover, increased levels of parental education were correlated with lower levels of sexual activity; this correlation was stronger for maternal education.
(p=0.0022 via a two-sample Wilcoxon rank-sum (Mann-Whitney) test) than for paternal education (p=0.0214). There was no correlation between maternal employment status and sexual activity, but paternal employment status was significantly associated with sexual activity (p=0.002 via Fisher’s exact): rates of being sexually active were highest among those whose fathers were unemployed (54.17%), lower among those whose fathers work full-time (41.24%), and lowest among those whose fathers work part-time (17.24%). While there was no association between religious denomination and sexual activity, students who indicated that they are practicing members of their religion are significantly less likely to be sexually active (33.15% have had intercourse) than those who are not practicing (56.69% have had intercourse) (p<0.001 via Fisher’s exact).

Those who indicated that they have taken sexual education classes were significantly more likely to be sexually active than those who have not (36.05% versus 51.28%; p=0.008). Moreover, rates of sexual activity were no different between those who had received abstinence education and those who had not (p=0.802); likewise, having received sexual education outside of school was not correlated with sexual activity (p=0.407). Those who were sexually active were less likely to think that abstinence education was useful (p=0.0001), less likely to think that abstinence was a realistic and practical option (p=0.0004), and had less favorable opinions of abstinence (p<0.0001).

Those who have had sexual intercourse had generally less negative perceptions regarding teenage pregnancy. They responded more favorably when asked if they would like to be a teenage parent (p<0.0001 via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), felt more ready to be a parent (p<0.0001 via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), felt that being a teen parent would be less difficult (p=0.0004 via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), and more often felt that there are advantages to being a teen parent (p=0.008 via Fisher’s exact).

Generally, those who are sexually active were no more likely to be knowledgeable about STDs than their not-sexually-active counterparts: they failed to be able to list significantly more STDs (p=0.4211), or ways to protect themselves from STDs (p=0.1718). Those who were sexually active, however, were able to list significantly more forms of contraception (mean number listed: 1.18 versus 0.73 forms; OR=1.68; p=0.024 via logistic regression).

**Teenage Pregnancy**

There was no significant correlation between age or gender and having been pregnant or fathered a child (p=0.183 for age; p=0.397 for gender). Those who lived alone were most likely to have been pregnant and those who lived with both parents were least likely (27.27% of those who live alone compared with 1.46% of those who live with both their mother and father have been pregnant or fathered a child; p=0.038). We failed to find any significant correlation between teen pregnancy and paternal education (p=0.962), paternal employment status (p=0.922), maternal education (p>0.999), or maternal employment status (p=0.481).

We detected no significant difference in the rates of teen pregnancy among those who are practicing members of their religion and those who were not practicing (p=0.401). There were significant differences in pregnancy rates between religious denominations; however, because of the small number of people who have been pregnant
in our sample, these differences in rates were driven by too few respondents for any test to maintain statistical integrity. We are therefore not comfortable generalizing this result.

Rates of pregnancy were greatest among those in long-term (10.64% have been pregnant) or casual relationships (6.41%); pregnancies were rarer among those who were either not in a relationship (1.75%) or were married (0.00%); these differences were statistically significant ($p=0.023$ via Fisher’s exact). Though there was no relationship between the number of lifetime sexual partners and having been pregnant ($p=0.1715$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), among those who have ever had intercourse, those who have been pregnant were more likely to have had intercourse in the past three months (91.67% had intercourse in the past three months) than were those who have not been pregnant (63.11% had intercourse in the past three months) ($p=0.057$ via Fisher’s exact).

There was no relationship between having been pregnant and having taken sexual education ($p>0.999$ via Fisher’s exact), having received sexual education outside of school ($p=0.720$ via Fishers exact), or having learned about abstinence ($p=0.537$ via Fishers exact). Generally, those who have been pregnant were no more likely to be knowledgeable about STDs than those who have not been pregnant: they failed to be able to list significantly more STDs ($p=0.4975$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), or ways to protect themselves from STDs ($p=0.4626$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test). Those who have been pregnant, however, were able to list significantly more forms of contraception (mean number listed: 2.38 versus 0.91 forms; OR=4.42; $p=0.026$ via logistic regression).

Those who have been pregnant generally have more favorable perceptions regarding teenage pregnancy. They responded more favorably when asked if they would like to be a teenage parent ($p=0.0025$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), felt more ready to be a parent ($p<0.0001$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), felt that being a teen parent would be less difficult ($p=0.0015$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), and more often felt that there are advantages to being a teen parent ($p=0.027$ via Fisher’s exact).

Knowledge and Sexual Education

We were unable to detect any relationship between age and the number of STDs that people could list ($p=0.733$), or the number of means of STD protection that were listed ($p=0.553$). There was a statistically significant relationship between age and the number of forms of contraception listed ($p=0.030$), however this relationship is based on a single outlier; if this outlier is removed the relationship fails to achieve significance ($p=0.146$).

