

Title V  
Needs Assessment  
2011-2015

Early Child and Adolescent Health Data



Wyoming Department of Health  
Community and Public Health  
Division

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## POPULATION PROFILE

### CHILDREN

#### AGE

Wyoming children ages 0 through 8 years were approximately 12% of Wyoming's total population in 2007. The gender split for their age groups was 54% male/46% female.<sup>1</sup>

#### RACE

In 2007, Wyoming's minority populations constituted less than 6% of Wyoming's children ages 0 through 8 years. Race in this description did not include ethnicity. Wyoming's racial make-up for this age group differed from the national racial distribution for the same ages.<sup>1</sup> See the table below.

2007 racial distribution for ages 0-8 <sup>1</sup>	Wyoming	U.S.
White	94.4%	76.1%
Black	0.9%	15.2%
American Indian/Alaskan Native	1.3%	0.9%
Asian	2.6%	4.1%
Native Hawaiian/Pacific Islander	0.0%	0.3%
Two or more races	0.5%	3.4%

#### ETHNICITY

Among Wyoming children ages 0 through 8 years 12.0% were Hispanic compared to 28.9% of the U.S. children of the same age group. More than half (58.6%) of American Indian (AI)/Alaska Native (AN) children ages 0 through 8 years in Wyoming were Hispanic.<sup>1</sup>

### ADOLESCENTS

#### AGE

Wyoming children ages 9 through 18 years were approximately 15.7% of Wyoming's total population in 2007. The gender split for their age groups was 50.5% male/49.5% female.<sup>1</sup>

#### RACE

In 2007, Wyoming's minority populations constituted 6% of Wyoming's children ages 9 through 18 years. Race in this description did not include ethnicity. Wyoming's racial make-up for this age group differed from the national racial distribution for the same ages.<sup>1</sup> See the table below.

2007 racial distribution for ages 9 to 18 <sup>1</sup>	Wyoming	U.S.
White	94.0%	76.3%
Black	0.9%	15.6%
American Indian/Alaskan Native	0.8%	3.8%
Asian	0.6%	1.2%
Native Hawaiian/Pacific Islander	0.3%	0.3%
Two or more races	3.4%	2.8%

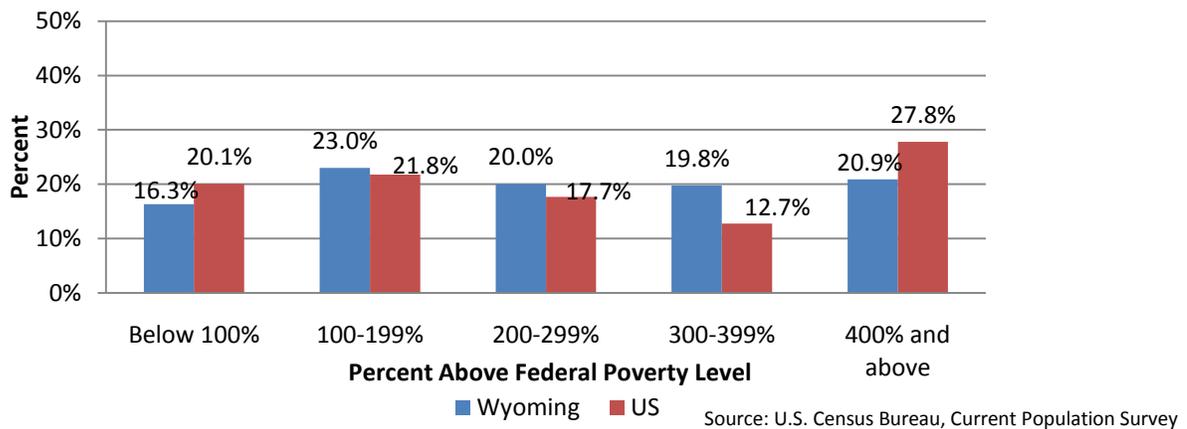
## ETHNICITY

Among Wyoming adolescents ages 9 through 18 years, 12.0% were Hispanic compared to 28.9% of the U.S. adolescents of the same age group. More than half (58.6%) of American Indian (AI)/Alaska Native (AN) children ages 9 through 18 years in Wyoming were Hispanic.<sup>1</sup>

## POVERTY STATUS

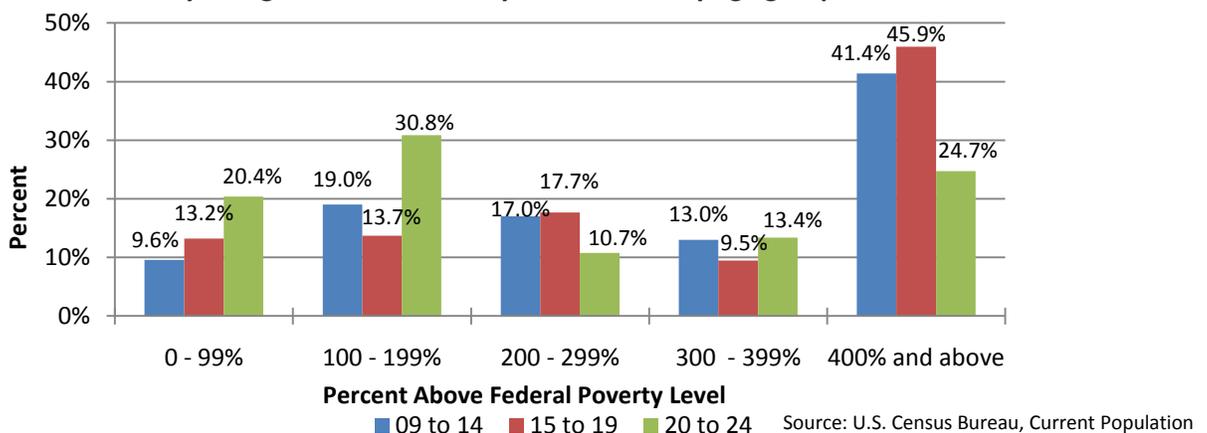
In 2007, approximately one in six Wyoming children ages 0 through 8 years lived at or below 100% of the Federal Poverty Level. This was less than the proportion of children ages 0 through 8 years that lived at or below 100% of the Federal Poverty Level in the United States (1 in 5). The proportion of children ages 0 through 8 years who lived between 100% and 299% of federal poverty was greater among Wyoming children than among U.S. children.<sup>1</sup>

**Wyoming children's family income level by age, 2007**



In 2007, approximately one in five Wyoming adolescents age 20 through 24 years was living at or below 100% of the Federal Poverty Level. This was more than twice the percent of adolescent's age 9 to 14 years living at or below 100% of the Federal Poverty Level. The percent of Wyoming adolescents ages 9 to 14 and 15 to 19 years who lived at or above 400% of federal poverty was almost double adolescent's ages 20 to 24 years.<sup>1</sup>

**Wyoming adolescent's family income level by age group, 2007**



## HOMELESSNESS IN WYOMING SUMMARY

An interim Interagency Council on Homelessness in Wyoming was created in 2003 to determine the extent of homelessness in Wyoming. The council also wanted to examine factors contributing to being homeless and services sought and needed by this population. To gain information about Wyoming's homeless population, the council surveyed organizations that focused on serving the homeless population. The council's findings were reported in the "Homelessness in Wyoming, Wyoming Interagency Council on Homelessness, May 2005." Of the 340 people reported to be chronically homeless in Wyoming in 2004, an estimated 22% of these were women and 26% were children under 18 years of age. Of the children, 40% were preschool age and 60% between the ages of 5 and 18; 95% of school-aged children were actively enrolled in school.<sup>2</sup>

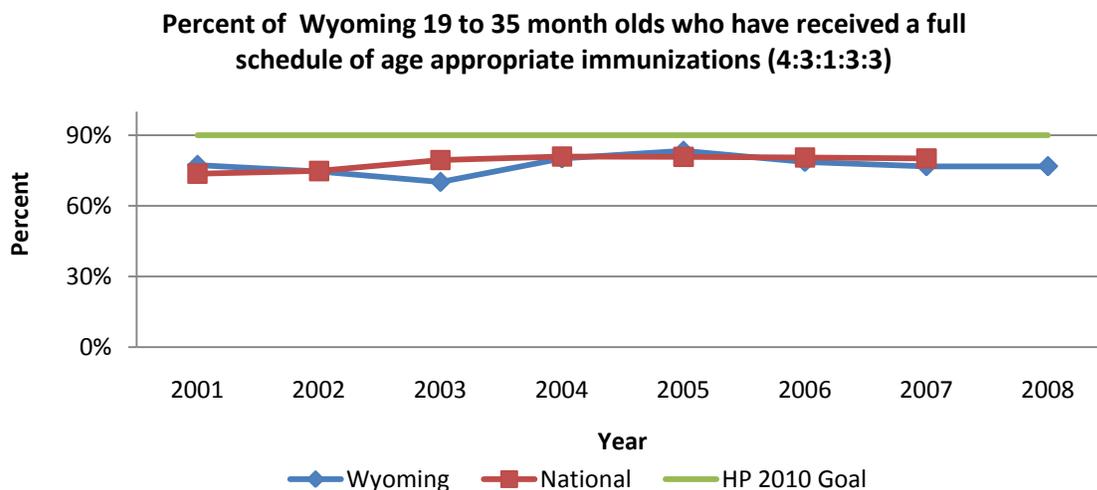
## ACCESS TO CARE

### IMMUNIZATIONS

Recommended vaccinations among Wyoming children ages 19-35 months have been above 75% since 2005. Neither Wyoming nor the United States have met the Healthy People 2010 goal of 90% of children 19 to 35 months old receiving a complete 4:3:1:3:3 immunizations series.<sup>3</sup>

4:3:1:3:3 is the accepted abbreviation for the following vaccine series<sup>3</sup>:

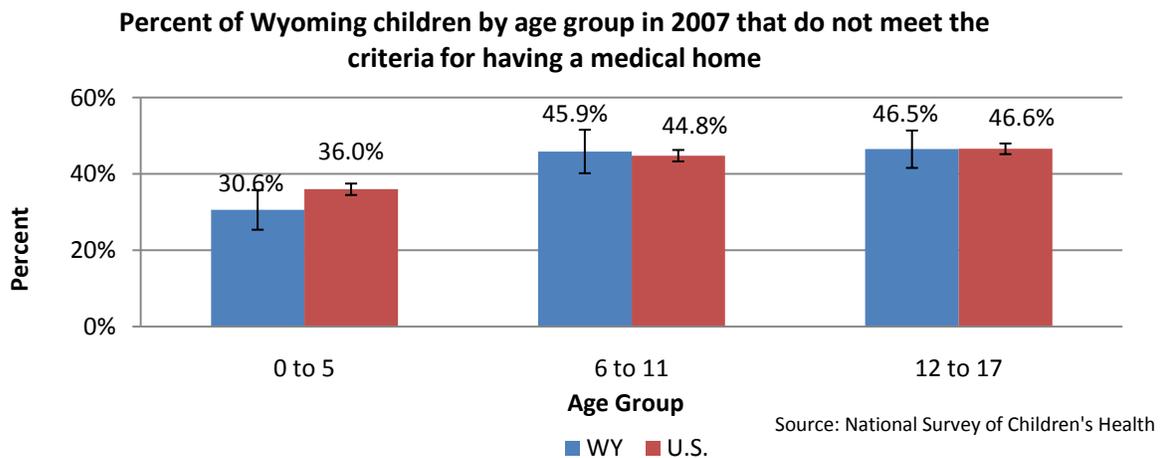
- **4+DTP** Diphtheria, Tetanus toxoids, and Pertussis
- **3+ Polio** Poliovirus
- **1+MMR** Measles, Mumps, and Rubella
- **3+Hib** *Haemophilus influenzae* type b
- **3+HepB** Hepatitis B



Source: Wyoming Vital Statistic Services,  
National Immunization Survey, HP 2010

## MEDICAL HOME

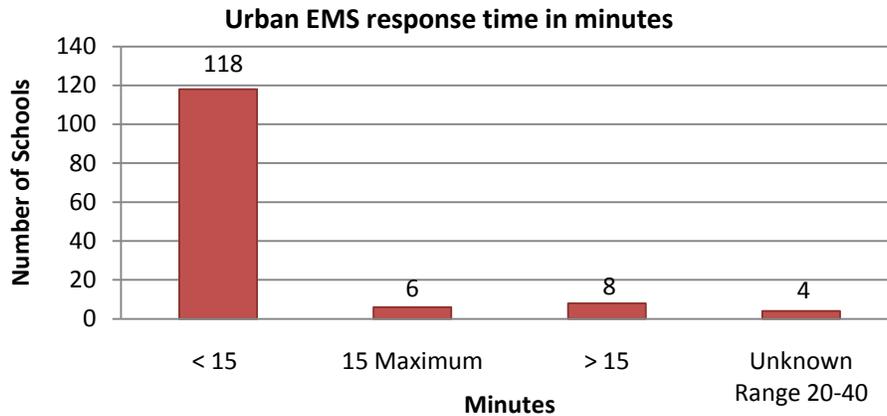
A medical home is an approach to providing primary care that is accessible, continuous, comprehensive, coordinated, compassionate, family-centered and culturally effective. The benefits offered by a medical home include stronger patient-doctor relations, coordinated healthcare between the primary care provider and specialist services and treatments, possible reduction of emergency room visits, and overall reduced healthcare costs.<sup>4</sup> In 2007, Wyoming children and adolescents ages 0 through 17 years did not differ from the national estimate of those that did not meet the criteria for having a medical home.<sup>5</sup>



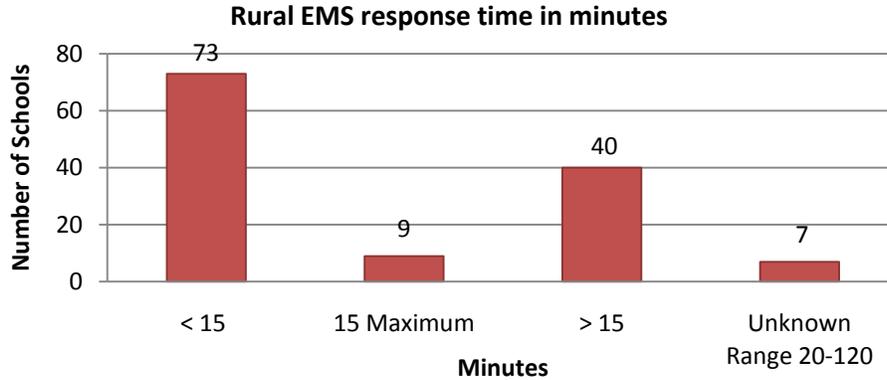
While many children did not have a medical home, 95.2% of Wyoming children and adolescents ages 0 to 17 years reported having a usual source for sick or well care in 2007.<sup>5</sup> Additionally, some children need referrals to receive advanced care. While most children did not need referrals in 2007, 2.7 % of Wyoming children and adolescents ages 0 to 17 years reported problems getting a referral for needed care.<sup>5</sup>

## EMERGENCY MEDICAL SERVICES RESPONSE TIME TO SCHOOLS

In 2007 public school nurses were asked how long it took for Emergency Medical Service (EMS) to arrive at their school. EMS response times were recorded from the surveys as the longest possible time for the EMS arrival<sup>6</sup>. Among nurses in urban schools, 86.8% reported being able to receive EMS treatment in less than 15 minutes, as opposed to 56.6% of rural schools.<sup>6</sup>