We were, moreover, unable to detect any relationship between having taken sexual education and knowledge demonstrated by the number of forms of contraception listed ($p=0.9755$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), number of STD prevention methods listed ($p=0.7116$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), or the number of STDs listed ($p=0.4555$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test). Those who have learned about abstinence were able to list more STDs ($p<0.0001$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), and more means of STD protection ($p=0.0001$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test), but there was no significant difference in the number of means of
contraceptives listed between those who have and those who have not learned about abstinence ($p=0.3684$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test).

The data indicated that there was no relationship between rates of contraceptive use and having taken sexual education classes ($p=0.267$ via Fisher's exact), receiving sexual education outside of school ($p=0.493$ via Fisher's exact), or learning about abstinence ($p>0.999$ via Fisher's exact).

**Perceptions**

Respondents were more likely to think that there was a lot of teen pregnancy in their community (68.8% of respondents) than to believe that teen pregnancy is a problem (57.0% of respondents) ($p<0.0001$ via McNemar's $\chi^2$).

Perceptions of STD risk varied significantly by sexual activity ($p=0.0364$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test) but not by contraceptive use ($p=0.7308$ via a two-sample Wilcoxon rank-sum (Mann-Whitney) test). The actual differences in perceived risk, though, were not great. Perceived risk was ranked on a five-point scale with 1 being “no risk” and 5 being “very high risk”. The mean perceived risk by sexual activity and contraceptive use are shown in Table 4.2. The mean perceived risk of nearly all groups correlates with “low risk” despite the very different real risks that these groups have.
4.4 Discussion:

The majority of sexual education in the high schools of Cochise County is being offered through a health or life skills course. Usually these courses are electives and not mandatory. Some high schools offer nothing in the way of sexual education or sexually transmitted disease education at all. While students overwhelmingly think that sexual education is useful and that sexual education should be offered in school, few students report that their schools actually offer sexual education. Most students appear to be receiving sexual education outside of school; however, this education may not be entirely accurate and thorough. When sexual education is offered, the most common focus of the courses is abstinence.

Students’ perceptions of the usefulness of abstinence education and their perceptions of abstinence as a realistic and practical option are fairly neutral, and among those who are sexually active, generally negative. Responses to those questions that treated abstinence abstractly were more favorable than responses to those questions that treated abstinence more concretely. While abstinence may seem like a good idea to teenagers, in reality it may not be practiced. This could also be because students felt that abstinence was a more desirable response. Students who have taken sexual education or learned about abstinence were no less likely to be engaging in sexual activity. Likewise, having taken sexual education, having received sexual education outside of school, or having learned about abstinence had no impact on rates of teen pregnancy. It is clear, therefore, that the sexual education that is being offered has been unsuccessful in reducing sexual activity or teenage pregnancy. The sexual education that is being offered currently is not effective in informing students of various methods of contraception, nor is it effective in increasing students’ knowledge of STDs.

Older teenagers are more likely to engage in sexual activity, yet they do not have more knowledge of sexually transmitted diseases and contraception than younger teenagers do. Judging by the age of sexual debut, sexual education is not being offered soon enough. Ideally, sexual education should begin as soon as elementary school.

The present study found that the vast majority of students who took the Cochise County Teen Sexual Behavior Survey felt neutral to comfortable while taking the survey. This demonstrates that students are willing to discuss the issue of sexual behavior. Therefore, it would appear that sexual education should not be avoided on the premise that teens are uncomfortable with this subject matter.
4.5 Recommendations:

Comprehensive sexual education, which covers abstinence, methods of contraception, anatomy and physiology, and sexually transmitted diseases, appears to be the best type of education for teenagers in Cochise County. Ideally, this would be a standardized educational program, developed at the state or county level to be implemented in all schools. This would create uniformity throughout the district and be more effective in reaching the entire population. Making this sexual education mandatory would be ideal. However, this goal may not be feasible anywhere in the near future due to the diversity of personal and moral beliefs. Because of the laws stating that students must have parental consent to participate in a sexual education course, and that a parent may opt out of a course on sexually transmitted diseases for their child, parental education seems to be a promising alternative. If parents themselves were educated about the problem of teenage pregnancy and the high rates of sexually transmitted diseases among teenagers, perhaps they would be more willing to set aside personal beliefs and allow their children to receive sexual education. Parental education would have to provide parents with statistics and sound evidence of the adverse consequences of teenage pregnancy for the mother, the child, and the community. Comprehensive sexual education should not be offered as a small part of another course. Offering sexual education for an entire semester may be difficult, but holding an isolated sexual education course a few times a week for a few weeks, is not beyond the realm of possibilities. It is important that sexual education be taught separately from other courses, to emphasize its importance and value to the well-being of the students. Should a school not have the resources to develop and implement their own comprehensive sexual education program, the services available through the Cochise County Health Department should be utilized to their full potential. Nurses through the health department are available to provide courses on sexual maturation and may answer any questions that students may have in regards to sexual health.

It is also imperative that comprehensive sexual education becomes a top priority of the Arizona Department of Health Services. Currently, comprehensive sexual education programs only receive the remainder of lottery monies for funding. Research should be done to better understand why the Arizona Department of Health Services is not currently funding a comprehensive sexual education program in Cochise County. More money should be channeled to more effective means of sexual education. Awareness of teenage pregnancy in Cochise County must be raised in order to encourage the community to lobby for more funding for effective teen pregnancy prevention programs. School administrators, especially superintendents, must also be educated on the benefits of sexual education in order to make the school environment more conducive to sexual education.

More research should be conducted to understand the most effective means of reaching teens and their parents in regards to the issue of sexual education. Surveys and focus groups should be conducted to better understand the concerns and desires of the affected population. Teenagers in particular should be involved in the process of developing a sexual education curriculum at their respective schools since they
are the ones who know what options are the most realistic for them. Teen empowerment should also be made an integral part of sexual education. Through increasing self-esteem and promoting the development of future goals, teenagers will be less likely to engage in behaviors that will negatively impact their future lives. The idea of realistic education should also be looked into. Interactive and hands-on strategies, such as providing students with dolls that cry and act like real infants, and having them try on suits which simulate being pregnant, and a simulation of the financial consequences of teen parenting may have more of an impact on learning than sitting in a classroom and reading out of a textbook.

Overall it is evident that much more needs to be done to prevent teen pregnancy in Cochise County and from the results of the survey it is clear that teens are in dire need of increased education. The youth of Cochise County have spoken, and they deserve to be heard. Students would like to be more educated on sexual issues, and it is a fundamental human right to be equipped with the information to protect oneself from harm. It is the responsibility of the community to listen to them and to protect them.
4.6 Limitations:

The largest limitation of this study was the challenge of recruiting high schools to participate. Navigating individual school policies and the concerns of administrators proved to be very difficult. It was hardest to recruit large public high schools. Consequently, the majority of the schools that did participate were charter schools. Charter schools may constitute an unrepresentative sample of Cochise County high school students, as many of these schools are considered to be alternative schools and are targeted toward at-risk youth. Many of the students at the charter schools may have once attended the public high schools, but chose to attend the charter schools for various reasons. This may have unintentionally resulted in selection bias. Even so, this does not necessarily apply to all of the charter schools. In addition, the majority of the participating schools were located in Douglas and the southern region of Cochise County. Unfortunately, we were unable to recruit large public schools from the northern and western regions of the county. This may have influenced the socioeconomic and ethnic characteristics of the participants. It would have been beneficial to have a participating public high school from Sierra Vista, since this city represents the most populated region of the county.

Communication also presented various barriers. It was often difficult to contact principals and superintendents due to their busy schedules. In addition, it was difficult to get in contact with the same person consistently. In some cases this resulted in misunderstandings between the project directors and the school staff. Due to the high proportion of Hispanic participants, there were some language barriers. It would have been beneficial to have the survey in Spanish as well. However, this endeavor was unfeasible given time constraints, the length of the survey, and issues surrounding translation validity. In order to properly translate a questionnaire of this subject matter, back translation would have been necessary due to colloquial speech and regional dialects represented. It should be noted that open-ended responses in Spanish were entered into the final results.

Due to the controversial, personal, and mature subject matter of the questionnaire, response validity was also a potential concern. Some students left questions blank which may have been due to a lack of understanding or feeling uncomfortable. Some of the participants included responses that did not seem realistic or physically possible. This may have been due to differing levels of maturity between the various ages of the respondents. Many students left questions on demographics blank or were unsure. Part of this may have been because some of the respondents did not understand the purpose of the survey, or the importance of demographic information to that purpose. Many blank or invalid responses may have resulted from students having difficulty understanding the questions, or interpreting these questions differently than the authors intended. It would have been more beneficial to have made presentations at individual schools to explain the purposes and credibility of the project to the students and the teachers administering the survey. It would have helped if the importance of the survey and its potential benefits to the health of Cochise County youth would have been reiterated to the students.
5. Overall Conclusion of Maternal and Child Health

Based on evidence from general maternal and child health indicators and various performance and outcome measures, the areas which Cochise County needs to focus on improving the most are:

- While it would be ideal to completely reduce the number of teen pregnancies, it is imperative that Cochise County try to increase the number of prenatal visits to pregnant teens through education and awareness campaigns.

- Decrease the number of abortions. The numbers of abortions in the 15-19 and 20-24 age group are fairly high. Although it was beyond the scope of this needs assessment to determine where these women are receiving their abortions, the county should research this as it is possible that many women are receiving abortions across the border due to the proximity of Cochise County to Mexico. Increased availability of sexual education and contraception counseling could reduce the number of abortions.

- Decrease complications of labor and delivery, especially meconium and dysfunctional labor. This may be feasible by increasing the number of prenatal visits and their duration.

- Increase the number of women of childbearing age who receive education on breastfeeding and teen sexual education.

- Decrease child and adolescent deaths owing to motor vehicle accidents.