Source: The 2007-2008 School Nurse Survey

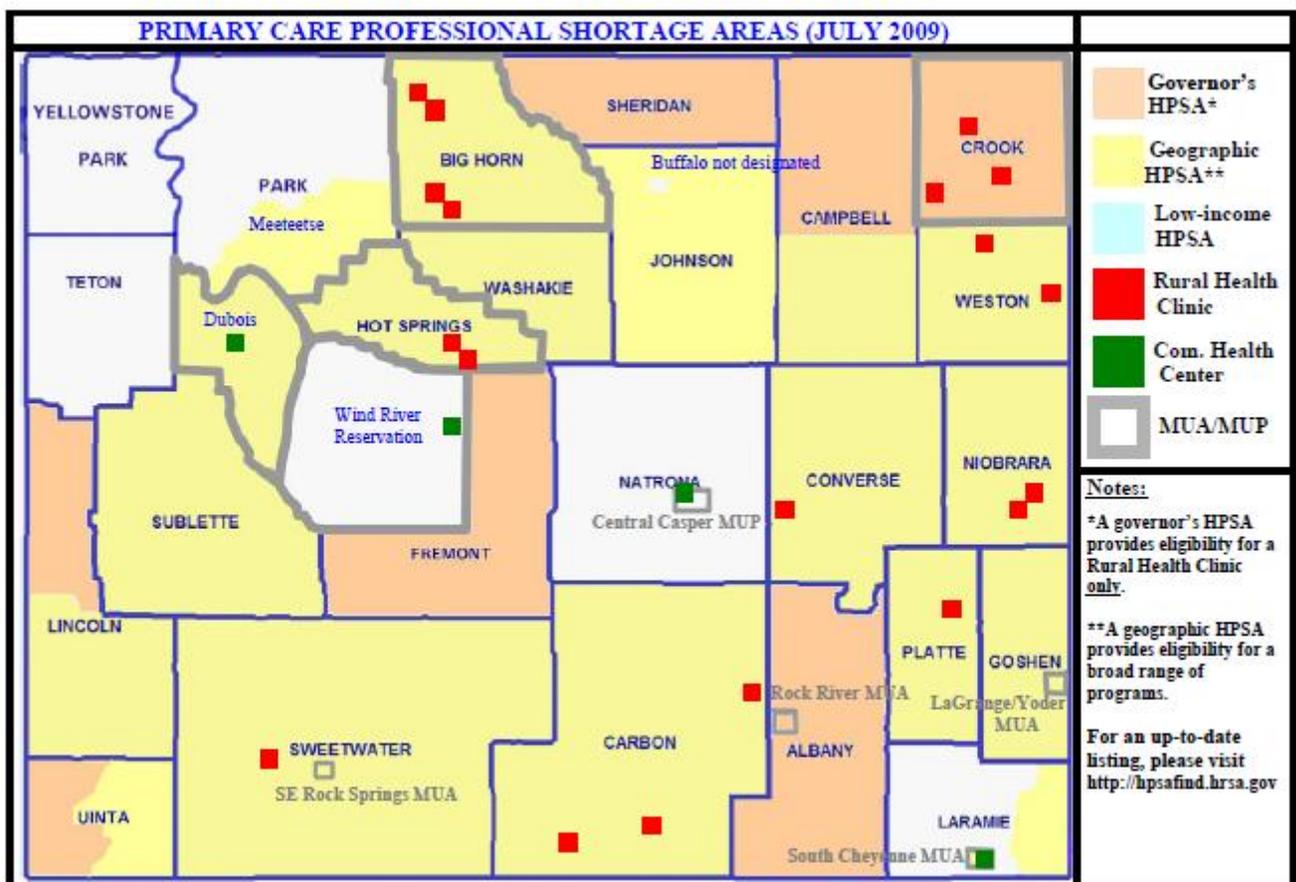


Source: The 2007-2008 School Nurse Survey

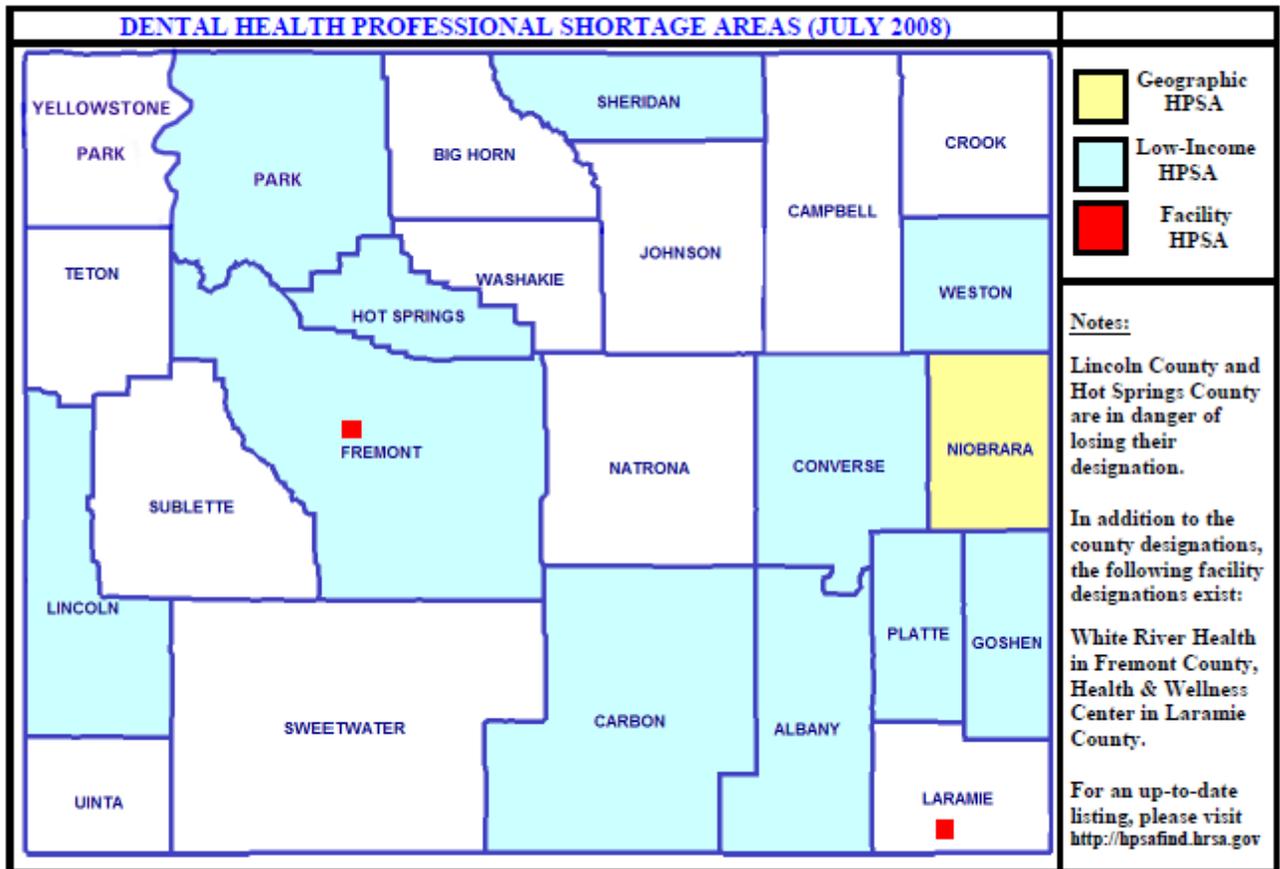
It should be noted that the survey question asked specifically about EMS arrival time. Other emergency services may exist especially for those schools that indicated a long EMS response time. That information was not requested on the survey, nor was there an option to indicate alternative emergency care.<sup>6</sup>

## HEALTH PROFESSIONAL SHORTAGE AREAS:

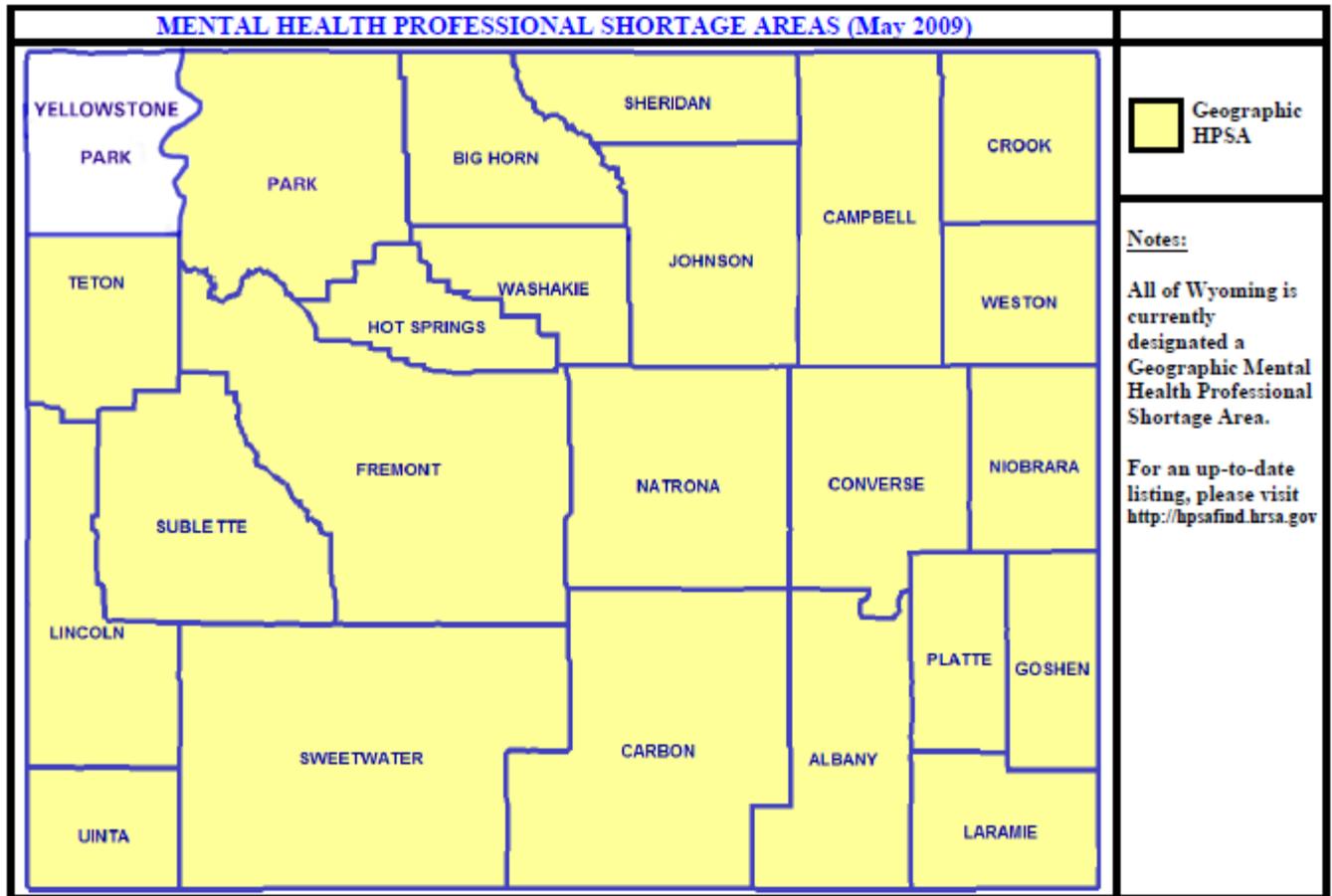
Health Resources and Service Administration (HRSA) is the federal agency within the USDPHHS to help improve “access to health care services for people who are uninsured, isolated or medically vulnerable.”<sup>7</sup> HRSA’s mission is to “provide national leadership, program resources and services needed to improve access to culturally competent, quality health care.”<sup>7</sup> Three areas of care that HRSA monitors include primary care, dental health, and mental health.<sup>8</sup> If an area does not have adequate medical coverage in an area, they can apply to become Health Professional Shortage Area (HPSA).<sup>8</sup> Once approved, they may receive federal assistance from HRSA to recruit and employ a needed medical professional.<sup>8</sup> There are currently 85 designated HPSA sites in Wyoming for primary care, dental health, and mental health.<sup>9</sup> These areas are indicated on the following maps.



Source: Health Resources and Services Administration. *HRSA Geospatial Data Warehouse (HGDW): Wyoming*. [database on the Internet] [cited 2009 Oct 1]; Available from: <http://hpsafind.hrsa.gov/HPSASearch.aspx>



Source: Health Resources and Services Administration. *HRSA Geospatial Data Warehouse (HGDW): Wyoming*. [database on the Internet] [cited 2009 Oct 1]; Available from: <http://hpsafind.hrsa.gov/HPSASearch.aspx>



Source: Health Resources and Services Administration. *HRSA Geospatial Data Warehouse (HGDW): Wyoming*. [database on the Internet] [cited 2009 Oct 1]; Available from: <http://hpsafind.hrsa.gov/HPSASearch.aspx>

## WYOMING PUBLIC TRANSPORTATION

In a rural and frontier state such as Wyoming, transportation can be an important factor in accessing healthcare. Public transportation in Wyoming is provided by the Wyoming Public Transit Association also called WYTRANS. WYTRANS is a private, non-profit organization that is funded through local businesses, the Wyoming Department of Transportation and the Federal Transit Administration. WYTRANS provides services in every county through senior centers, rehabilitation agencies, and transit-only systems. Transit only systems exist in a limited capacity in Casper, Laramie, Jackson, Sweetwater County, and Fremont County. A fee is required for each trip by all agencies, but some may operate on a donation basis. The average fare requested by transit agency is \$1.56 which is an average of 30% less than a full fare.<sup>10</sup>

The 2004 Wyoming Department of Transportation Report states:

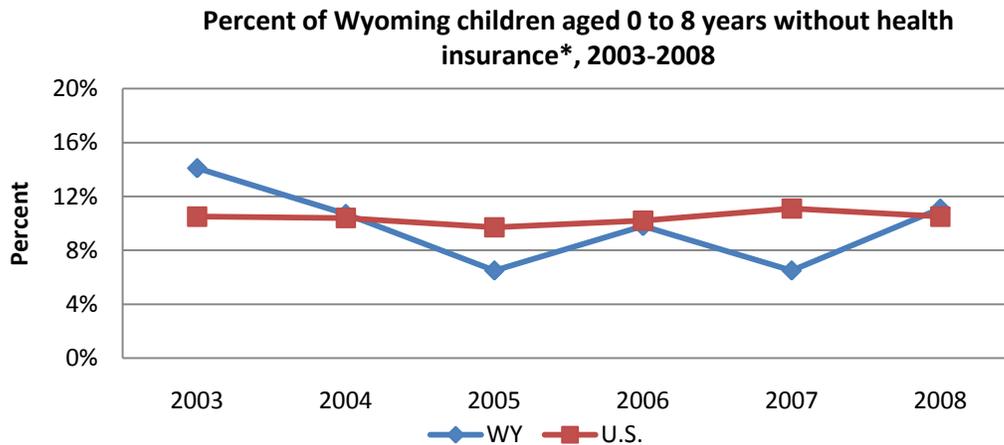
- WYTRANS assisted about 900 senior citizens who otherwise would have to move to a less independent living environment due to lack of transportation.
- WYTRANS provided 165,000 rides for clients for vocational rehabilitation, developmental disabilities, Headstart, public health, and others.
- WYTRANS provided service for over 66,000 individuals; of these, over 21,000 had no other form of transportation.
- The estimated number of rides included 106,412 for nutrition, 67,322 medical, 504,704 educational, 92,114 employment, 79,690 social, 170,961 social, and 1,031,504 other.<sup>10</sup>

There are not enough transportation services available to meet demand. WYTRANS agencies have an average shortfall of \$28,400 annually to meet demand for their services.<sup>10</sup>

## INSURANCE COVERAGE

### UNINSURED

Between 2004 and 2008, the proportion of U.S. children ages 0 to 8 years without health insurance was greater than that of Wyoming children ages 0 to 8 years.<sup>1</sup>



\*Uninsured = currently not covered by health insurance at time of the survey

Source: U.S. Census Bureau, Current Population Survey

### CONTINUOUS COVERAGE

Health insurance for adolescents ages 9 through 24 years was assessed by determining what percentage had no lapses in health coverage during the prior year. Health insurance coverage included any form of public or private insurance including Medicaid, Kid Care CHIP, Indian Health Services, Blue Cross, etc. In 2007, 81.1% of Wyoming adolescents were covered by some form of health insurance which was similar to the U.S. adolescent population(81.4%).<sup>1</sup>

### WYOMING KID CARE CHIP

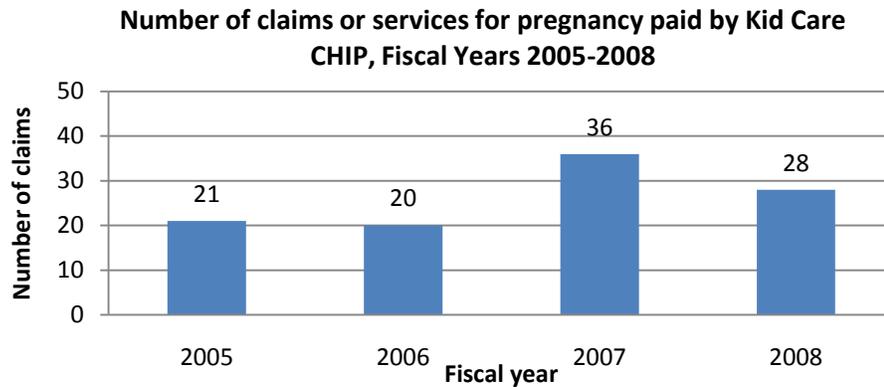
Kid Care CHIP, Wyoming's children's health insurance program, provides health insurance coverage for children and adolescents from 0 to 18 years of age who meet income and eligibility guidelines. To be eligible for Kid Care CHIP, children must be a U.S. citizen or lawful, permanent resident who has lived in the U.S. for at least five years, a Wyoming resident residing in the state of Wyoming, under 19 years of age and income eligible.<sup>11</sup>

Kid Care accepts claims from both professional and institutional sources. Institutional claims include those submitted for services provided by an institution, such as a hospital. Professional claims are those provided by a physician. These may overlap depending on how claims are submitted or filed. Every effort is made to count institutional stays as only one claim, however, professional services are based on the actual number of services and do not cover a course of treatment. There was no change in benefits from 2005 through 2008.<sup>11</sup>

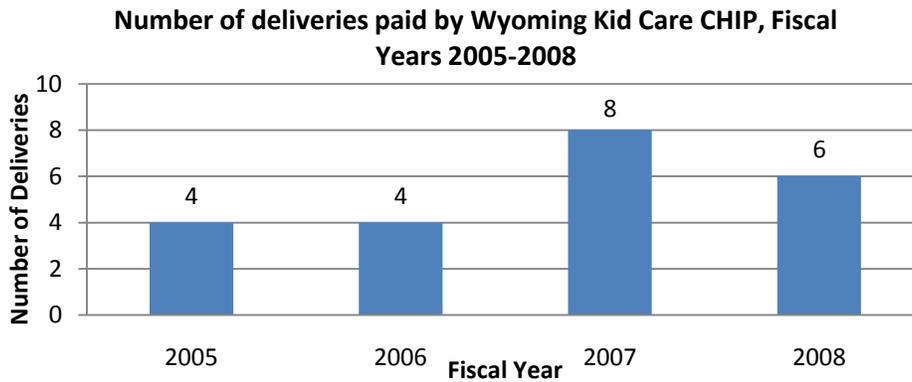
Kid Care covers a wide range of medical care costs, and a few from 2005-2008 are illustrated below.

## WYOMING KID CARE CHIP PREGNANCY CLAIMS AND SERVICES

From 2005 to 2008, Kid Care CHIP paid 105 claims related to pregnancy and paid for 22 deliveries. The majority of these claims were for children 16-18 years of age.<sup>11</sup>



Source: Wyoming Kid Care CHIP

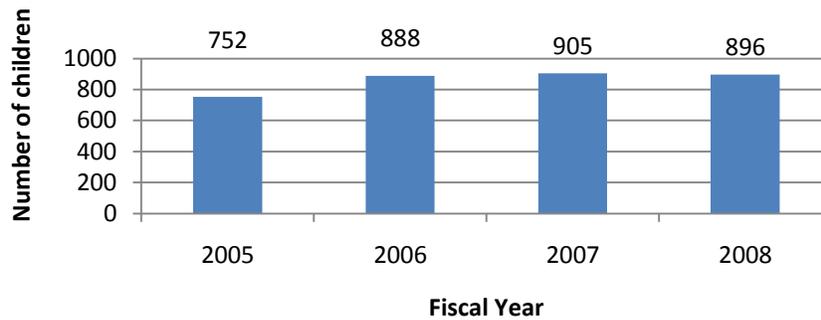


Source: Wyoming Kid Care CHIP

## WYOMING KID CARE CHIP INJURY CLAIMS

The number of Wyoming children ages 0 to 18 years with claims or services for injury paid by Kid Care, has remained stable between 2006 to 2008.<sup>11</sup>

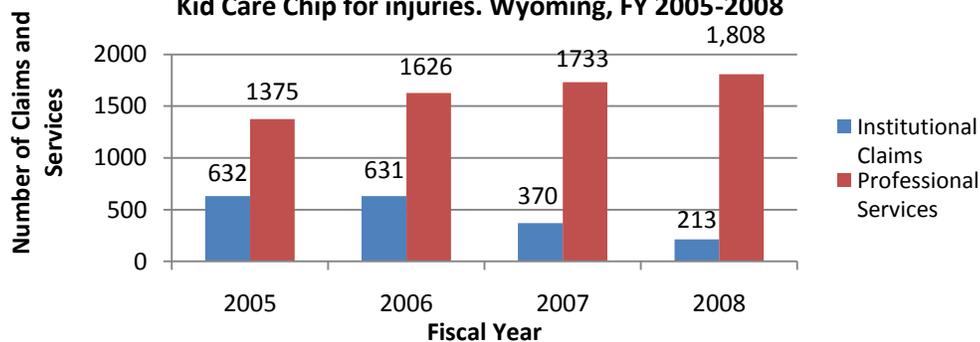
**Number of Wyoming children with at least one claim or services paid by Kid Care CHIP for injuries FY2005-2008**



Source: Wyoming Kid Care CHIP

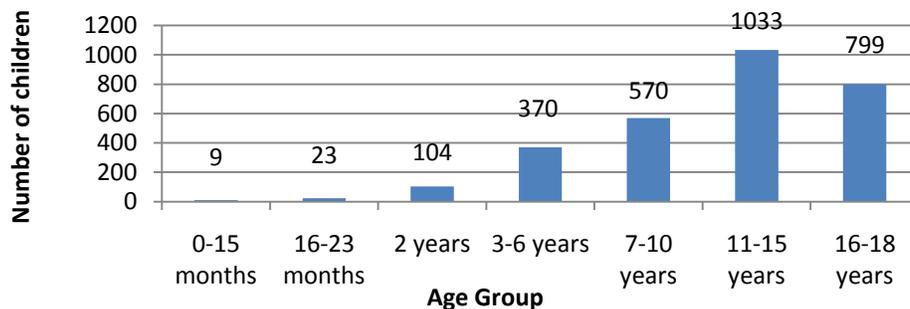
As stated previously, claims are submitted either from institutions or professional practices. From 2005 to 2008 the total number of claims remained relatively consistent however, professional practice claims steadily increased while institutional claims steadily decreased.