- Develop and implement a maternal transport program for transport within Cochise County. Although one is already in place for transporting high risk births to medical centers in Tucson and Phoenix, one should be developed for mothers who live far away from the only birthing center in Sierra Vista.

- Increase the percentage of children who are immunized. Cochise County is doing fairly well on this measure; however, it is still below the Healthy People 2010 goal of 90%.

- Reduce the number of domestic violence and child abuse incidences.

- Increase the proportion of low-income women who receive reproductive health/family planning services.

- Decrease hospitalizations for ambulatory care sensitive conditions for children aged 1-14 by increasing access to primary care.
• Reduce the percentage of infants considered to be low birthweight to the Healthy People 2010 goal of 5%.

• Reduce the number of fetal, infant, perinatal, neonatal, and post-neonatal deaths to meet the Healthy People 2010 goals.

• Reduce teenage pregnancies, especially among 15-17 year olds.

• Reduce the percentage of high school students who are sexually active.

To date, Cochise County has made notable progress in improving maternal and child health. However, there are still opportunities for improvement. With the strong leadership of the Cochise County Health Department and collaboration with other agencies in improving health, the county will be well on its way to reaching its 2010 health objectives. Maternal and child health are imperative to the overall health and well-being of the population. Addressing the health needs of women and children and reducing health disparities will benefit the county today and in the long term, resulting in a healthier future for all of Cochise County.
References


## Appendix

### Appendix A

**Cochise County Teen Survey**

<table>
<thead>
<tr>
<th>City</th>
<th>School</th>
<th>Contact</th>
<th>Title</th>
<th>Phone Number</th>
<th>Response</th>
<th>#</th>
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<tr>
<td>Sierra Vista</td>
<td>Buena High School</td>
<td>Renae Humberg</td>
<td>Superintendent</td>
<td>515-2714</td>
<td>NO</td>
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<tr>
<td>Wilcox</td>
<td>Wilcox High School</td>
<td>Joel Todd</td>
<td>Principal</td>
<td>384-4214</td>
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<tr>
<td>San Simon</td>
<td>San Simon</td>
<td>Kathy Moore</td>
<td>Superintendent</td>
<td>845-2275</td>
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<tr>
<td>Saint David</td>
<td>St David High School</td>
<td>Mark Goodman</td>
<td>Principal</td>
<td>720-4781</td>
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<td>N/A</td>
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<tr>
<td>Bowie</td>
<td>Bowie High School</td>
<td>Bruce Brown</td>
<td>Superintendent</td>
<td>847-2545</td>
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<tr>
<td>Sierra Vista</td>
<td>Shiloh Christian School</td>
<td>Angela Tumpkin</td>
<td>Principal</td>
<td>459-2869</td>
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<tr>
<td>Benson</td>
<td>Benson High School</td>
<td>Bryan Bullington</td>
<td>Principal</td>
<td>586-2213 x3</td>
<td>Future</td>
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<tr>
<td>Tombstone</td>
<td>Tombstone High School</td>
<td>Marie Bryan</td>
<td>Counselor</td>
<td>235-7358</td>
<td>No</td>
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<tr>
<td>Douglas</td>
<td>Omega Alpha (charter)</td>
<td>Ashok Bhatnagar</td>
<td>Principal</td>
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<td>Teacher</td>
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<td>Gabe</td>
<td>Teacher</td>
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<td>Sierra Vista</td>
<td>The Berean School</td>
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<td>Principal</td>
<td>459-4113</td>
<td>YES</td>
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<td>Douglas</td>
<td>Center for Academic Success</td>
<td>Steve Huff</td>
<td>Principal</td>
<td>364-2616</td>
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<td>El Frida</td>
<td>Valley Union</td>
<td>Rusty Taylor</td>
<td>Principal</td>
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<td>Douglas</td>
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<td>Bonnie Lopez</td>
<td>Principal</td>
<td>364-3462</td>
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<tr>
<td>Bisbee</td>
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<td>Counselor</td>
<td>432-5714</td>
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<tr>
<td>Douglas</td>
<td>Douglas Juvenile Detention Center</td>
<td></td>
<td></td>
<td></td>
<td>YES</td>
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</tr>
</tbody>
</table>
Appendix B

Dear Administrator,

Thank you for participating in the Cochise County Teen Behavior Survey. We have included the student questionnaires, teacher instructions, and a box/envelope to collect the questionnaires in each classroom. Please have your students complete the questionnaire before ______. We will collect the surveys on ______.

We will contact you in early December with a link to the results of the project and the final needs assessment compiled for the county health department. Please let us know if you would like a summary of the results specific to your school.

Feel free to contact us at kaggerbe@email.arizona.edu with any questions or concerns.

Thank you again for your cooperation!

Sincerely,

Kristen Aggerbeck, Renee Newman, Shoroog Shunnags, Jeff Stanaway and the Cochise County Health Department
Appendix C

Cochise County Teen Sexual Behavior Survey

Teacher Instructions

This survey is completely confidential and is solely for the purpose of assessing the health and perceptions of Cochise county teens. If a student expresses concern over the subject matter or specific questions, please remind him or her that the survey is completely voluntary and confidential. If a student asks for help in interpreting a question or defining a word, feel free to assist him or her, but please refrain from saying something that may bias the student’s response.