**Number of claims and services provided by Kid Care Chip for injuries. Wyoming, FY 2005-2008**



Source: Wyoming Kid Care CHIP

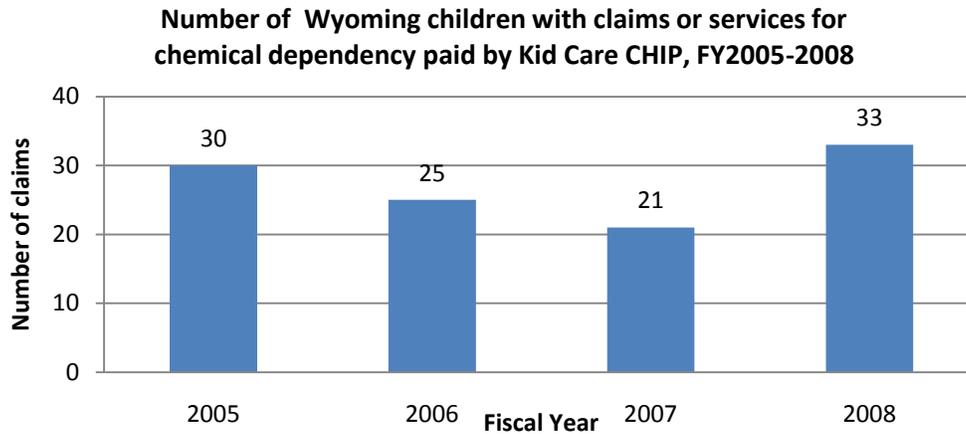
**Number of Wyoming children by age group with claims or services paid by Kid Care CHIP for injuries Wyoming FY 2005-2008**



Source: Wyoming Kid Care CHIP

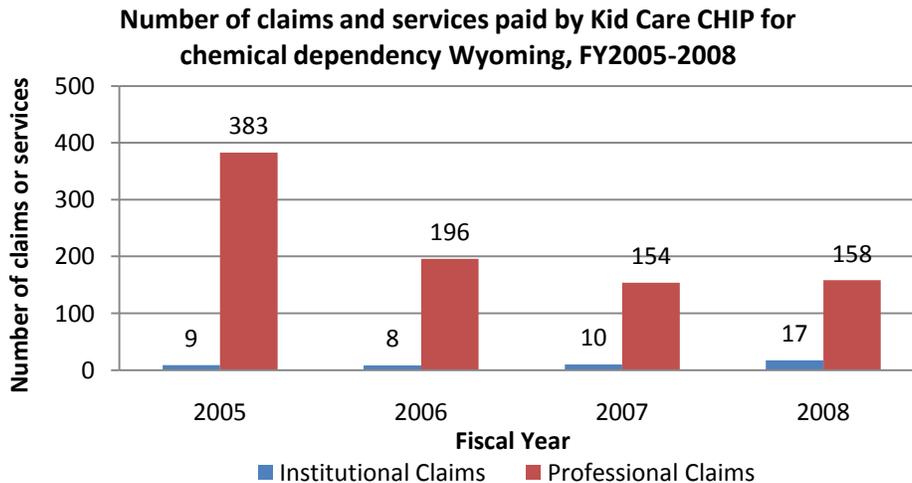
## WYOMING KID CARE CHIP CHEMICAL DEPENDENCY AND MENTAL HEALTH CLAIMS AND SERVICES

The number of Wyoming children ages 0 to 18 years with claims or services for chemical dependency paid by Kid Care, has fluctuated from year-to-year.<sup>11</sup>



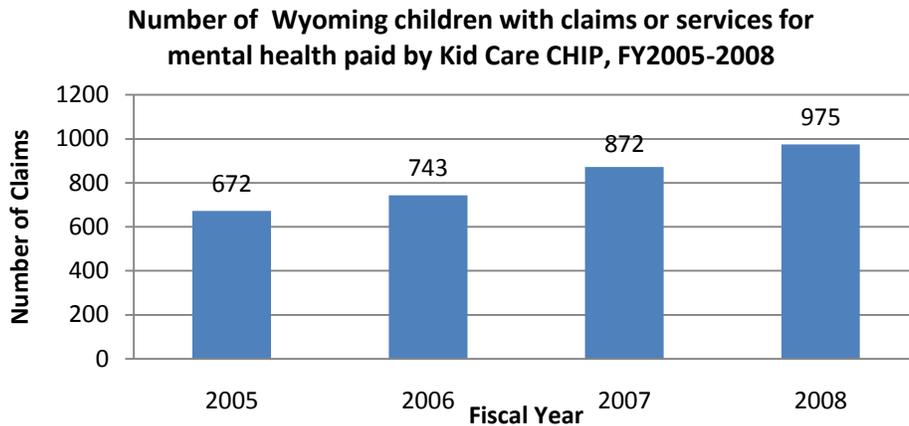
Source: Wyoming Kid Care CHIP

Children ages 16 to 18 years made up the largest group of children who received services for chemical dependency. There was no data on children younger than 3 years of age.<sup>11</sup>



Source: Wyoming Kid Care CHIP

The number of Wyoming children ages 0 to 18 years with claims for mental health services paid by Kid Care steadily increased between 2005 and 2008.<sup>11</sup>



Source: Wyoming Kid Care CHIP

## SCREENINGS

### EARLY PERIODIC SCREENING, DIAGNOSIS, AND TREATMENT

The Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) service is Medicaid's comprehensive and preventive child health program for individuals under the age of 21 years. EPSDT has two purposes: to assure health care resources are available and accessible, and to help Medicaid recipients and their caregivers use these resources.<sup>12</sup> In Wyoming, EPSDT services are also called Health Check services by Wyoming EqualityCare. There are three types of screenings that a state must provide for EPSDT program:

- Initial screen: a check-up that must be provided when a child enters the Medicaid program
- Periodic screen (well child check-up): should occur at regular intervals (e.g., babies get six periodic screenings in the first 12 months)
- Inter-periodic screen: a check-up or assessment at any time outside of a regularly scheduled visit, if a child shows signs of illness or a change in his/her condition

In Fiscal Year (FY) 2009, the percentage of Wyoming Medicaid clients receiving at least one initial periodic screen included 59.9% of clients ages 0 to 5 years, 21.2% of clients ages 6 to 14 years, and 15.1% of clients ages 15 to 20 years.<sup>13</sup>

## WYOMING LION'S EARLY CHILDHOOD VISION PROJECT

The Wyoming Lion's Early Childhood Vision Project trains screeners to conduct five vision-screening activities: External Observation, Photo-screening, Near and Distance Acuity using the LEA symbols, and depth perception using the Lang Stereo Test. When a child fails a vision screening, families are encouraged to take their child to a professional eye care provider for a comprehensive eye exam. The purpose of vision screening is to prevent serious vision problems through early detection.<sup>14</sup>

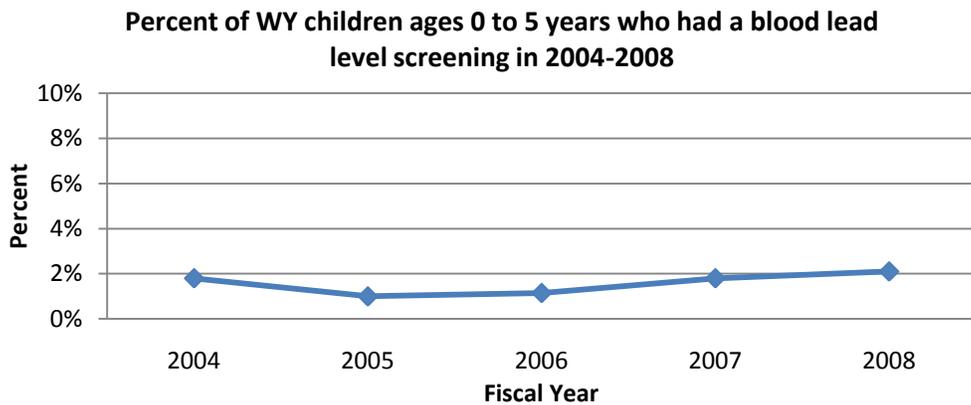
Wyoming Lion's Club Vision Screening Data		
	2008	2001-2008
Number of sessions	436	2815
Number of children screened	5936	44036
*Children screened ages 6-36 months	2432 (41%)	17124 (39%)
*Children screened >36 months	3453 (58%)	26486 (60%)
Number screened by Lion's volunteers	317	7257
Number screened at developmental centers/Head Start	5492	37902
Number referred for follow-up due to a failed screening	477	4109
Number receiving follow-up	161	1985
Number of children with amblyopia	16	274
Number of children with other diagnosis	120	1326

\*Age unknown for remainder of children screened

## BLOOD LEAD LEVELS

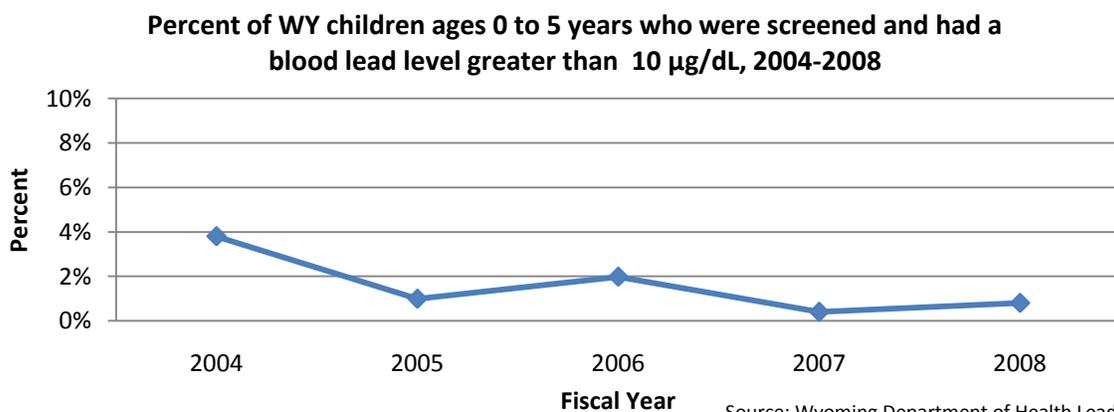
Small amounts of lead in the blood can lead to learning disabilities and behavioral problems. Very high amounts of lead in the blood can lead to seizures, coma and possibly death. The CDC recommends public health actions be taken to reduce blood lead levels greater than  $10\mu\text{g}/\text{dL}$ .<sup>15</sup>

Each year between 2004 and 2008, less than 3% of the WY children ages 0 to 5 had a blood lead level screening.<sup>16</sup>



Source: Wyoming Department of Health Lead Poisoning Prevention Program

Of the Wyoming children screen for blood lead levels, less than 4% of the children ages 0 to 5 had a blood lead level greater than  $10\mu\text{g}/\text{dL}$  each year between 2004 through 2008.<sup>16</sup>



Source: Wyoming Department of Health Lead Poisoning Prevention Program

## EMOTIONAL AND MENTAL HEALTH

### EMOTIONAL AND MENTAL HEALTH

#### Children ages 0 to 5 years:

Children ages 0 to 5 years who display learning, developmental or behavioral abnormalities may be an indication of a child's risk for developmental, behavioral and/or social delays. The percent of Wyoming children who have parents with one or more concerns about child's physical, behavioral or social development was 39.3% in 2007; not significantly different from the national percentage (40.1%).

The percent of Wyoming children who are at risk for developmental, behavioral or social delays was not statistically different from the nation ( $p>0.05$ ). The percent of Wyoming children who play with other children their own age every day was significantly lower than the national estimate ( $p=0.045$ ) [U.S. 31.4% (29.8-32.9) vs. WY 22.6% (17.4-27.8)].<sup>5</sup> In 2007, 57.8% of Wyoming parents were asked about developmental concerns by a healthcare provider; this was significantly greater than the national estimate of 48.0% ( $p<0.01$ ).<sup>5</sup>

#### Children ages 6 to 17 years:

In 2007, 94.7% of Wyoming children ages 6 to 17 years consistently exhibited positive social skills; this was not significantly different from the national percentage (93.6%). The percent of Wyoming children that consistently exhibited problematic social behaviors was 7.7%; this was not statistically different from the national percent (8.8%) ( $p>0.05$ ).<sup>5</sup>

#### Children ages 2 to 17 years:

In 2007, 4.0% of Wyoming children ages 2 to 17 years currently had ADHD and were taking medication; this was not different from the national estimate of 4.2% ( $p=0.89$ ). Wyoming parents rated the severity of their child's ADHD similarly in Wyoming and the nation ( $p>0.50$  for both categories) [Mild: Wyoming 2.6% (1.4-3.8), U.S. 3.0% (3.0-3.2); Moderate/Severe: Wyoming 3.4% (2.3-4.4), U.S. 3.4% (3.1-3.7)].<sup>5</sup>

In 2007, 6.8% of Wyoming children ages 2 to 17 years were taking medication for ADHD, emotions, concentration or behavioral issues; this was not significantly different from the national estimate of 6.2% ( $p=0.80$ ). The percent of Wyoming children ages 2 to 17 years who received needed mental health service or counseling during the past 12 months was 67.6%; this was not significant different from the national estimate of 60.0% ( $p=0.13$ ).<sup>5</sup>

In 2007, the percent of Wyoming children ages 2 to 17 years who received some type of treatment or counseling from a mental health professional during the past 12 months was 10.5%; this was not significantly greater than the national estimate of 8.1% ( $p=0.35$ ).<sup>5</sup>

### MENTAL HEALTH SERVICES

The Mental Health and Substance Abuse Services Division (MHSASD) of the Wyoming Department of Health, currently contracts with 15 mental health providers to service a combination of 30 facilities and offices in Wyoming.<sup>17</sup> The number of beds in each of these facilities is not collected by MHSASD. Seven of the providers are funded to offer services around Supported Independence Projects (SIP). However, many of the SIP are considered residential treatment programs; five providers are funded to offer group

homes<sup>17</sup>. The group homes are located within each of MHSASD five regions of care. In addition to MHSASD funds, all state funded mental health providers accept Medicaid.<sup>17</sup>

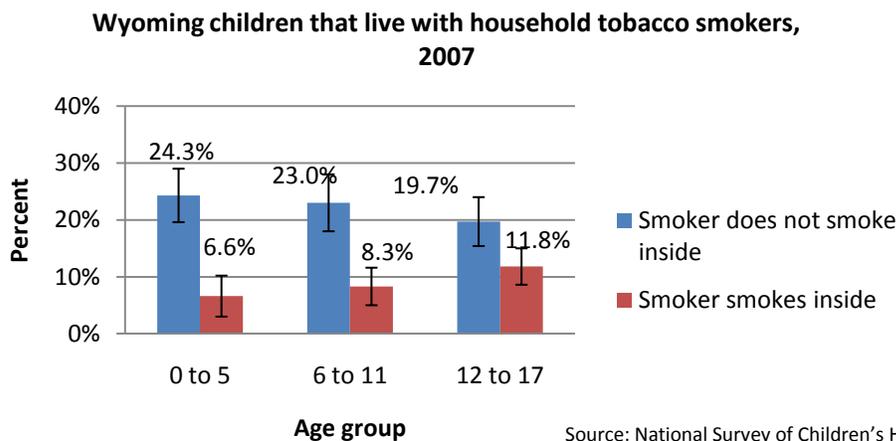
## SUBSTANCE ABUSE TREATMENT SERVICES

MHSASD contracts with 19 substance abuse treatment providers who service a combination of 31 facilities or offices. Some of these providers offer both mental health and substance abuse treatment services<sup>17</sup>. There are a total of 255 state funded residential treatment beds, 38 state funded transitional beds, and 38 state funded social/medical detox beds. All but two of the 19 state funded substance abuse treatment providers accept Medicaid<sup>17</sup>. The two providers who do not accept Medicaid have smaller practices and offer many services not covered by Medicaid.<sup>17</sup>

## SUBSTANCE USE IN WYOMING ADULTS WITH CHILDREN AGES 0 TO 17 YEARS IN THE HOUSEHOLD

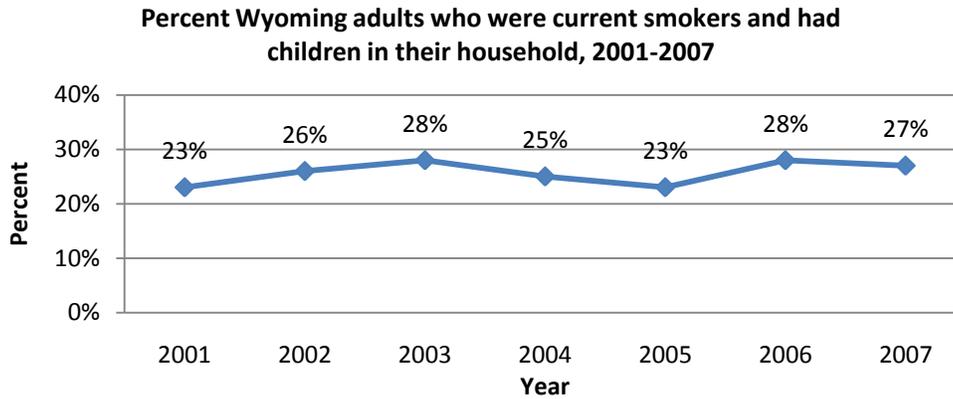
Substance use by adults in households can affect the well-being of children living there. Secondhand smoke has been associated with premature death and disease in children, and household smoking is the primary area infants and children are exposed to second hand smoke.<sup>18</sup> Use of tobacco by household caregivers allows increased accessibility to tobacco products, as well as fostering the perception that tobacco use is normal and acceptable.<sup>18</sup>

Data from the National Survey of Children’s Health showed a pattern of decreased outdoor smoking and an increase in indoor smoking in Wyoming household smokers as the resident child increased in age from infancy to adolescence.<sup>5</sup>



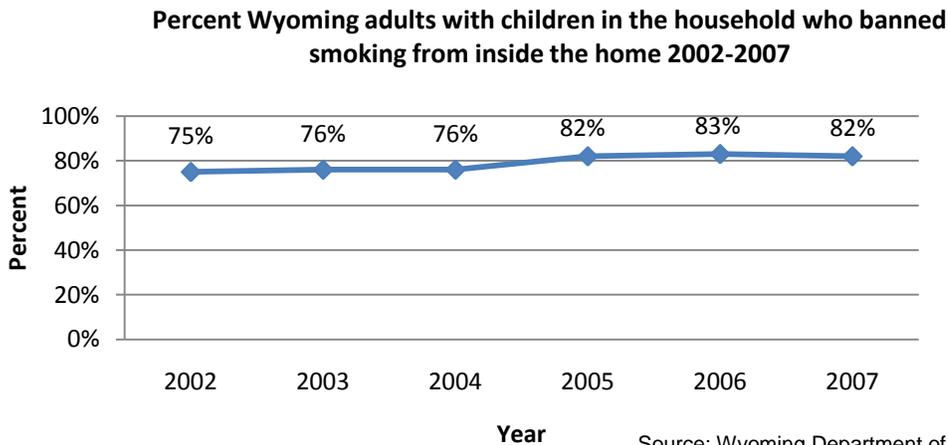
Another source of information for adult behaviors in Wyoming comes from the Wyoming Behavioral Risk Factor Surveillance System (BRFSS). The BFRSS is a random digit dial telephone survey of Wyoming residents ages 18 years and older.<sup>19</sup> Only a primary adult of the residence who is at least 18 years of age is allowed to participate in the survey.<sup>19</sup>

In 2007, approximately one quarter (27%) of Wyoming adult smokers lived in a residence with children. The percent of adults who smoked while children were in the household has remained fairly consistent between 2001 and 2007.<sup>20</sup>



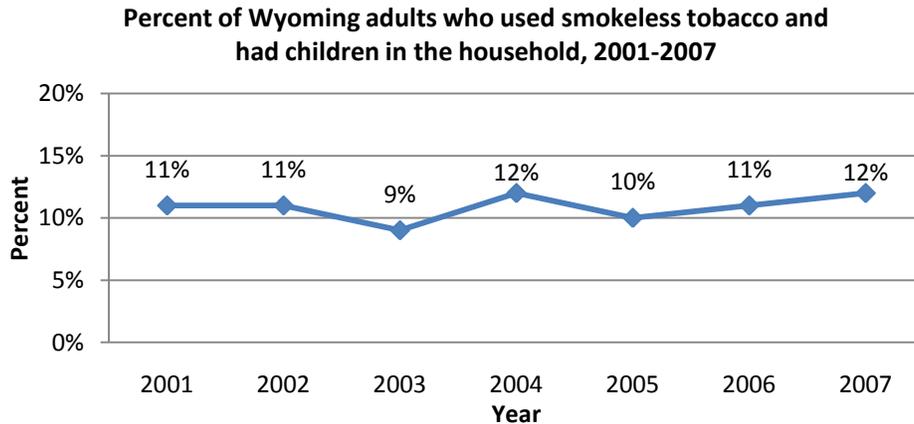
Source: Wyoming Department of Health BRFSS

In 2007, the majority of Wyoming households with children (82%) banned smoking inside the home.<sup>19</sup> The percentage of Wyoming households that have banned indoor smoking has steadily increased since 2002.<sup>20</sup>



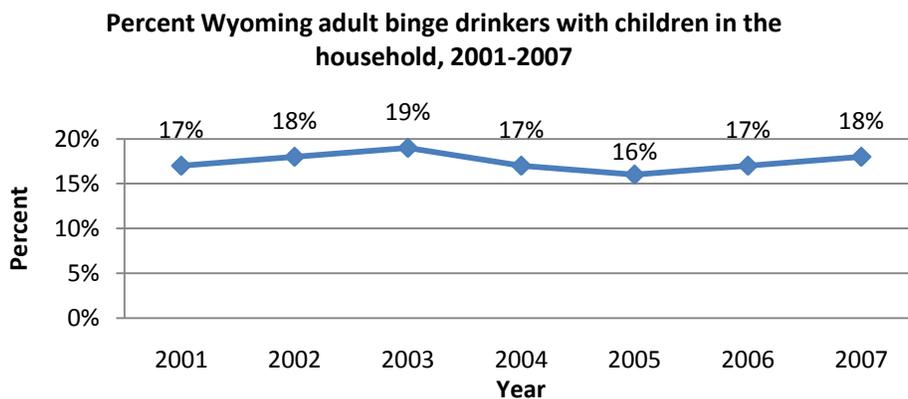
Source: Wyoming Department of Health BRFSS

In 2007, 12.0% of adult smokeless tobacco users lived in a residence with children.<sup>19</sup> The percent of Wyoming adults using smokeless tobacco and living in a household with children remained consistent between 2001 through 2007.<sup>20</sup>



Source: Wyoming Department of Health BRFSS

Adult binge drinking can affect children in numerous ways. Excessive alcohol use has been associated with child abuse, spousal abuse, teen pregnancy, poor performance in school, motor vehicle crashes, homicide, suicide and drowning. It may cause substantial disruptions in family, work and personal life. Alcohol use during pregnancy causes fetal alcohol syndrome.<sup>21</sup> Binge drinking is a behavior monitored by the BRFSS. Adults who participated in binge drinking and had children in their home remained fairly consistent between 2001 and 2007.<sup>20</sup>



Source: Wyoming Department of Health BRFSS

## TEEN PREGNANCY

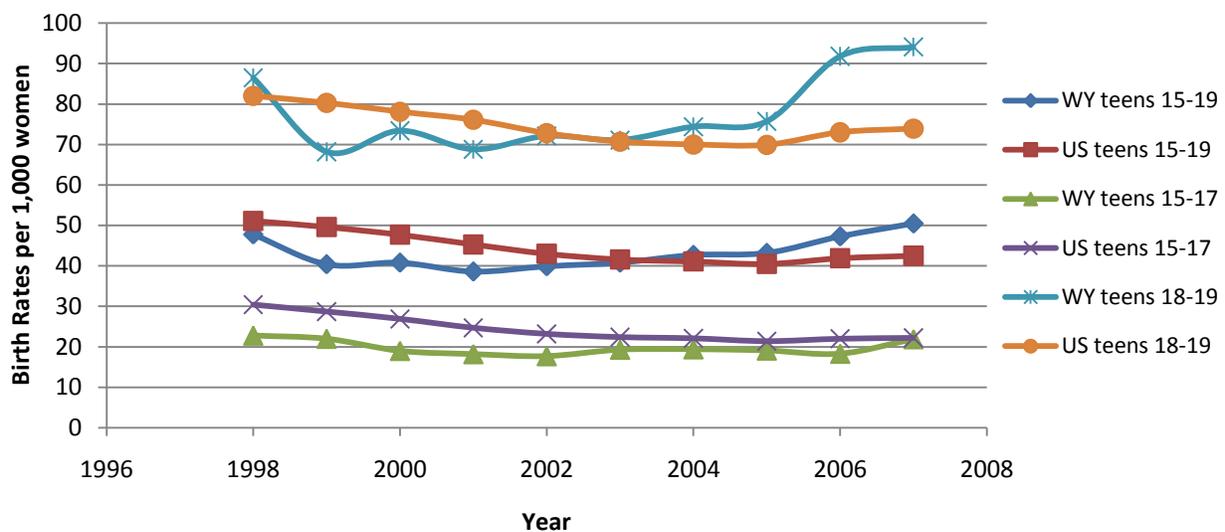
### TEEN BIRTH RATE

The teen birth rate for women ages 15 to 19 years declined between 1998 and 2002, but has increased since 2002. The U.S. rate declined from 1998-2005, but increased since 2006. Wyoming's rate (50.5 per 1,000 women ages 15 to 19) was higher than the U.S. rate (42.5) in 2007.

The birth rate among younger Wyoming teens ages 15 to 17 years also decreased between 1998 (22.8) and 2002 (17.7), and increased starting in 2003. In 2007, Wyoming's rate of 21.9 per 1,000 women ages 15 to 17 was similar to the U.S. rate of 22.2 per 1,000 women.

Wyoming's teen birth rate among women ages 18 to 19 years has been higher than the U.S. rate. The rate steadily decreased in older Wyoming teens between 1998 and 2001, but increased since 2004. There was a large increase from 2005 to 2006 that continued into 2007. The Wyoming rate in 2007 was 94.1 per 1,000 women vs. the U.S. rate of 73.9 per 1,000 women.<sup>22-23</sup>

Teen birth rates, Wyoming and U.S. 1998 - 2006



Sources: Wyoming Vital Statistics Service, U.S. Census Bureau

## CHRONIC DISEASE

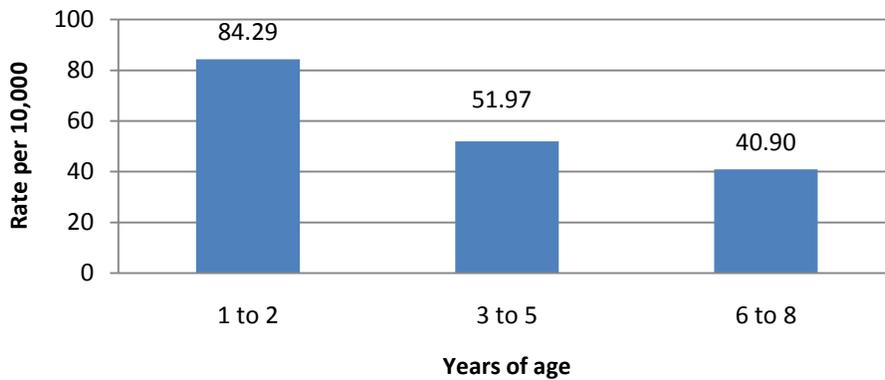
### ASTHMA

Asthma is a disease of the lungs.<sup>24</sup> It is also one of the most common long-term diseases of children and was the leading cause of absenteeism in public school children in 2003.<sup>24-25</sup> Asthma is a persistent condition that causes periodic wheezing, breathlessness, chest tightness, and nighttime or early morning coughing.<sup>24</sup> Generally asthma attacks only occur when exposed to an environmental trigger.<sup>24</sup> Asthma data has been collected from a variety of sources in Wyoming in order to get a snapshot of how it has affected Wyoming children and adolescents.

## HOSPITALIZATIONS

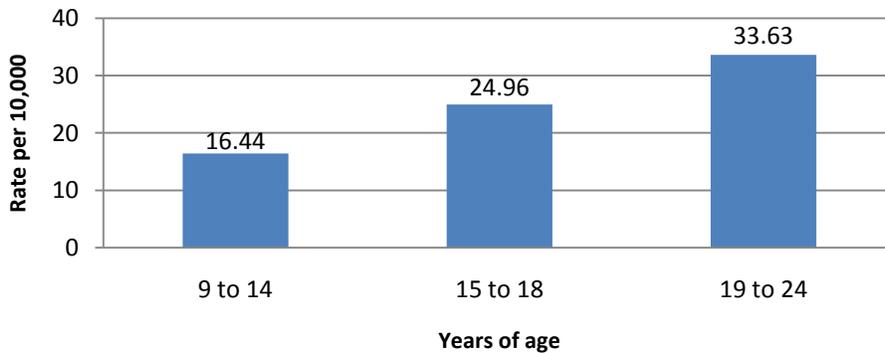
The reported hospitalizations for asthma in Fiscal Year 2007 used to determine the hospitalization rate were from the actual number of hospitalization occurrences not the number of children. One child may have been hospitalized more than once. The overall rate of asthma hospitalizations among 1 to 8 years olds for FY 2007 was 56.66/10,000.<sup>26</sup> The overall rate of asthma hospitalizations for Wyoming adolescents ages 9 to 24 years for Fiscal Year 2007 was 28.92/10,000.<sup>26</sup> Hospitalizations for asthma are broken down by smaller age groups in the following graphs.

**Rate of asthma hospitalizations among Wyoming children by age group, 7/1/07 - 6/30/08**



Source: FY2007 Hospital discharge data

**Rate of asthma hospitalizations among Wyoming adolescents by age group, 7/1/07 - 6/30/08**



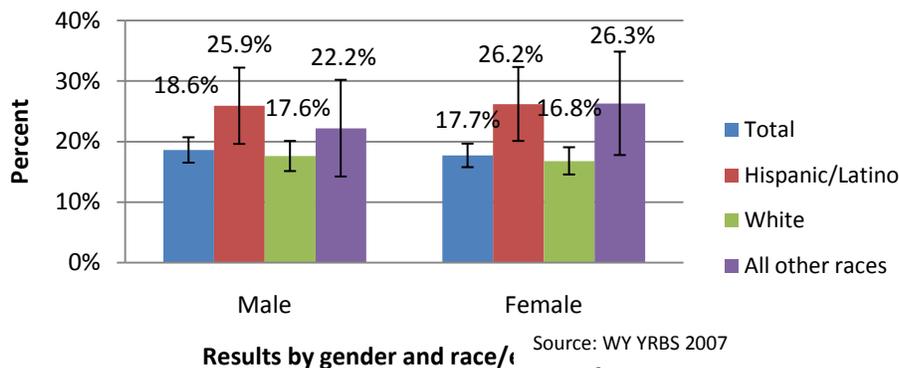
Source: FY2007 Hospital discharge data

## YOUTH RISK BEHAVIOR SURVEY: ASTHMA

The Youth Risk Behavior Survey (YRBS) was a survey created by the Centers for Disease Control and Prevention (CDC) to measure the major and preventable health risk behaviors of youth. In Wyoming, this survey is administered every other year to both middle and high school students although the same questions may not be asked.<sup>27</sup> Race data presented by YRBS includes non-Hispanic ethnicity; meaning white or all other races interprets to white non-Hispanic and all other races non-Hispanic.

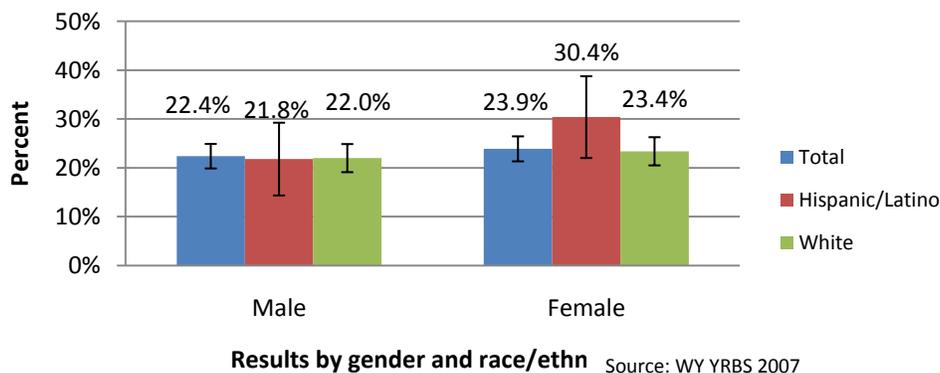
Both Wyoming middle school and high school students were asked if they had ever been told by a doctor or nurse they had asthma. In middle school there was no difference between genders that reported ever having asthma. Hispanic girls did report a significantly higher asthma prevalence than white girls.<sup>27</sup>

**Percent of Wyoming middle school students who had ever been told by a doctor or nurse that they had asthma, YRBS 2007**



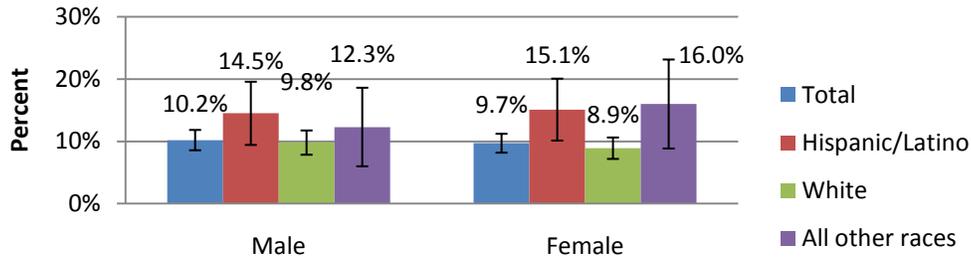
For Wyoming high school students, there was no significant difference between genders that reported ever having asthma. There was also no difference among the different races and ethnicities. However, the overall asthma prevalence in Wyoming (23.1%) was significantly higher than the 2007 national YRBS estimate of 20.3%. (U.S. Boys 19.9%, U.S. Girls 20.7%)<sup>27</sup>

**Percent of Wyoming high school students who had ever been told by a doctor or nurse that they had asthma, YRBS 2007**



Wyoming middle and high school students who reported ever having asthma were also asked if they currently have asthma. There was no difference by race, ethnicity, or gender in asthma prevalence among middle school boy or girls who reported having current asthma.<sup>27</sup>

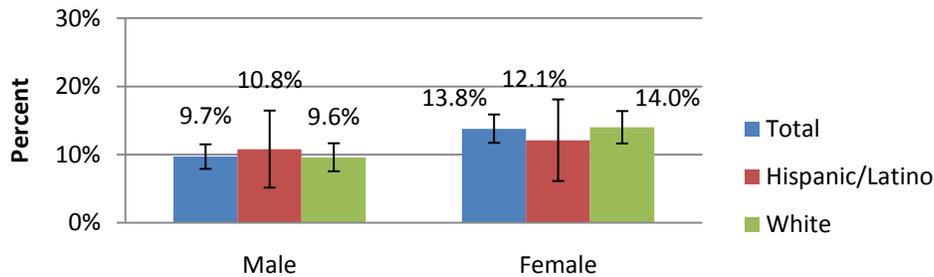
**Percent of Wyoming middle school students who had been told by a doctor or nurse that they had asthma and still have asthma (i.e. current asthma), YRBS 2007**



**Gender and Race/Ethnicity** Source: WY YRBS 2007

Among high school students, a significantly higher percentage of high school girls reported still having asthma than high school boys. There was no significant difference by race or ethnicity. The overall Wyoming high school asthma prevalence (11.7%) was similar to the national prevalence (10.9%), and the national prevalence by gender was also similar to Wyoming's. (U.S. Boys 9.3%, U.S. Girls 12.5%)<sup>27</sup>

**Percent of Wyoming high school students who had been told by a doctor or nurse that they had asthma and still have asthma (i.e. current asthma), YRBS 2007**



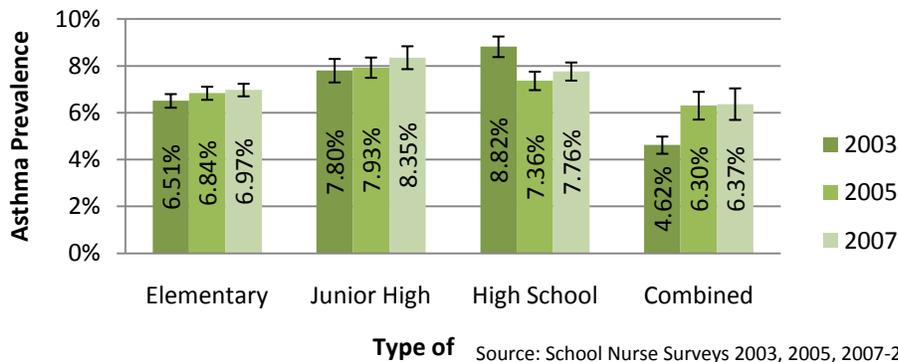
**Results by gender and race/etl** Source: WY YRBS 2007

## SCHOOL NURSE SURVEY

Surveys were mailed to all Wyoming public school nurses in 2003, 2005, and 2007 to determine the current prevalence of asthma among Wyoming public school children. The intent of the data collected was to longitudinally track trends and to identify areas where improvements are needed in safety, educational resources, and increased awareness of asthma.<sup>6, 28-29</sup>

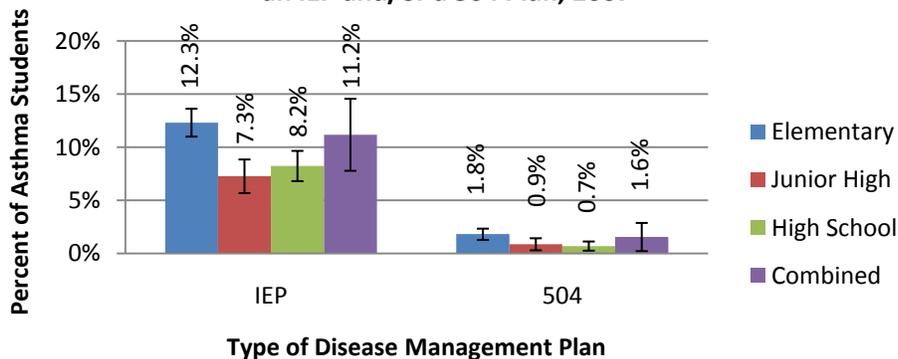
From 2003-2007, the highest prevalence of asthma was found in high school and junior high school students. Asthma prevalence in those grade levels was significantly higher than in elementary and combined schools. Combined school referred to K through 12 grade or other combination that was not traditionally defined elementary, junior, or high school.<sup>6</sup>

**Percent of asthma in Wyoming public school children by type of school, 2003-2007**

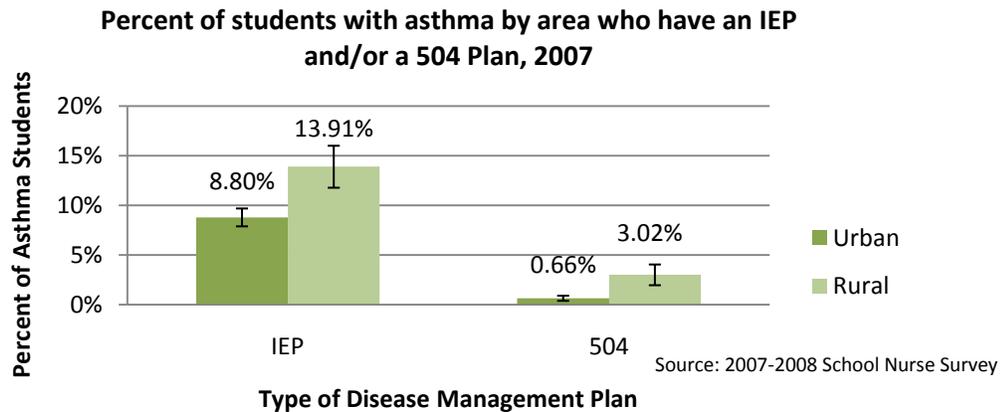


Asthma management at Wyoming public schools is maintained by agreements with children, parents, school nurses, and school staff. Parents and schools are encouraged to develop 504 plans to define accommodations for students with chronic conditions such as asthma to allow these students to perform at the same level as other students. An Individualized Education Plan (IEP) may also be developed to address educational issues. Data from the 2007 School Nurse Survey show that students with asthma were significantly more likely to have an IEP than a 504 plan. Of all the students with a known asthma diagnosis in Wyoming public schools, 10% of them have an IEP established and 1.3% of them have a 504 plan.<sup>6</sup>

**Percent of students with asthma by type of school that have an IEP and/or a 504 Plan, 2007**



Students attending rural schools were significantly more likely to have either an IEP or 504 plan versus students who attended more urban schools.<sup>6</sup>



## SUMMARY OF ASTHMA FINDINGS FROM THE SCHOOL NURSE SURVEY

Over 79% of Wyoming public schools responded to the asthma questions in the 2007 survey. The results represent information on 70,653 students.<sup>6</sup>

- The overall prevalence of asthma in Wyoming public school children was 7.38%. The range was from 1.86% to 12.50%.
- Asthma prevalence in Wyoming counties ranged from 3.02% to 11.25%.
- There was no significant difference in asthma prevalence among counties by eligibility for the free/reduced lunch (FRL) program.
  - In counties with the highest percent of children who were eligible for the FRL 7.84% (95% CI: 7.29%-8.39%) of the children had asthma.
  - In counties with the lowest percent students who were eligible for the FRL program 7.76% (95% CI: 7.22%-8.30%) of the children had asthma.
- The asthma prevalence among children living in urban areas was significantly higher than that found in rural areas (RR: 1.26, 95% CI: 1.18-1.35).
- Children in rural areas were more likely than children in urban areas to have a bronchodilator, keep it with the school nurse, and have a signed form allowing them to keep it on their person.
- In counties with 10% or greater minority population, asthma prevalence was significantly higher than in counties with less than a 10% minority population [Relative risk: 1.15, (95% CI: 1.08-1.21)].
- Of children with asthma, 52% used a bronchodilator at school. Of these, 21% keep the medication in the school nurse's office while 18% had signed forms allowing them to keep their medication with them while in school. The remainder did not specify where the inhaler was kept.