Please ensure that every student receives a survey. Notify the class that when they have completed the survey, they should place it in the envelope provided. After all the distributed surveys are in the envelope, the students should elect one student to seal the envelope. To ensure maximum confidentiality, we ask that you do not handle the completed surveys before the envelope has been sealed. If possible, have a student deliver the sealed envelope, along with any extra surveys, to the principal’s office.

Thank you for your cooperation.
Appendix D

Cochise County Teen Sexual Behavior Survey

This survey is about sexual behavior, perceptions and attitudes. It has been developed so you can tell us what you do that may affect your health. The information you give will be used by the Cochise County Health Department to assess teen pregnancy and behavior in order to develop better health education for young people like yourself.

DO NOT write your name on this survey. The answers you give will be kept private. No one will know what you write. Answer the questions based on what you really do and think.

Completing the survey is voluntary. Whether or not you answer the questions will not affect your grade in this class. If you are not comfortable answering a question, just leave it blank.

The questions that ask about your background will be used only to describe the types of students completing this survey. The information will not be used to find out your name. No names will ever be reported.

Make sure to read every question carefully. When you are finished, place your survey in the envelope provided for your class. When all students have finished the survey, choose one student to seal the envelope.

Thank you very much for your help.
Please answer the following questions:

### Section 1: Personal Information

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Age</td>
<td>_________________</td>
</tr>
<tr>
<td>2  Sex (circle one)</td>
<td>Male  Female</td>
</tr>
<tr>
<td>3  Current Grade (circle one)</td>
<td>a) 9th  b) 10th  c) 11th  d) 12th</td>
</tr>
<tr>
<td>4  Name of High School</td>
<td>_________________</td>
</tr>
<tr>
<td>5  What city do you live in?</td>
<td>_________________</td>
</tr>
<tr>
<td>6  What is your race/ethnicity? (Circle all that apply)</td>
<td>a) American Indian/Alaska Native  b) Asian  c) Black/African American  d) Hawaiian Native/Pacific Islander  e) Hispanic/Latino  f) White/Non-Hispanic</td>
</tr>
<tr>
<td>7  Do you live (circle all that apply)</td>
<td>a) with Mom  b) with Dad  c) guardian(s)  d) alone  e) other</td>
</tr>
<tr>
<td>8  How many brothers and sisters do you have?</td>
<td>_________________</td>
</tr>
<tr>
<td>9  What is your father’s highest level of education? (circle one)</td>
<td>a) High school (highest grade completed)  b) College degree  c) Graduate/professional degree  d) I’m not sure  e) N/A</td>
</tr>
<tr>
<td>10 What is your mother’s highest level of education? (circle one)</td>
<td>a) High school (highest grade completed)  b) College degree  c) Graduate/professional degree  d) I’m not sure  e) N/A</td>
</tr>
<tr>
<td>11 Is your father employed? (circle one)</td>
<td>a) employed full-time  b) employed part-time  c) not employed  d) N/A</td>
</tr>
<tr>
<td>12 Is your mother employed? (circle one)</td>
<td>a) employed full-time  b) employed part-time  c) not employed  d) N/A</td>
</tr>
<tr>
<td>13 What is your family's approximate total annual income? (circle one)</td>
<td>a) under $15,000  b) $15,000-$29,999  c) $30,000-$59,999  d) $60,000-$99,999  e) $100,000 or more  f) I’m not sure  g) N/A</td>
</tr>
<tr>
<td>14 What is your religious affiliation? (circle one or more)</td>
<td>a) Atheist  b) Catholic  c) Christian (non-Catholic)  (please indicate)  d) Hindu  e) Jewish  f) Muslim  g) No affiliation  h) Other (please indicate)</td>
</tr>
<tr>
<td>15 Do you consider yourself a practicing member of your religion? (circle one)</td>
<td>Yes  No</td>
</tr>
<tr>
<td>16 Are you currently in a romantic relationship? (circle one)</td>
<td>a) not in a relationship  b) in a casual relationship  c) in a long-term relationship  d) married</td>
</tr>
</tbody>
</table>
Section II: Sexual Education

17 Are sexual education classes offered at your school? (circle one)  Yes  No
18 If it is offered, have you taken sexual education? (circle one)  Yes  No
19 Should sexual education classes be offered? (circle one)  Yes  No
20 What changes would you make to the current format of sexual education at your school?

21 Have you received any sexual education outside of school (including information from family, clergy, etc...)? (circle one)  Yes  No
22 Where and/or from whom did you receive this education?