## DIABETES

Diabetes is a growing concern nationally. In 2007 it was estimated by the information collected through the National Health Interview Survey, that 23.6 million U.S. residents of all ages had undiagnosed or diagnosed diabetes.<sup>30</sup> That was approximately 7.8% of the U.S. population.<sup>30</sup> Another report released in 2008 by the Centers for Disease Control (CDC) confirmed that estimate, and stated that diabetes prevalence had increased in all age groups.<sup>31</sup> Efforts to better understand diabetes prevalence among

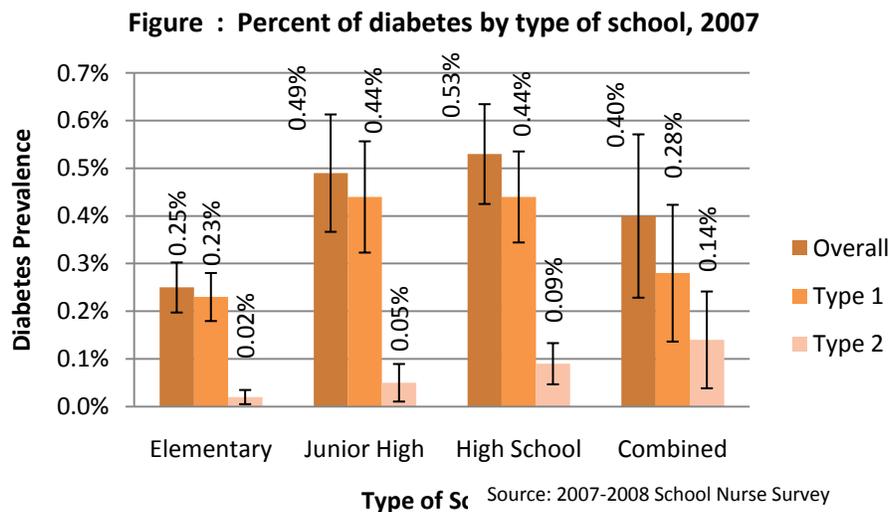
Wyoming children and how it is managed was done by the Wyoming Department of Health in 2005 and 2007 through school surveys.<sup>6,29</sup> Below is a snapshot of the results.

## SCHOOL NURSE SURVEY

Surveys were mailed to all Wyoming public school nurses in 2005 and 2007 to determine the current prevalence of diabetes among Wyoming public school children. This survey ran concurrent with the asthma survey. The intent of the data collected was to longitudinally track trends and to identify areas where improvements are needed in safety, educational resources, and increased awareness of diabetes.<sup>6,29</sup>

Over 79% of Wyoming public schools responded to the survey in 2007, and the results include information on 70,653 students. The overall prevalence of diabetes in Wyoming public school children is 0.38%. The prevalence of Type 1 diabetes was 0.32%, and Type 2 diabetes prevalence was 0.05%. Fourteen percent (14.0%) of Wyoming public school children with diabetes had type 2 diabetes.<sup>6</sup>

In general, Type 1 diabetes was significantly higher than Type 2 diabetes in all grade levels of Wyoming public school children. The higher percentage of Type 2 diabetes in combined schools should be interpreted cautiously because of the lower number of students overall in that school category.<sup>6</sup>



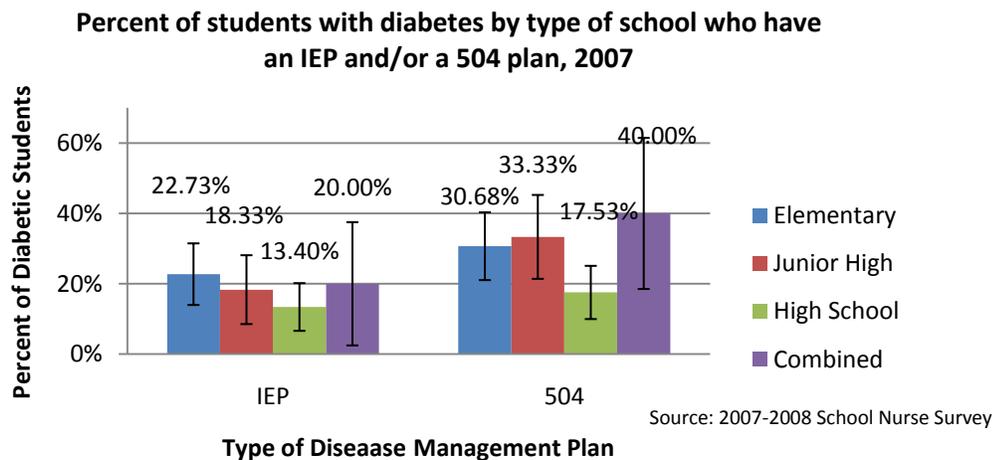
Diabetes prevalence in Wyoming school districts ranges from 0% to 1.21%. Data aggregated by county show diabetes prevalence ranges from 0% to 0.64%. Diabetes prevalence is significantly different in counties with a very low or very high percentages of children eligible for free/reduced lunch (FRL):<sup>6</sup>

- Fewer than 20% of the students eligible for FRL: Diabetes Prevalence =0.27%
- More than 40% eligible for FRL: Diabetes Prevalence =0.41%

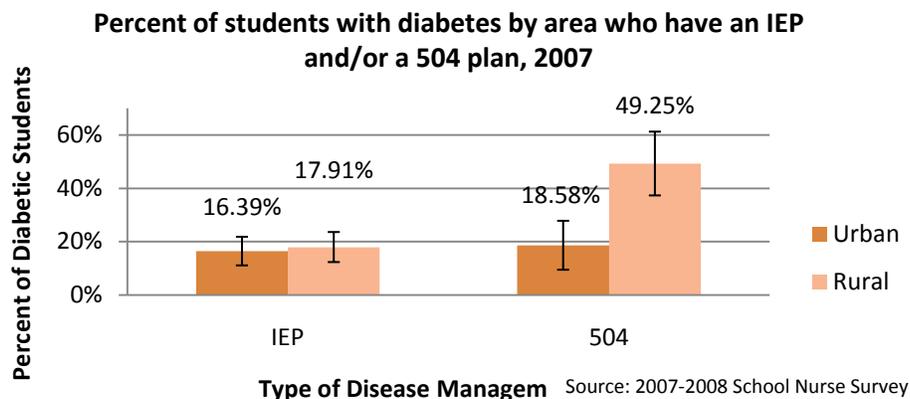
The prevalence of Type 2 diabetes (0.06%) is highest in school districts where 15 to 20% of the children live in families in poverty compared to districts where fewer than 15% or greater than 20% of children are part of families living in poverty (0.02% and 0.03%) (Relative risk: 2.29, 95% CI: 0.81-6.46).<sup>6</sup>

The diabetes prevalence among children living in rural areas (0.40%) is slightly higher than that found in urban areas (0.37%).<sup>32</sup> Diabetes prevalence differs by type of school. The high school prevalence is the highest at 0.53% and is significantly higher than that of elementary schools (0.25%) (RR=2.08, 95% CI: 1.56– 2.77). Of children with diabetes, 38.5% have an insulin pump.<sup>6</sup>

Diabetes management at Wyoming public schools is maintained by agreements with children, parents, school nurses and school policies. Parents and schools are encouraged to develop IEPs and 504 plans for each student with diabetes as well as other chronic diseases. Of the students with a known diabetes diagnosis in Wyoming public schools, 18% have an IEP established and 27% have a 504 plan.<sup>6</sup>



The percentage of IEPs did not differ between rural and urban students with diabetes. Rural students with diabetes had a significantly higher percentage of 504 plans, however, than urban students with diabetes.<sup>6</sup>



## SCHOOL POLICY INFORMATION

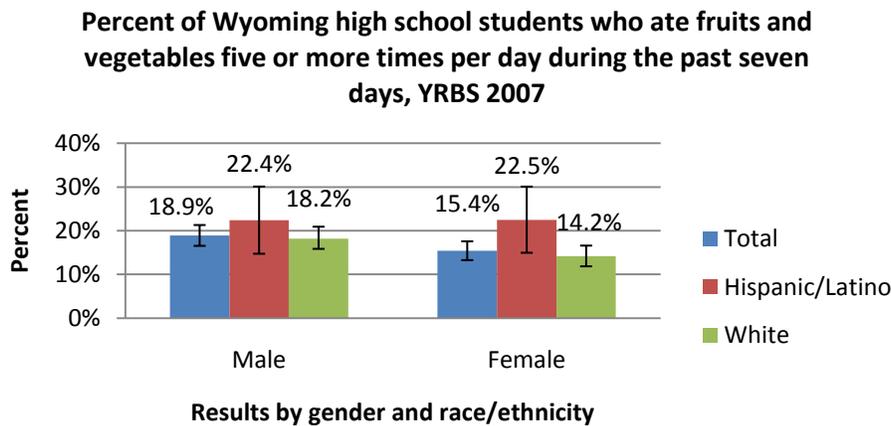
In order to learn more about school health policy for diabetes, nurses were asked specific questions about diabetes supplies, training, testing, care and education within the school. Multiple answers were allowed for many of these questions. Response rates were relatively low. Answers given do not infer an institutional policy.<sup>6</sup> General findings are listed below.

- The majority of schools require parents of students with diabetes to bring diabetic supplies to school. Only a few schools maintain diabetic supplies for students.<sup>6</sup>
- The majority of teachers and staff were trained to detect symptoms of high/low blood sugar emergencies. Those not trained did not correspond to not having students with diabetes enrolled.<sup>6</sup>
- Teacher/staff training occurred predominately yearly. However, it was also provided on an “as needed” basis.<sup>6</sup>
- Diabetes training was primarily provided by the school or head school nurse. Parents, diabetes educators and some other medical staff also participated in the training.<sup>6</sup>
- The majority of schools allow students to self-administer insulin. Those that did not were mostly elementary schools.<sup>6</sup>
- Most schools allow children to test their blood sugar in classrooms/other sites in school. Those that did not were primarily elementary schools.<sup>6</sup>
- Trained school staff and the child’s parent(s) were considered the most responsible for diabetes care during field trips.<sup>6</sup>
- Issues discussed with parents of students with diabetes include medical, school accommodations, learning, psychosocial, and financial.<sup>6</sup>
- Fifty-eight percent of school nurses were aware of the American Diabetes Association Medical Management Plan.<sup>6</sup>

## NUTRITION AND EXERCISE

### DIETARY BEHAVIORS

Students who participated in the 2007 high school YRBS were asked how many times per day they ate fruits and vegetables during the past seven days. The Healthy People 2010 (HP 2010) goal is that at least 75% of people over the age of two years will consume at least two daily servings of fruit and three daily servings of vegetables.<sup>33</sup> The overall YRBS results indicated a prevalence of less than 30% of students who ate fruits and vegetables in five of the past seven days before taking the survey, thus falling extremely short of the HP 2010 goal. There was no significant difference between genders or race/ethnicities on the percentage of students who ate fruits and vegetables in five of the past seven days before taking the survey.<sup>27</sup> These results are presented below.

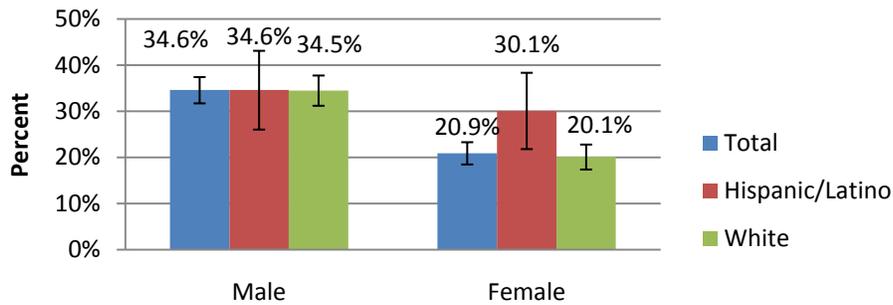


Source: WY YRBS

The overall percentage of Wyoming YRBS high school students who reported eating fruits and vegetables five or more time per day during the past seven days was 17.3%. This was significantly lower than the 2007 national YRBS estimate of 21.4%. The 2007 national YRBS high school estimate by gender was 22.9% for boys and 19.9% for girls.<sup>27</sup>

Students who participated in the 2007 high school YRBS were also asked about their daily soda consumption. The overall results indicated that the percentage of Wyoming students who drank a can, bottle, or glass of soda pop one or more times per day during the seven days before the survey was 27.9 % and was significantly less than the 2007 national YRBS estimate of 33.8%. Among Wyoming students, high school boys consumed significantly more soda daily in a week time span than did high school girls. There was no statistical difference by race and ethnicity among the genders for soda consumption.<sup>27</sup>

**Percent of Wyoming high school students who drank a can, bottle, or glass of soda or pop one or more times per day during the past seven days, YRBS 2007**



Results by gender and race/ethnicity

Source: WY YRBS 2007

## OBESITY

It was estimated that 17% of children and adolescents were obese based on the results from the 2007-2008 National Health and Nutrition Examination Survey (NHANES).<sup>34</sup> Nationally, obesity prevalence among age groups 2 to 5 years, 6 to 11 years, and 12 to 19 years have all more than doubled in the past 30 years.<sup>35-36</sup> The current percent of obese children by the fore mentioned age groups is 10.4%, 19.6%, 18.1% respectively.<sup>36</sup> Children who are obese are at greater risk for health problems that develop during any age in their lifetime, and are more likely to become obese as an adult.<sup>37-38</sup>

A common measure used to determine weight status is by the body mass index (BMI).<sup>39</sup> For children ages 2 through 19 years of age, BMI is determined by height, weight, age and gender.<sup>39</sup> The four categories of BMI for children are underweight, health weight, overweight, and obese, and defined below.<sup>40</sup>

**Underweight** = < 5<sup>th</sup> percentile of BMI-for-age

**Healthy Weight** = 5<sup>th</sup> to < 85<sup>th</sup> percentile of BMI-for-age

**Overweight** = 85<sup>th</sup> to <95<sup>th</sup> percentile BMI-for-age

**Obese** = >95<sup>th</sup> percentile of BMI-for-age

Given the growing concern over the national levels of increasing obesity among America's youth, Wyoming Department of Health attempted to obtain thorough information about overweight and obese prevalence among Wyoming's youth. Sources of information presented include the National Survey of Children's Health (NSCH), Women Infant and Children (WIC), a third grade survey, and the 2007 YRBS.

## 2007 NATIONAL SURVEY FOR CHILDREN'S HEALTH

The 2007 NSCH collected information from participants to determine weight status. The results indicate that Wyoming has a higher percent of healthy weight children and a much lower percentage of obese children ages 10 to 17 years as compared to the 2007 national NSCH estimate.<sup>5</sup>

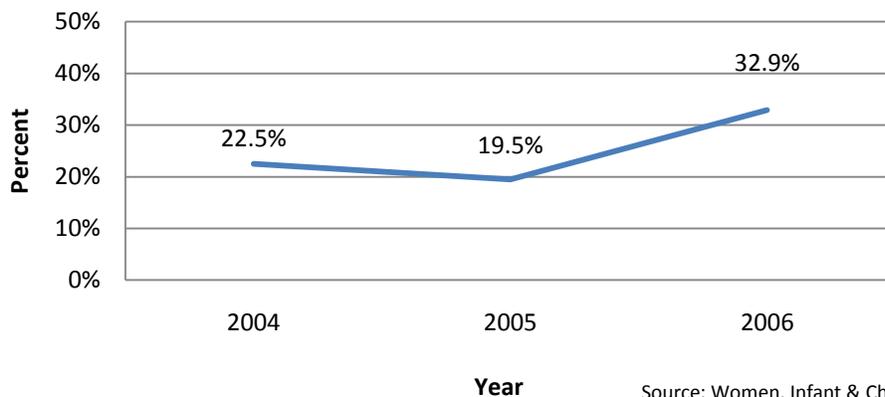
### 2007 BMI status for WY children ages 10 to 17 compared to U.S. estimate, 2007<sup>5</sup>:

<u>BMI Class</u>	<u>WY</u>	<u>U.S.</u>
Underweight	5.6%	5.3%
Healthy Weight	68.7%	63.2%
Overweight	15.5%	15.2%
Obese	10.2%	16.4%

## WOMEN, INFANT AND CHILDREN: 95<sup>TH</sup> PERCENTILE BMI

A report released by the U.S. Department of Agriculture in 2009 estimated WIC participants BMI.<sup>41</sup> For boys ages 2 to 4 years BMI was just above 16.0% from 1999-2006 which was similar to the estimate they had in 1988-1994.<sup>41</sup> Children were not classified as to what BMI status they were if they were healthy weight or otherwise. For Wyoming WIC participants, BMI was assessed for both girls and boys ages 2 to 5 years. The percent of children in the 95<sup>th</sup> percentile and considered obese increased over 10% from 2004 to 2006. Results are shown below.<sup>42</sup>

**Percent of Wyoming children aged 2 to 5 years who received WIC and had a BMI at or above the 95th percentile**



Source: Women, Infant & Children Data

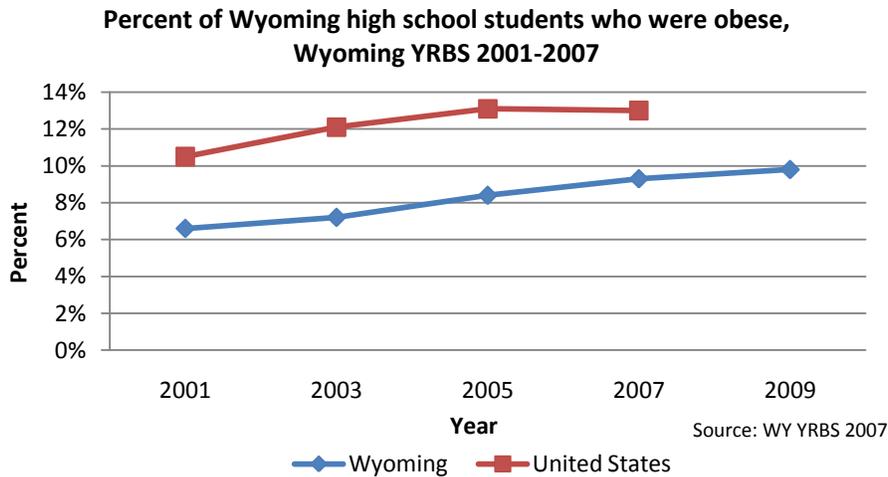
## THIRD GRADE BMI SURVEY

In 2009 Wyoming Department of Health performed a BMI survey among third grade students. This survey was a part of an oral health study being conducted at the same time. Parental consent was required for the student to participate in the survey. In total, 487 students were examined from the 24 schools that participated. The overall student participation rate was 33%. The collected data was weighted to estimate the BMI percentages for all 4,973 third grade students.<sup>43</sup> The BMI results are listed below.

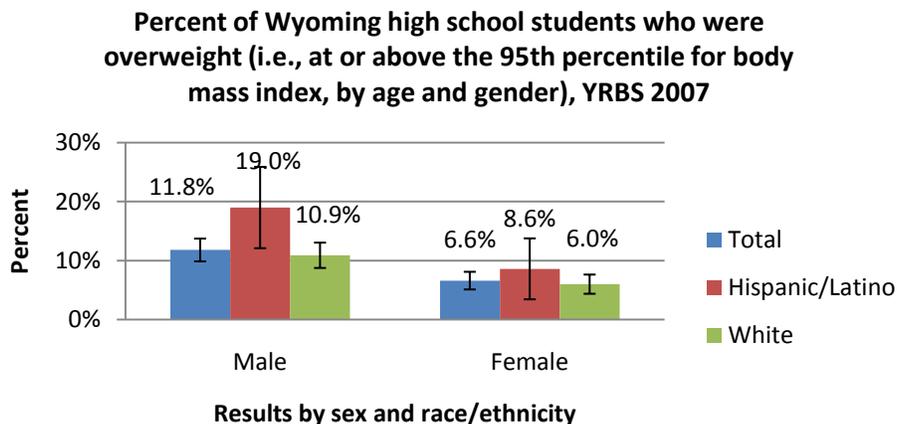
BMI Category	BMI	95% Confidence Interval
Underweight	2.97%	1.80-4.85
Healthy weight	67.85%	63.75-71.70
Overweight	14.20%	11.47-17.45
Obese	14.98%	12.19-18.23

## 2007 YOUTH RISK BEHAVIOR SURVEY

Students who have participated in the Wyoming high school YRBS were asked their heights and weights so a weight status trend could be determined. The figure below indicated that the obesity in Wyoming has steadily increased since it was first measured in 2001, but has remained lower than the national YRBS estimate. In 2005, the YRBS adopted the CDC definition of BMI based on gender and age. This may account for the larger jump that occurred between 2003 and 2005 survey years.<sup>27</sup>

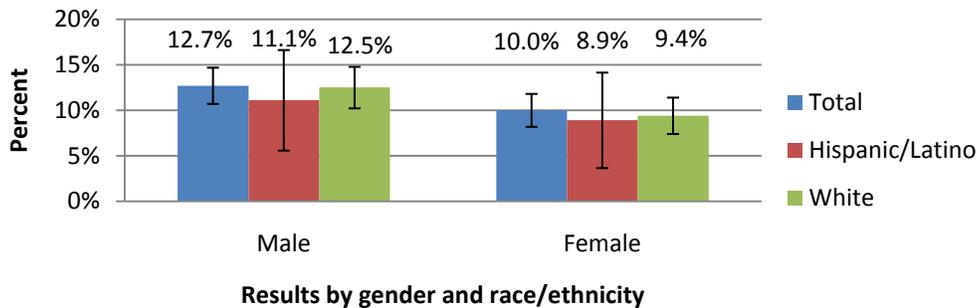


The YRBS in 2007 defined overweight as at or above the 95<sup>th</sup> percentile for BMI, by age and gender. Results from the Wyoming survey indicated that the percentage of boys who were overweight was significantly higher than girls. There was no difference by race and ethnicity among the genders regarding being overweight. Overall, however, the percentage of Wyoming students was 9.3%, which was significantly lower than the national YRBS estimate of 13.0%. The national estimate by gender was 16.3% for boys and 9.6% for girls.<sup>27</sup>



The 2007 YRBS also measured high school students at risk of becoming overweight. These students were already at or above the 85<sup>th</sup> percentile, but below the 95<sup>th</sup> percentile for BMI by age and gender. In Wyoming, 11.4% of students were at risk of becoming overweight; this percentage was similar by gender and significantly lower than the national YRBS estimate (15.8%).<sup>27</sup>

**Percent of Wyoming high school students who were at risk for becoming overweight (i.e., at or above the 85th percentile but below the 95th percentile for BMI, by age and gender), YRBS 2007**



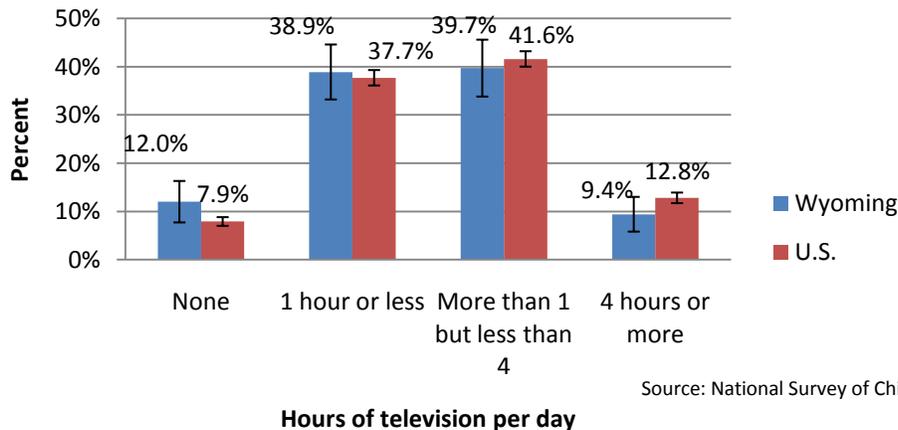
Source: WY YRBS 2007

## TELEVISION AND VIDEO GAME HABITS

### TELEVISION

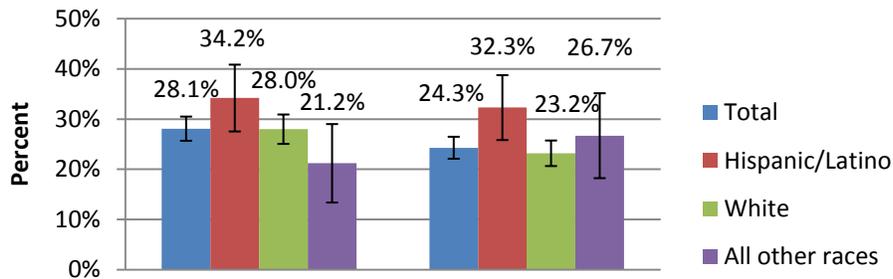
The 2007 NSCH asked parents about their child's television viewing habits. Wyoming children ages one through five years did not differ significantly from the U.S. estimate. The type of television viewing was not specified.<sup>5</sup>

**Television habits of Wyoming children aged through 5 years compared to the United States, 2007**



To gauge television habits among Wyoming middle school and high school students, the 2007 YRBS asked students how many hours per day of TV they watched on an average school day. Approximately one third of the middle school students surveyed indicated watching three or more hours of television per day on an average school day. There was no significant difference by gender, race, or ethnicity.<sup>27</sup>

**Percent of Wyoming middle school students who watched three or more hours per day of TV on an average school day, YRBS 2007**

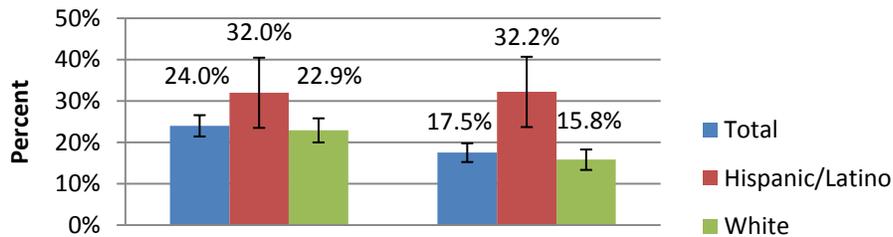


**Results by gender and race/ethnicity**

Source: WY YRBS 2007

The overall percentage of Wyoming students that watched three or more hours of TV on an average school day was 20.8% which was lower than the national estimate of 35.4%. A significantly higher percentage of Wyoming boys watched three or more hours of TV than girls; however Hispanic/Latino girls reported watching similar amounts of television as all races of Wyoming boys.<sup>27</sup>

**Percent of Wyoming high school students who watched three or more hours per day of TV on an average school day, YRBS 2007**



**Results by gender and race/ethnicity**

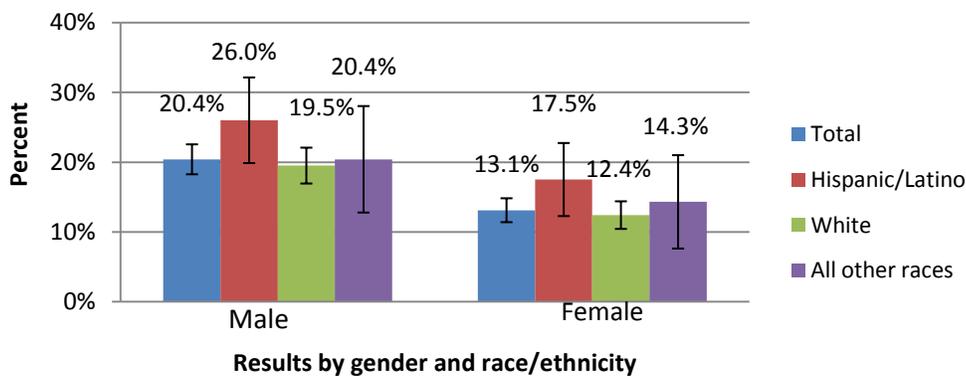
Source: WY YRBS 2007

## VIDEO GAMES OR COMPUTER USE

High technology devices such as computers and video games can be another distraction for students of all ages. The Wyoming 2007 YRBS asked both middle and high school students how many hours they spent playing video or computer games or using a computer for something other than school work on an average school day.<sup>27</sup>

Among middle school students, a significantly higher percentage of Wyoming boys used computers or video games three or more hours on an average school day than Wyoming girls.<sup>27</sup>

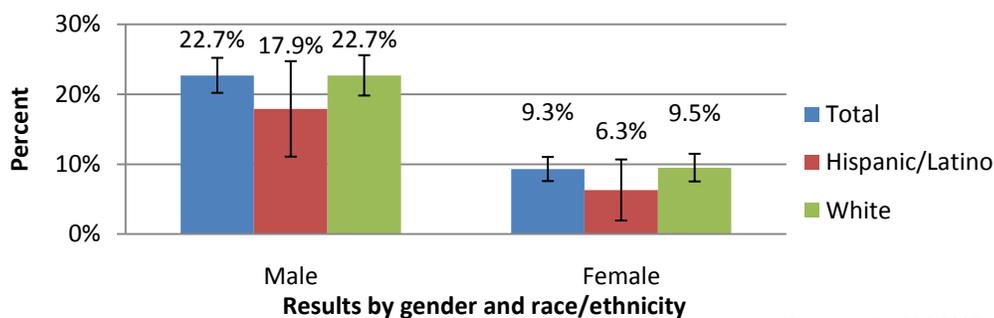
**Percent of Wyoming middle school students who played video or computer games or used a computer for something other than school work three or more hours/day on an average school day, YRBS 2007**



Source: WY YRBS 2007

Among Wyoming high school students, a significantly higher percentage of boys of all races/ethnicities played video games or used a computer three or more hours for something other than school than did girls of all races/ethnicities.<sup>27</sup>

**Percent of Wyoming high school students who played video or computer games or used a computer for something that was not school work three or more hour/day on an average school day, YRBS 2007**

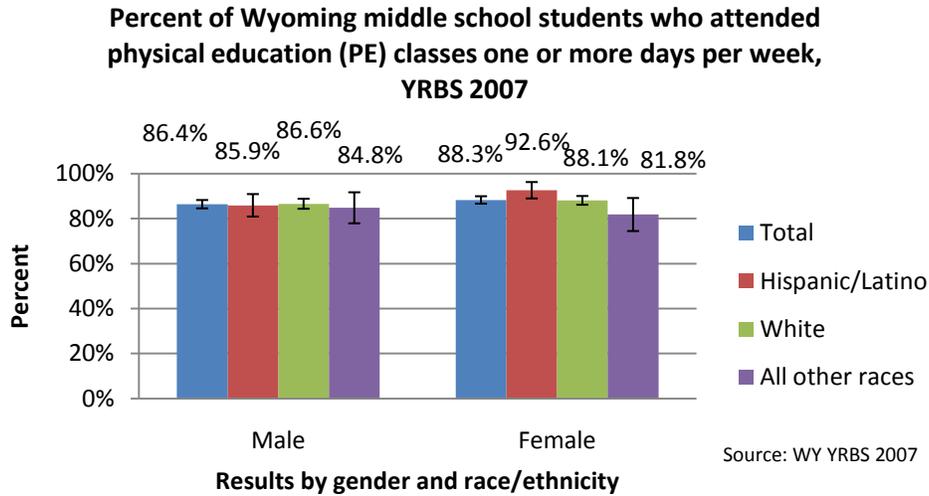


Source: WY YRBS 2007

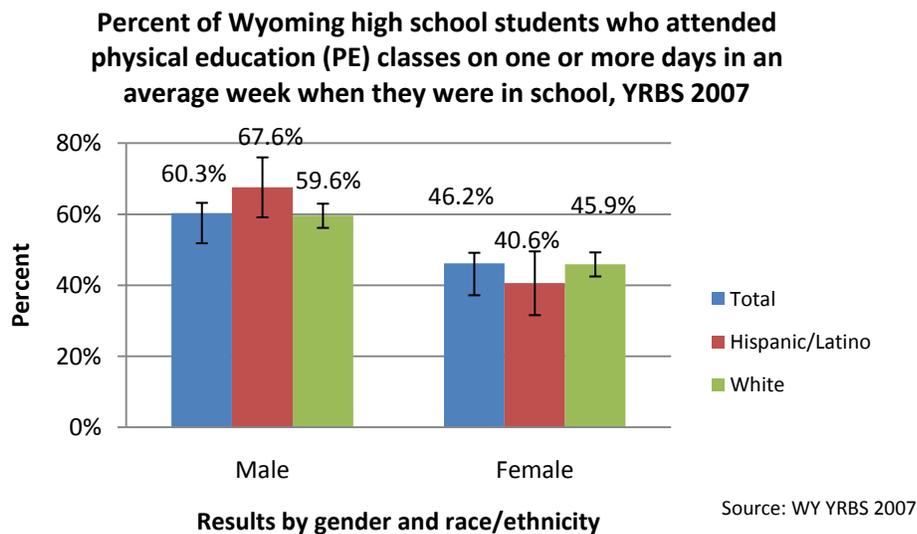
## PHYSICAL ACTIVITY

### PHYSICAL EDUCATION (PE) CLASSES

Middle school and high school students who participated in the 2007 Wyoming YRBS were asked if they attended physical education (PE) class at their school. Most middle school participants reported attending at least one day of PE during the week. There was no difference by gender, race, or ethnicity.<sup>27</sup>



Among Wyoming high school YRBS participants, about two-thirds of boys attended at least one day of PE during the week, while less than half of girls attended at least one PE class during the week. The difference was significant.<sup>27</sup>

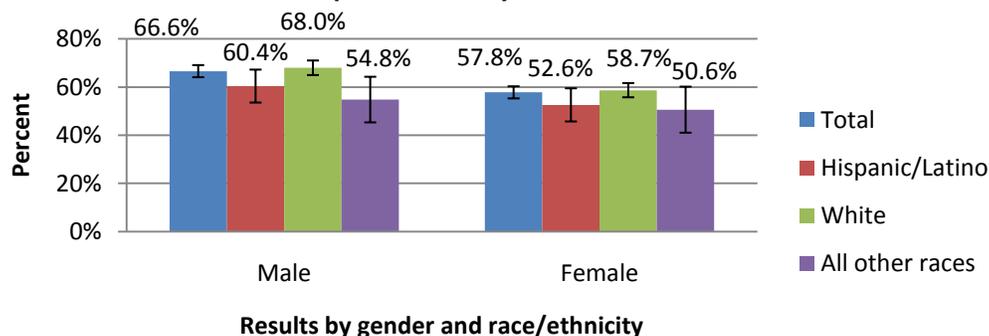


## 60 MINUTES PHYSICAL ACTIVITY

The CDC recommends that children and adolescents get 60 minutes of physical activity everyday. During these 60 minutes children should have three days each of muscle strengthening, aerobic activity, and bone strengthening. It is possible that many activities could fulfill one or more of those recommendations.<sup>44</sup>

The Wyoming 2007 YRBS asked students how many days within the past seven before taking the survey they had been physically active at least 60 minutes. Wyoming middle school boys reported a significantly higher percentage of 60 minutes of physical activity on five or more days of the past seven before the survey than middle school girls. The percentage did not differ significantly by gender, race or ethnicity.<sup>27</sup>

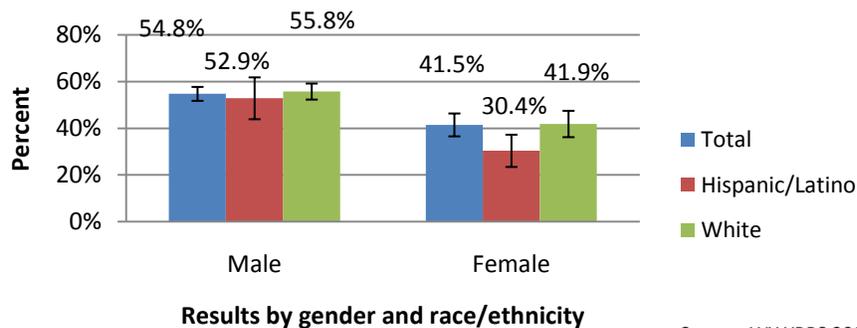
**Percent of Wyoming middle school students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days, YRBS 2007**



Source: WY YRBS 2007

Slightly over half of the Wyoming high school boys reported being physically active at least 60 minutes on five or more days of the past seven days before the survey. This percentage, however, was significantly higher than Wyoming high school girls.<sup>44</sup>