23 Do you feel that sexual education is useful? (circle one)  Yes  No
24 If yes, in what ways is it useful?

Section III: Behavior

25 Have you ever had sexual intercourse? (circle one)  Yes  No  If “No” skip to Q31
26 How old were you when you had sexual intercourse for the first time?
27 Have you had sexual intercourse in the past three months? (circle one)  Yes  No
28 During your life, with how many people have you had sexual intercourse?
29 How do you feel about having had sexual intercourse? (check one)

[Checkboxes for: Very Regretful, Somewhat Regretful, Neutral, Somewhat Happy, Very Happy]
30 Why do you feel this way about having had sexual intercourse?

31 How many of your friends have sex? (check one)

[Checkboxes for: None, Few, Some, Many, All]
32 At what age do you think that most people have intercourse for the first time? (circle one)  a) 12 or younger  b) 13  c) 14  d) 15  e) 16  

[Additional options: f) 17  g) 18  h) 19  i) 20 or older]

Section IV: Abstinence

(abstinence is defined as choosing to not engage in sexual activity, especially sexual intercourse)

33 Have you learned about abstinence? (circle one)  Yes  No
34 If yes, what did you learn about abstinence?_____________________________________

35 Rate your opinion of the following statement:  
"Abstinence education is useful." (check one)  
☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

36 Rate your opinion of the following statement:  
"Abstinence is a realistic and practical option for people my age." (check one)  
☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

37 Rate your friends' opinions of abstinence (check one)  
☐ Very Unfavorable ☐ Unfavorable ☐ Neutral ☐ Favorable ☐ Very Favorable

38 How many of your friends are abstinent? (check one)  
☐ None ☐ Few ☐ Some ☐ Many ☐ All

39 What types of messages do you think would be most effective in encouraging teens to postpone sexual activity until they are older?_____________________________________

Section V: Contraception

40 Have you ever used any form of contraception (birth control)? (circle one) Yes ☐ No ☐  
If "No" skip to Q42

41 If yes, what form(s) of contraception (birth control) have you used? (please list)  
_____________________________________

42 Please list all of the contraceptives that you are familiar with  
_____________________________________

43 How many of your friends use contraceptives? (check one)  
☐ None ☐ Few ☐ Some ☐ Many ☐ All

Section VI: Teen Pregnancy

44 Do you believe that there is a lot of teen pregnancy in your community? Yes ☐ No ☐

45 Do you believe that teen pregnancy is a problem in your community? Yes ☐ No ☐

60
46 Rate your opinion of the following statement:
“I would like to have a baby while I am a teenager.” (check one)

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

47 Rate your opinion of the following statement:
“Given what I know about parenting, I believe that I am currently ready to be a parent.” (check one)

☐ Strongly Disagree ☐ Disagree ☐ Neutral ☐ Agree ☐ Strongly Agree

48 How would you rate the difficulty of being a teen parent? (check one)

☐ Very Difficult ☐ Somewhat Difficult ☐ Moderate ☐ Somewhat Easy ☐ Very Easy

49 Do you believe that there are any advantages to being a teen parent? Yes No

If yes, please explain

50 If “No”, skip to Q61

51 Have you ever been pregnant (females) or fathered a child (males)? Yes No

If “No”, skip to Q61

52 At what age did you become pregnant, or father a child? 

53 Was the pregnancy planned? Yes No

54 Did the pregnancy end in childbirth? Yes No

55 If yes, did you keep the baby, or was it adopted? a) kept the baby  b) baby was adopted

56 If you kept the baby, does anyone else assist you in caring for the child? Please explain.

57 Have you or your partner ever had an abortion? Yes No

If yes, how many? At what age(s)?

58 If you or your partner ever had a miscarriage? Yes No

If yes, how many? At what age(s)?

59 How many people in your high school do you think have been pregnant? (give an approximate number)

60 Do you know of anyone who has dropped out of school because they were pregnant? Yes No
63 To the best of your knowledge, have any of your friends had an abortion? Yes No
64 To the best of your knowledge, have any of your friends given a baby up for adoption? Yes No
65 Have any of your friends kept their baby? Yes No
66 If yes, does anyone else assist them in caring for their child? Please explain.

---

### Section VII: Sexually Transmitted Diseases

67 Have you heard of sexually transmitted diseases (STDs)? Yes No
68 Please list any STDs that you have heard of.

---

69 What are some ways to protect yourself from getting STDs? Please list.

---

70 Have you ever had an STD? Yes No
71 How would you rate your risk of getting an STD? (check one)
   - No Risk
   - Low Risk
   - Moderate Risk
   - High Risk
   - Very High Risk
72 How many of your friends have had an STD? (check one)
   - None
   - Few
   - Some
   - Many
   - All

---

### Section VIII: Your Thoughts

73 How did you feel while taking this survey? (check one)
   - Very Uncomfortable
   - Uncomfortable
   - Neutral
   - Comfortable
   - Very Comfortable
74 If you have any thoughts or comments related to the topic of this questionnaire, please share them with us here.

---

Thank you for completing this questionnaire!
Appendix E

Doctor and Nurse Survey

Responses are strictly confidential

What is your specialty?

-------- Family Practice
-------- Ob-Gyn / Women’s Health
-------- Pediatrics
-------- Other: __________________________

1- On average how many of females 19 and under in your patient population use contraception? (circle one)
   a. None     b. Few     c. Some     d. Many     e. All

2- Which method of contraception are you most likely to prescribe to teenagers 19 and under? (circle one)
   a. Birth Control Pill   b. IUD   c. Injections   d. Patch   e. Other

3- Do you require parental consent for prescribing contraception? (circle one)
   a. Yes   b. No

4- Do you discuss options for dealing with unintended pregnancy with your pregnant teenage patients? (circle one)
   a. Yes   b. No

5- How likely are you to discuss abortion with your pregnant teenage patients? (circle one)
   a. Very unlikely   b. Unlikely   c. Indifferent   d. Likely   e. Very likely

6- How likely are you to discuss adoption with your pregnant teenage patients? (circle one)
   a. Very unlikely   b. Unlikely   c. Indifferent   d. Likely   e. Very likely

7- Are you comfortable talking about abortion with teens? (circle one)

8- Are you comfortable talking about contraception with teens? (circle one)
9- Are you comfortable talking about sexual behavior with teens? (circle one)

10- Do you offer sexual health education to female teenagers? (circle one)
    a. Yes   b. No

11- Do you feel that teenagers in the community are adequately educated on sexual health and the consequences of engaging in risky sexual behaviors? (circle one)
    a. Yes   b. No

   If yes, where are they receiving this education? .................................................................

   If no, where are the gaps in sexual education? .................................................................

12- Do you think teen pregnancy is a problem in your county? (circle one)
    a. Yes   b. No

   Explain your response: .............................................................................................................

13- How do most pregnant teens you encounter feel about their unexpected pregnancy? (circle one)
    a. Negative   b. Neutral   c. Positive

14- Do you feel that the pregnant teens you see take their situation seriously? (circle one)
    a. Not at all serious   b. Less serious   c. Neutral   d. Serious   e. Very serious

15- Are your pregnant teenage patients surprised by the difficulties of pregnancy? (circle one)
    a. Yes   b. No

   If yes, what types of difficulties do they encounter (i.e. physical, financial, stigma)
   ..............................................................................................................................................

16- Do you feel pregnant teens comply with scheduled doctor’s appointments? (circle one)
    a. Never   b. Rarely   c. Sometimes   d. Most of the time   e. Always

THE END

Thank You For Your Participation!
Appendix F

TEENS SPEAK ON BEHALF OF REALITY

To the Editor:

Many adults do not realize or want to admit that young adults are sexually active. We Bisbee High School students often see pregnant teens walking down the breezeway. What about the couples making out behind the wings? This is just the visible evidence, but what do the numbers say? Earlier this year, Rochelle Krott and Rosi Laborin conducted a survey at Bisbee High School to identify the rate of sexual activity among their student body. A random sample of 76 participants (42 female, 34 male), grades 9 through 12, was taken from the BHS student body of about 380 students. In the survey, 53.3 percent admitted that they currently perform sexual activities (48.8 percent female, 58.8 percent male). This data clearly suggests that sexual activity is prominent among teenagers at BHS.

Parents and schools seek to solve this problem by diligently promoting abstinence. Unfortunately, Bisbee schools don’t promote abstinence as much as they should; it seems they don’t even say the word. Regardless, teens still engage in sexual activities. According to our BHS survey, 30 percent admitted that they did not use any form of protection the last time they performed a sexual activity. These numbers show that students do not practice abstinence, and this poses many dangerous risks, including sexually transmitted diseases and pregnancy. According to our research, 1 in 4 Arizona teenagers have or had an STD, and out of every 100,000 Arizona children aged 13 and older, 122 have HIV. Pregnancy is another risk of teenage sexual activity. In 2004, 4.2 percent of all students in the nation had been pregnant or gotten someone pregnant. In 2002, Arizona had the 4th highest teenage birth rate in the country. The Arizona Youth Risk Behavior Survey reports 13,572 Arizona teenage pregnancies in 2002; 37 teenagers got pregnant every day.

The natural occurrence of sexual activity is nearly impossible to avoid among teens, and as teens progress through high school, sexual exploration becomes more and more prominent. As sexual activity becomes more frequent among teenagers, many issues begin to surface. The most prominent issue deals with promoting abstinence versus providing education about contraception. Federal educational legislation will cut funding to schools that teach contraception and prevention over abstinence. Our schools do send a small but insignificant message about abstinence and sexual awareness, but this message truly does not reach the student body. Our parents shy away from the subject altogether. We BHS students wish to change this. How can you help?

BHS HONORS BIOLOGY STUDENTS

Carolyn Harris, Biology Teacher
Ernie Rimer, Student Teacher
Biology class tackles teen sexuality awareness

By Karen Herberman

The Bisbee Observer

Some classes at Bisbee High School are intended for serious students who want to pursue an advanced studies program that offers opportunities outside the traditional textbook assignments. Weighted class projects have more impact on the students' grade point average than others.