**Percent of Wyoming high school students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days, YRBS 2007**



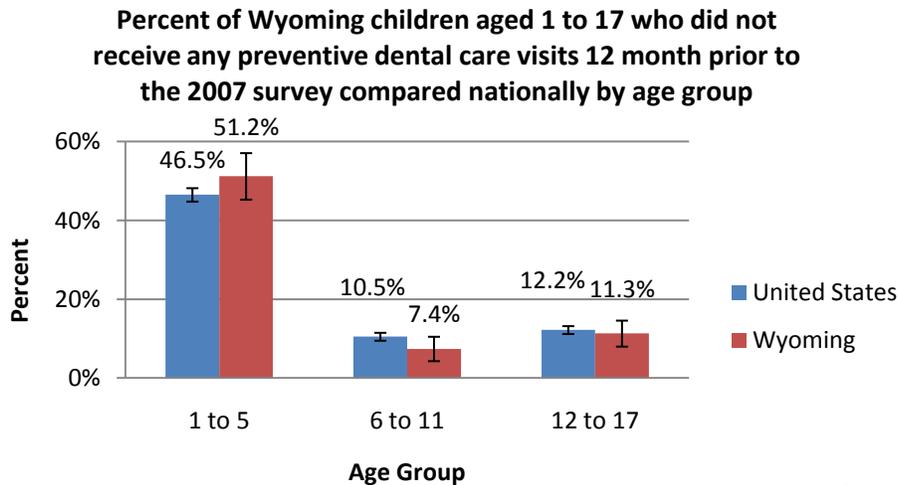
Source: WY YRBS 2007

## ORAL HEALTH

### PREVENTATIVE VISITS

Children on Medicaid are eligible for dental visits under the Early Periodic Screening, Diagnosis, and Treatment program within Medicaid. In Wyoming 2007, only 19.8% of EPSDT eligible children ages 0 to 5 years received any dental services during the year.<sup>45</sup>

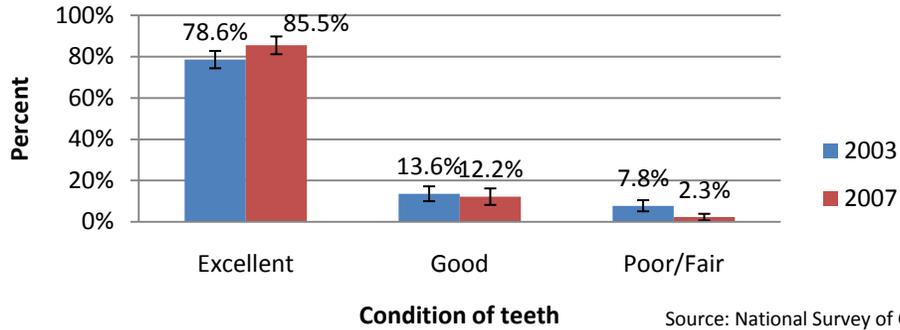
The 2007 NSCH asked parents about preventive dental care for children ages 1 to 17 years. Wyoming children that did not receive any preventive dental care in the 12 months before the NSCH survey did not differ from the percentage of U.S. children.<sup>5</sup>



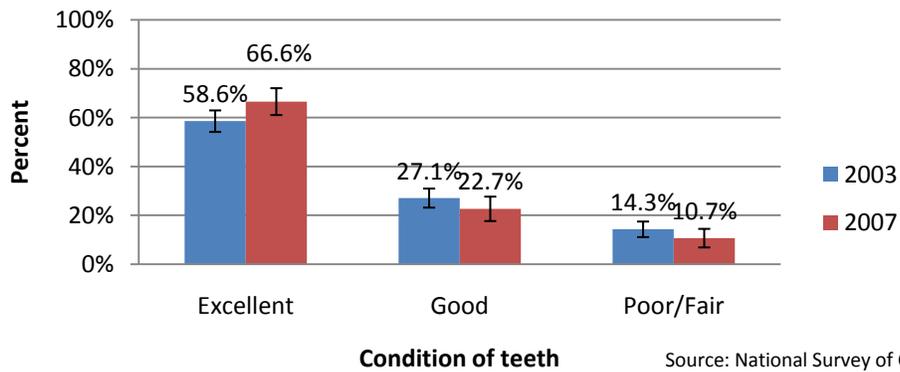
### CONDITION OF TEETH

In the 2003 and 2007 NSCH surveys, parents were asked to describe the overall condition of their child's teeth as "Excellent", "Good", "Poor/Fair". Among age groups 1 to 5 years, 6 to 11 years, and 12 to 17 years, changes were not significantly different between the 2003 and 2007 surveys. Improvement in the "Excellent" category was seen in children 1 to 5 years and 6 to 11 years.<sup>5, 46</sup> Results are presented on the next page.

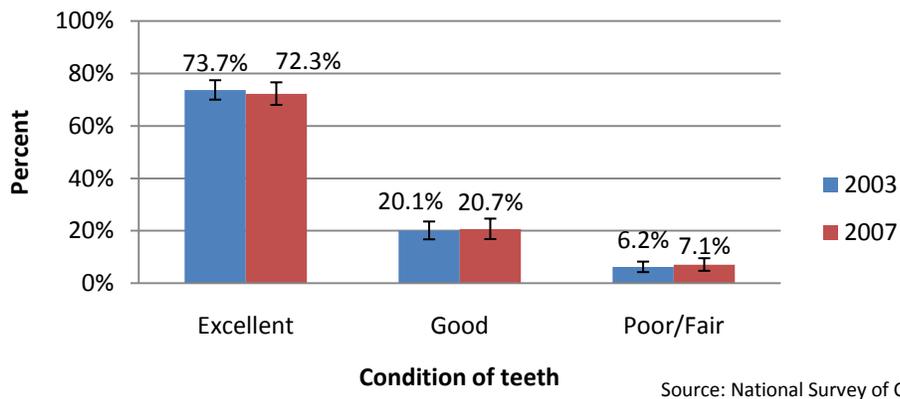
**Overall condition of teeth in Wyoming children aged 1 to 5 years, 2003 and 2007**



**Overall condition of teeth in Wyoming children aged 6 to 11 years, 2003 and 2007**



**Overall condition of teeth in Wyoming children aged 12 to 17 years, 2003 and 2007**



## THIRD GRADE ORAL HEALTH SURVEY

In 2009 Wyoming Department of Health performed an oral health survey among third grade students. This survey was a part of a BMI study being conducted at the same time. Parental consent was required for the student to participate in the survey. The oral exam included an examination of 1<sup>st</sup> molars for sealed, decayed, missing and filled teeth. In total, 487 students were examined from the 24 schools that participated. The overall student participation rate was less than 33%. The collected data was weighted to estimate the oral health status for all 4,973 third grade students. The following results were based on the presence or absence of characteristic on any molar.<sup>43</sup>

Condition of 1 <sup>st</sup> molars	Percent	95% Confident interval
Sealant on at least one molar	56.64%	52.41-60.78
Untreated decay on at least one molar	8.29%	6.24-10.94
One or more molars missing	0.64%	0.22-1.87
One or more molars filled	12.81%	10.21-15.94

## EDUCATION

### SCHOOL SAFETY

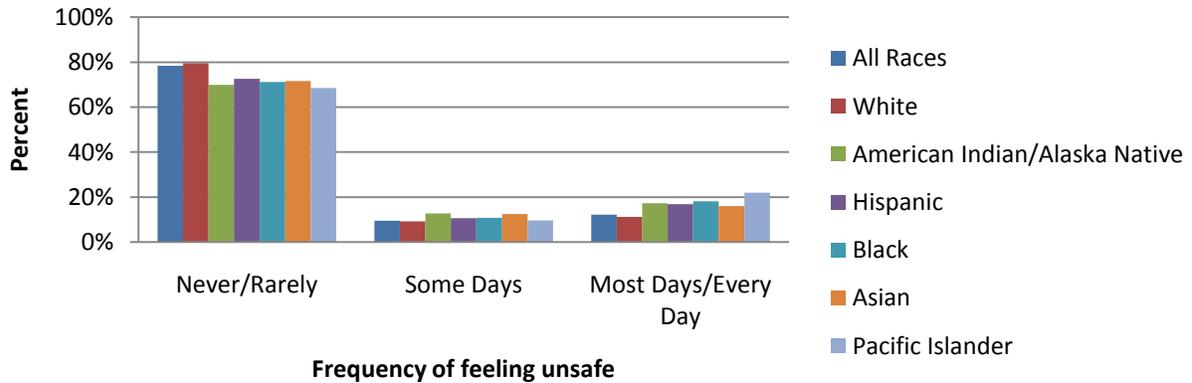
The Prevention Needs Assessment (PNA) is a survey designed to gather information for the planning and evaluation of substance abuse, violence, and delinquent behavior prevention programs, policies, and practices.<sup>47</sup>

The PNA measures students' self-reported substance use and participation in problem behaviors. It also assesses 22 intermediate attitudes, beliefs, and perceptions that influence whether high school and middle school students will participate in substance use, violence, and/or criminal activity. Attitudes, beliefs, and perceptions that studies show increase the likelihood of substance use and problem behavior are called Risk Factors; whereas attitudes, beliefs and perceptions that decrease the likelihood of substance use and problem behavior are called Protective Factors. Data from this report provides leaders and prevention specialists with information to address the unique and important challenges of substance abuse and problem behavior among middle and high school students. Beyond basic findings, this report describes meaningful changes that have occurred in substance use in the state of Wyoming since 2001.<sup>47</sup>

The PNA survey was administered in 2008 to all enrolled 6th, 8th, 10th, and 12th grade students in the state of Wyoming. A total of 17,193 students in Wyoming participated in the PNA during 2008, representing an overall response rate of 65%.<sup>47</sup>

According to the 2008 PNA survey, only about 70% of students felt safe en route to and from school.<sup>47</sup>

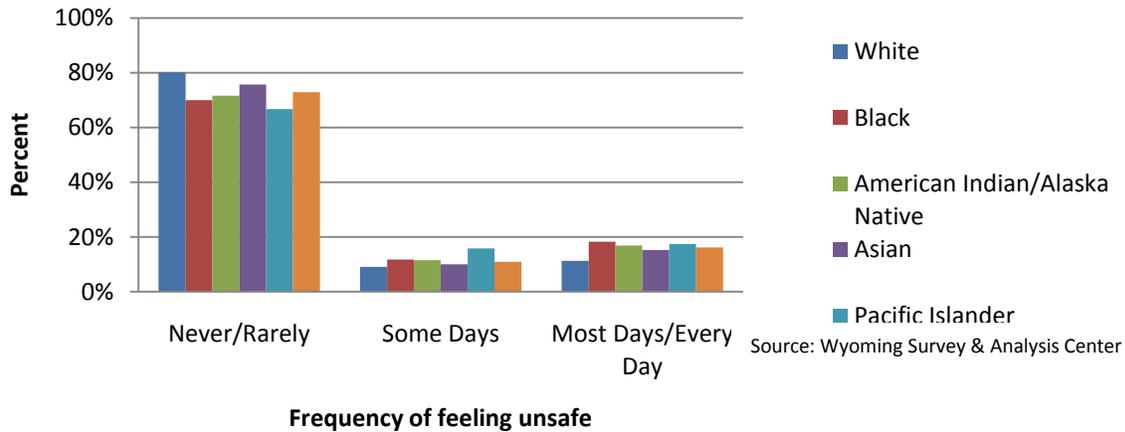
**Percent of students reporting feeling unsafe when going to or from school, 2008  
PNA by race and ethnicity**



Source: Wyoming Survey & Analysis Center

In 2008, almost 20% of students of all races and ethnicity felt unsafe most days while at school.<sup>47</sup>

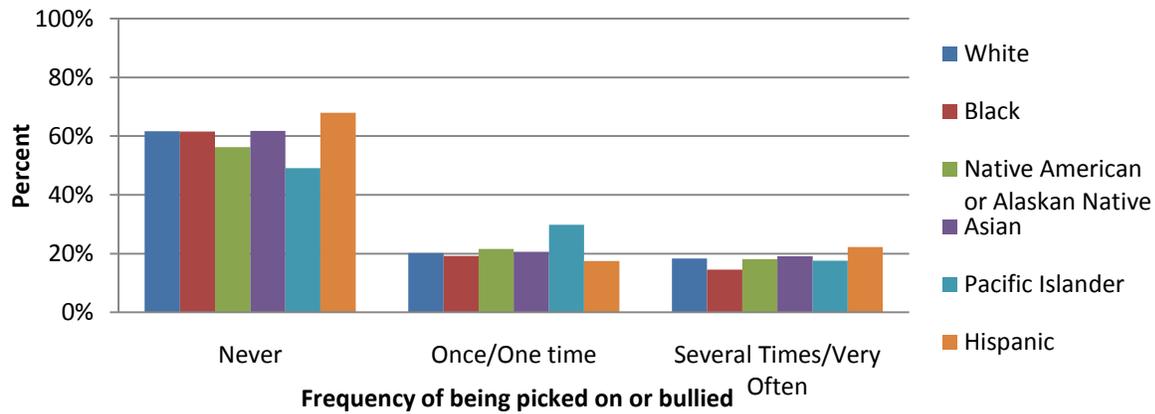
**Percent of Wyoming students that felt unsafe while at school by race and ethnicity, 2008**



Source: Wyoming Survey & Analysis Center

Approximately one-third of students reported being bullied by a fellow student at least once in the 12 months before taking the survey.<sup>47</sup>

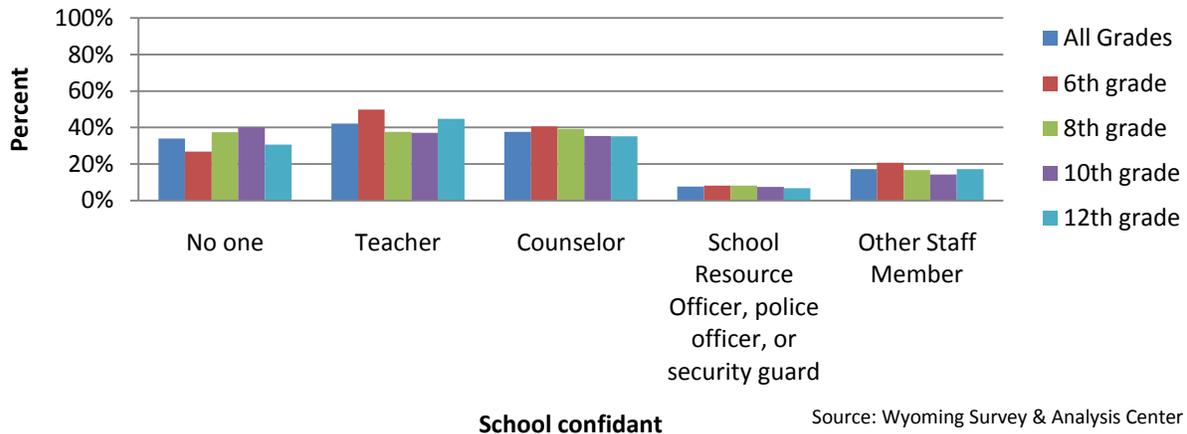
**Percent of students reporting having been picked on or bullied by a fellow student in the last 12 months, 2008**



Source: Wyoming Survey & Analysis Center

Overall, about 35% of students reported having no one at school they talked to about their problems in 2008.<sup>47</sup>

**Percent of Wyoming students by grade level who reported having someone at school to talk with about their problems, 2008**



Source: Wyoming Survey & Analysis Center

## INDIVIDUALIZED EDUCATION PLANS

All children in the United States have the right to a Free Appropriate Public Education (FAPE) and Individuals with Disabilities Education Act (IDEA) ensures children with disabilities receive the appropriate resources necessary to fulfill that right. Within IDEA are two provisions, Part B and Part C, which detail Individual Education Plans (IEP) for school ages children with disabilities (Part B) and that helps infants and toddlers with disabilities (Part C) receive early intervention services.<sup>48</sup>

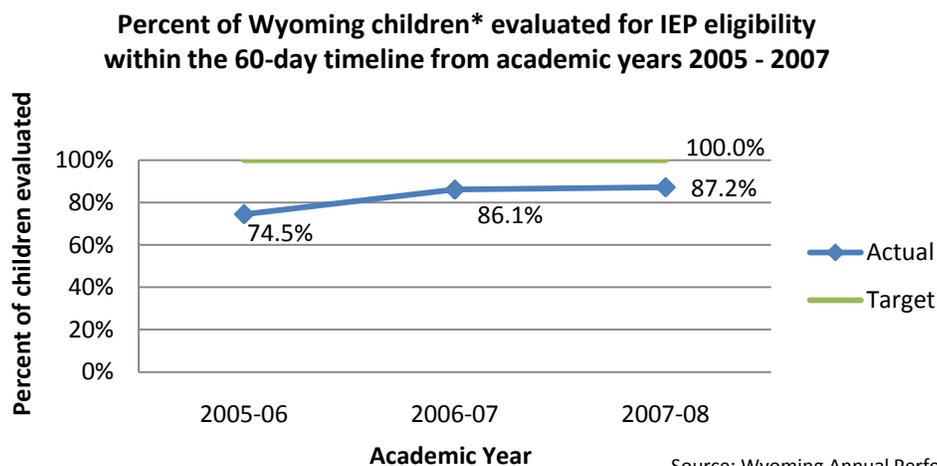
## PART C

Part C of IDEA is a federal grant program that assists states in operating a comprehensive statewide program of early intervention services for disabled children from birth through the age of two years and their families. Part C expires on the child’s third birthday. If a child receiving Part C is eligible for Part B, IDEA mandates that that child have an IEP implemented before the child’s third birthday.<sup>48</sup> An Individualized Education Plan (IEP) is a “learning” plan tailored to the learning style of a child with disabilities.<sup>48</sup>

It is WDE’s goal to have 100% of Wyoming children receiving Part C to have an IEP implemented prior to the child’s third birthday. In FFY 2007, WDE was able to implement IEPs to 89.8% of the Part C children recipients who were eligible for Part B before the child’s third birthday. Reasons for not meeting the 100% target included parents not showing up for scheduled meetings or notifying the Child Development Centers that they would be unavailable, lost family contact, staff errors, and family emergencies.<sup>49</sup>

## PART B: ELIGIBILITY

Not all children accepted in Part B was transitioned in from Part C. Children may enter into Part B through referral. Parental consent is required for a child to undergo eligibility evaluation which is the next step after referral. Once consent is received, the Wyoming Department of Education (WDE) has a 60 day timeline to evaluate all children referred to the WDE. It is WDE’s goal to evaluate all referred children within the 60 day timeline. WDE has improved in meeting its goal since academic year 2005-2006, when Wyoming began reporting the data.<sup>49</sup>

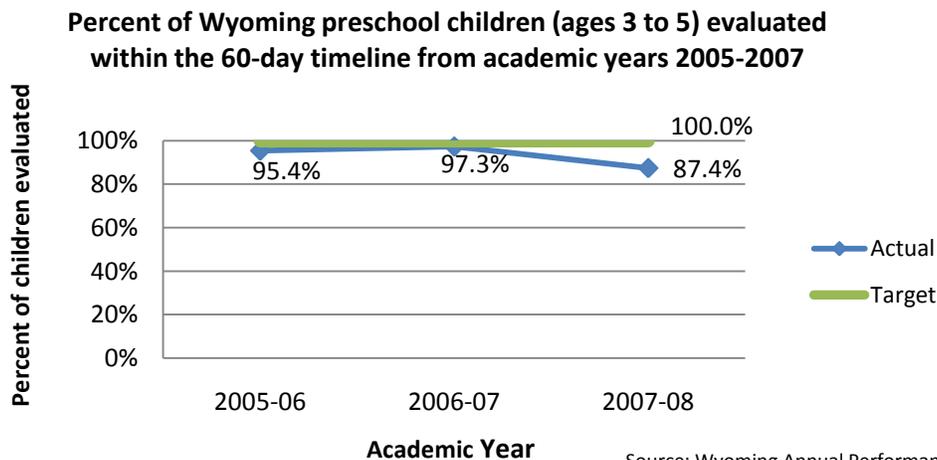


Source: Wyoming Annual Performance Report for Special Education FFY 2007

Age of children was not specified in the report.