Honors biology is one of those classes. This semester in honors biology, one day each week is devoted to a special project selected by the class members and lead by Student Teacher Ernie Rimer. The special projects assignments started with various topics selected by the students. They researched and prepared their papers, and made classroom presentations. Those topics reported on included recycling, pedestrian access to highways (bike lanes, for example), long-term effects of mining on the environment, drug abuse and prevention, and teenage sexuality and awareness, Rimer explained.

The class then selected from those topics to determine a long-term project they would work on together. Teenage sexuality and awareness was the topic selected. There are just 13 students in the class; they are mainly juniors and seniors, though a few sophomores elect this class. They did some brainstorming together to get some ideas for the project. Their assignment for the rest of the semester was to work on community awareness of teen sexuality, primarily making sure information was available and that people know where to find it.

One of the things they decided to do was to take a survey representative of the student population. Awoy pointed.

The survey was given out to the students, and they designed their own survey. Students were asked more questions about the students' level of sexual activity and their interest in knowing more about the subject. More than 81 percent of the students indicated that they would like more information on such topics as HIV/AIDS, sexually transmitted diseases, protected sex, prevention and birth control. According to the survey, about three fourths of the senior students surveyed said they considered themselves sexually active. A need for information was pinpointed.

Another phase of the project is to research any services available locally and gather support from outside sources such as the local hospital and county health department.

Information from the semester-long study will be made available in a pamphlet that will be composed and assembled by the class and offered at the office at the high school for those who want it. The students also plan to increase awareness by starting a Web site. A page at MySpace.com, a site popular among teens, is in the works, according to student Kyndra Wilson.

Student teacher Ernie Rimer has strong feelings about this topic. Now working on his master's degree in education at Northern Arizona University, he wasaledictor- en of the Bisbee High School class of 1999 and a talented athlete. He was also a teenage parent. His daughter Veronika, 7, is a student at Greenway School.

By Karen Herberman

Biology Teacher Carolyn Harris, Rimer's supervisory teacher for Rimer's student teaching, guides her students through traditional biology lessons the four days each week not devoted to the special projects. She also encourages them to participate in competitions with outstanding science students from other schools in science events such as the Science Bowl, Envirothon and the Science Fair.

BHS turns 100!

Bisbee High School Centennial Celebration will be May 20 at the Elks Clubhouse and Park and is being sponsored by the BHS Alumni Association and the Bisbee Unified School District. Reaching 100 years is an event that should be celebrated and the BHS Centennial committee in Bisbee invites you to join them for dinner, entertainment and reminiscing. You can get information or tickets at 432-5174. Shown left to right are some of the committee members Ken Bodry, BHS senior, and alumni Sue Coke Ray, Sue Qi, Ron Gerdes, Carolyn Howell Loy and Clark Hay.

Local man off to Iraq

Air Force Staff Sgt. Anthony Haynes is currently deployed overseas at a forward-operating location in support of Operation Iraqi Freedom.

Operation Iraqi Freedom is the official name given to military operations involving members of the U.S. armed forces and coalition forces participating in efforts to free and secure Iraq. Mission objectives focus on force protection, peacekeeping, stabilization, security, and counter-insurgency operations as the Iraqi transitional governing bodies assume full sovereign powers to govern the people of Iraq.

Members from all branches of the U.S. military and multinational forces contribute to supporting Iraqi military and security forces to assume full authority and responsibility in defending and preserving Iraq's sovereignty and independence as a democracy.

The sergeant is an air traffic controller regularly assigned to the 49th Operation Support Squadron, Holloman Air Force Base, Alamogordo, N.M.

Tony is the son of Kenneth and Betty Bruce of W. Tumbluede Lane, McNeal. His wife, Josie, is the daughter of Irenio and Maria Martinez of Elfrida.

Haynes graduated in 1998 from Valley Union High School, Elfrida, and received a bachelor's degree in 2004 from Embry-Riddle Aeronautical University, Prescott.
Sex survey gets mixed reactions

By Ashley Johns
The Bisbee Observer

This week the students at Bisbee High were able to take a survey about sex.

In this survey, they were asked questions about contraceptives, babies, and why they liked sex. Some of the students found the survey disturbing.

"I didn’t like it. It make me feel like I was saying too much, so I didn’t answer a lot of the questions," said Michelle Shelton.

The survey addressed a lot of issues, some of which seemed a bit odd.

"It asked how I felt about sex. I didn’t know if that was a trick question, or not," said Sean Tomlinson.

The questionnaire also wanted to know what we knew about our friends’ activities. This was a little annoying, as well.

"I hated that question! How am I supposed to know what my friends do? We don’t talk about that!" said Alicia Lopez, a sophomore.

Despite the awkwardness of the questions, some of the students thought it was a good thing.

"It lets people know what kids are up to and how they might be able to fix the problems," said James Thomas.

Some students liked the whole thing, whether it was because it gave them something to do or gave them a distraction from what they were supposed to do. But almost all can agree that it wasn’t a horrible thing.