Districts that did not meet the 100% evaluation within 60 days were required to submit corrective action plans that examined their current policy procedures, practices, and implementation strategies to enable them to meet the 60 day timeline with 100% accuracy in the future.<sup>49</sup>

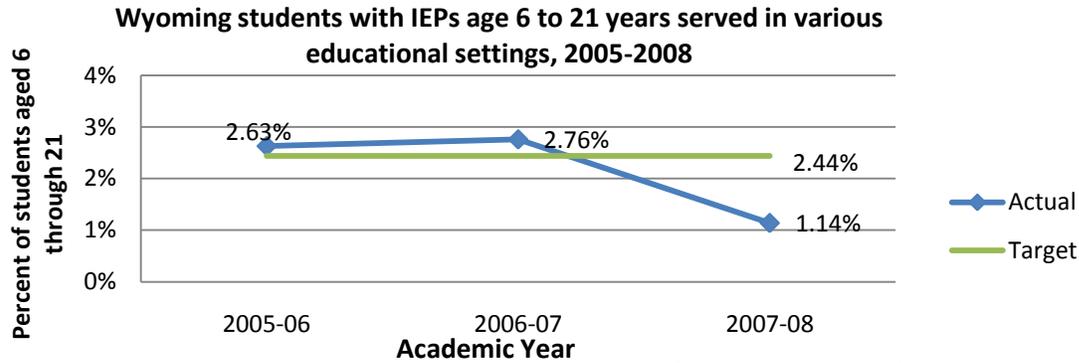
WDE's performance in getting referred preschool children ages 3 to 5 years evaluated within the 60-day timeline dropped about 10% in the 2007-2008 academic year. Prior to 2007 data was reported manually. New technology may have been the source for the drop in performance due to the transition. The automated improvement should help all districts meet the 100% target set by the WDE.<sup>49</sup>



Source: Wyoming Annual Performance Report for Special Education FFY 2007

Children ages 6 through 21 years may receive special education in a variety of program settings such as a separate school, residential facility and homebound or hospital environments.<sup>49</sup> Separate schools service children with disabilities who receive special education and related services for greater than 50 percent of the school day and may be public or private.<sup>50</sup> Residential facilities service students who receive special education and related services for greater than 50 percent of the school day and live in public or private residential facilities during the school week. These facilities may be public or private.<sup>50</sup> A homebound or hospital environment services students with disabilities who were placed in and receive special education and related services in hospital or homebound programs.<sup>50</sup> Separate school, residential facility and homebound/hospital does not include students whose parents have opted to provide home schooling, students who are placed by the courts (Court-Order Placed Students or COPS) or students who are parentally placed into residential facilities.<sup>50</sup>

It is WDE's goal to service fewer than 2.44% of children with disabilities ages 6 to 21 years within one of these alternative program settings, and met this goal in the 2007-2008 academic year. No explanation was provided regarding the decrease of those students served in various settings from 2006-2007 school year to the 2007-2008 school year such as whether these children were transitioned in the traditional school environment.<sup>49</sup>

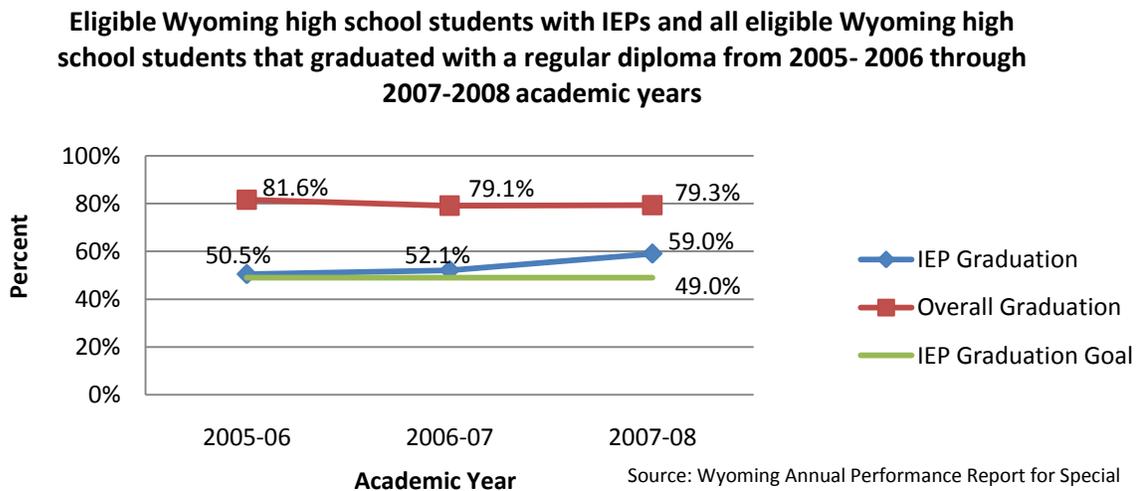


Source: Wyoming Annual Performance Report for Special Education FFY 2007

## GRADUATION

Children with disabilities are eligible for an IEP through age 22.<sup>48</sup> Given the alternative nature of IEPs, children with disabilities are not required to graduate in the same time frame as non-disabled students; rather, they are required to complete the school curriculum as outlined by their IEP in order to graduate with a regular high school diploma.<sup>49</sup>

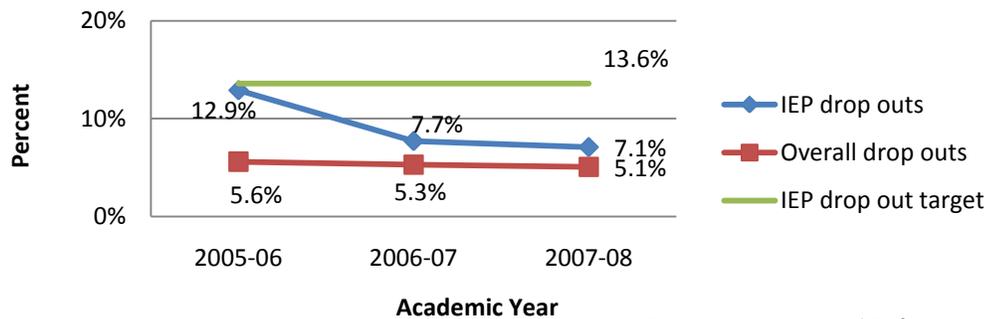
WDE has a 49.0% target graduation percentage for all students with an IEP and eligible to graduate. Wyoming exceeded this goal in 2005-06 through 2007-08 academic years. Students with an IEP and are eligible to graduate have a lower graduation percentage than all students eligible for graduation.<sup>49</sup>



Source: Wyoming Annual Performance Report for Special Education FFY 2007

A high school “drop-out” in Wyoming is defined as a not graduating in four years for non-disabled students, not graduating as outlined in the approved IEP for disabled students, or if a disabled student has aged-out of the educational system. Aging-out occurs at age 22 or as determined by the student’s IEP committee.<sup>49</sup> WDE set a target to have fewer than 13.6% of all students drop-out from the educational system. Children with disabilities that have IEPs have been below this target goal since the 2005-06 academic year.<sup>49</sup>

**Wyoming high school drop outs with an IEP and overall Wyoming high school drop outs from academic years 2005-2006 through 2007-2008**



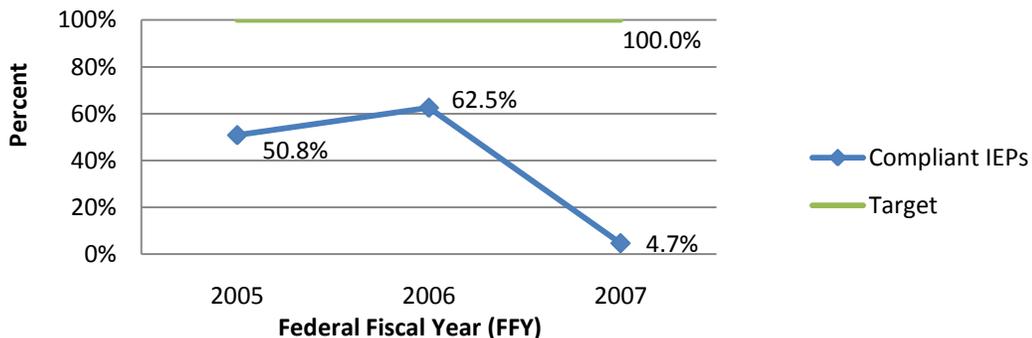
Source: Wyoming Annual Performance Report for Special Education FFY 2007

## TRANSITION PLAN

As stated previously an IEP is a “learning” plan tailored to the learning style of a child with disabilities. Under IDEA, the IEP is to encompass a life plan of academic learning tailored to the student’s goals from the creation of the IEP, beginning not later than the first IEP to be in effect when the child turns 16, or younger if determined appropriate by the IEP Team, and must be updated annually. An IEP must include two components. The first component is an appropriate and measurable postsecondary goals based upon age-appropriate transition assessments related to training, education, employment, and independent living skills if needed. The second component includes transition services needed to assist the child in reaching those goals, including the courses of study.<sup>49, 51</sup>

The WDE goal for implementing required transition planning is 100%. WDE has fallen short of meeting this goal since the FFY 2005. The drastic drop in compliance seen in FFY 2007 may have resulted from the change in reporting methods. The transition to computerized reporting that was mandated by the WDE exposed inconsistencies in interpretation and previous reporting methods. All non-compliant IEPs had been subsequently corrected for each of the Fiscal Years.<sup>49</sup>

**Wyoming youth aged 16 years and above with an IEP that includes attainable coordinated, measurable, annual IEP goals and transitions services to meet post-secondary goals from Federal Fiscal Years (FFY) 2005 - 2007**



Source: Wyoming Annual Performance Report for Special Education FFY 2007

## MAINSTREAM OUTCOME

The successful mainstreaming of individuals with disabilities is defined by WDE as youth's who had IEPs, are no longer in secondary school and who have been competitively employed, enrolled in some type of post-secondary school, or both, within one year of leaving high school. Competitive employment is defined as work in the competitive labor market in an integrated setting and compensated at or above minimum wage, but not less than customary wage, and level of benefits paid by employer for the same or similar work by individuals who are not disabled. Employment may be full-time or part-time. Postsecondary education may be in a two year or four year college program, vocational or technical education program beyond high school and adult basic education and enrolled on a full or part-time basis.<sup>49</sup>

WDE refers to a student who had an IEP and is no longer a student, an "exiter". Exiters include students with disabilities who graduated with a regular diploma, completed high school with a certificate or modified diploma, dropped-out, aged out, or moved out of the district and were not known for continuing. It was WDE's goal in FFY 2007 for 83.7% of exiters from 2006-2007 academic year to be engaged in employment or post-secondary education.<sup>49</sup>

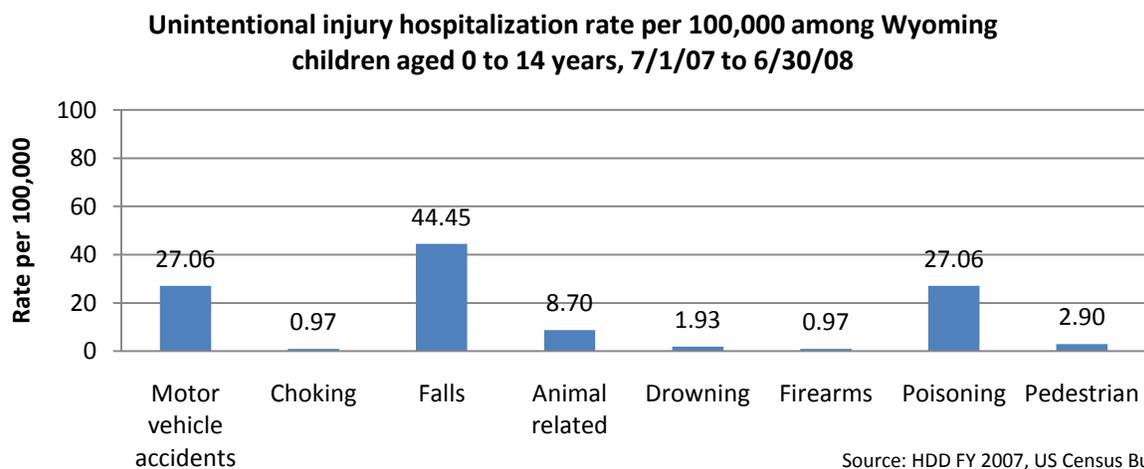
The total number of exiters in FFY 2007 was 775 students. Of these, WDE was able to contact and interview only 270 people; a response rate of only 34.8%. Of the 775 exiters 212 were considered non-reachable due to incorrect phone numbers, or they returned to high school the following year. Of the 270 students interviewed, 85.2% of them were competitively employed, enrolled in post-secondary education, or both. Thus, the WDE exceed their goal of 83.7%. A summary of the exiter outcome is listed in the table below.<sup>49</sup>

Status of 270 Exiters FFY 2007	Number	Percent
A. Attended post-secondary education only	52	19.3%
B. Been competitively employed only	91	33.7%
C. Attended post-secondary education AND been competitively employed	87	32.2%
D. Neither attended post-secondary education OR been competitively employed	40	14.8%
Met the indicator (sum of rows A, B, and C)	230	85.2%

## INJURY

### HOSPITALIZATIONS DUE TO UNINTENTIONAL INJURIES

Unintentional injuries are not a reportable condition so they may be underreported in Wyoming. Available information on hospitalizations due to unintentional injuries came from the Wyoming Hospital Association, and included only those that had a primary diagnoses listed as unintentional injury. Data included all hospitalizations for any cause of unintentional injury and may represent multiple hospitalizations for one child. In FFY 2007, the overall hospitalization rate for Wyoming children ages 0 through 14 years was 114.03 per 100,000.<sup>26</sup> This was lower than the national rate of 143.02 per 100,000 for the same age group.<sup>52</sup> Categorical breakdown of Wyoming's unintentional injuries as a primary diagnosis is shown in the figure below.



Primary diagnosis of injury

### SAFETY EQUIPMENT USE IN REPORTED TRAFFIC ACCIDENTS

Each year the Wyoming Department of Transportation (WYDOT) publishes a report that includes safety restraint use for individuals that had been in a traffic accident. A safety restraint is defined differently depending on the age group. For children ages 1 through 6 years, a restraint is defined as a child safety seat. For children ages 7 through 14 and 15 through 24 years, a restraint can include the use of any one of the following: a child safety seat, lap belt, shoulder and lap belt, airbag, or shoulder and lap belt and airbag. Results of safety restraint usage should be interpreted cautiously. The restraint use was usually self-reported to the officer on site after the accident. It is also not know if a safety restraint was used properly.<sup>53</sup>

### AGES 1 THROUGH 14 YEARS

In 2007, 19% of Wyoming children ages 1 through 6 years were involved in traffic accidents and were reported to not have been in a child safety seat. An estimated 3.5% of these children had some suspected injury or fatality. Among Wyoming children ages 7 through 14 years, 28.4% involved in traffic

accidents were reported to not have been in a proper restraint. While most children did not have an apparent injury, 6.5% of these children had some suspected injury or fatality.<sup>53</sup>

The Healthy People 2010 (HP2010) goal of child safety seat use is 100%, and 92% for those using appropriate safety restraints.<sup>33</sup> While Wyoming did not meet this goal in 2007, reported safety restraint use in 2007 was significantly higher than in 2004.<sup>53-56</sup> Results are detailed below.

Age Group	2007 Percent use	2004 Percent use	p-value
1 through 6	80.9%	77.2%	<0.01
7 through 14	89.3%	86.4%	=0.01

The improvement in safety restraint use among Wyoming children could have occurred for many reasons; more use of safety seats, better technology for safety seats, better proper use of safety seats, and less severe accidents.<sup>53</sup>

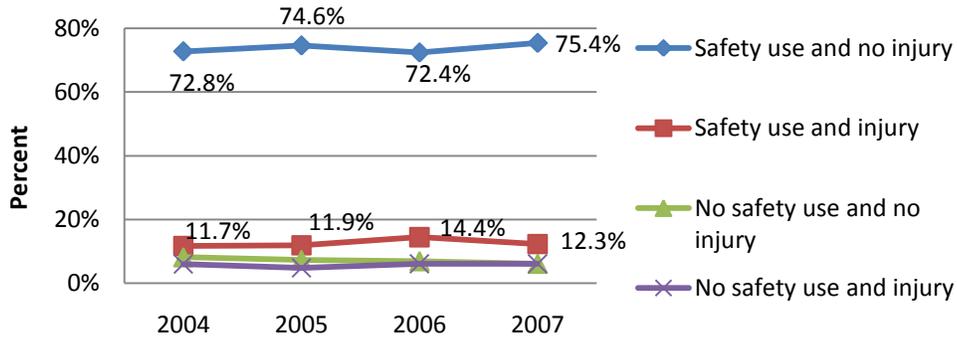
## AGES 15 THROUGH 24 YEARS

Wyoming adolescents ages 15 through 24 years did not meet the HP 2010 goal of 92% of safety restraint use.<sup>33</sup> Similarly to Wyoming children, safety restraint use among Wyoming adolescents increased significantly since 2004.<sup>53-56</sup> Results are presented below.

Age Group	2007 Percent use	2004 Percent use	p-value
15 through 18	87.7%	84.5%	<0.001
19 through 24	89.3%	86.4%	<0.001
21 through 24	88.0%	85.9%	<0.001

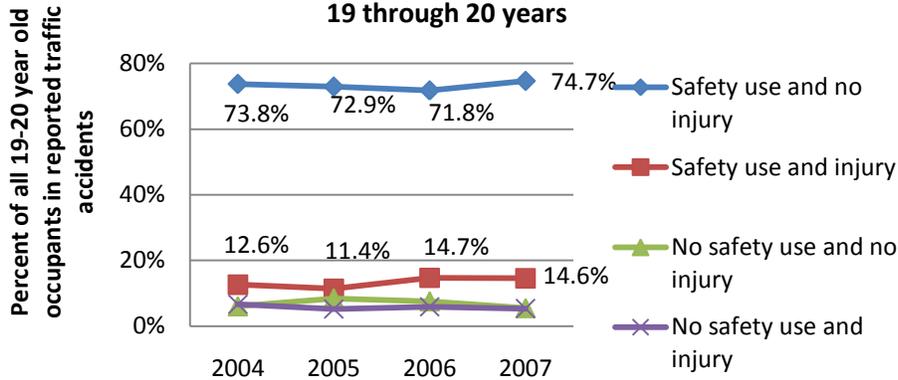
WYDOT reported injury outcome by safety restraint use or no safety restraint use in the annual crash reports. Injury was defined as possible injury, non-incapacitating injury, incapacitating injury, and fatality. Pedestrians, motorcyclists, and bicyclists involved in traffic accidents were not included. Limitations of the data include appropriate use of the safety equipment was not reported and use of safety equipment was self reported. Injury outcome by safety restraint use by age group from 2004 through 2007 is presented in the following three figures. In each age group safety use and no injury increased in 2007.<sup>53-56</sup>

**Occupant safety equipment use in reported accidents and injury outcome for adolescents aged 15 through 18 year, 2007**



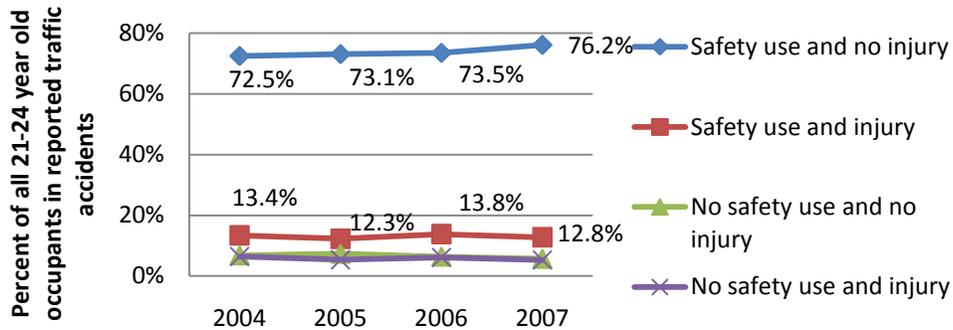
Source: WYDOT Crash Report 2004-2007

**Occupant safety equipment use and injury outcome for ages 19 through 20 years**



Source: WYDOT Crash Report 2004-2007

**Occupant safety equipment use and injury outcome for ages 21 through 24 years**

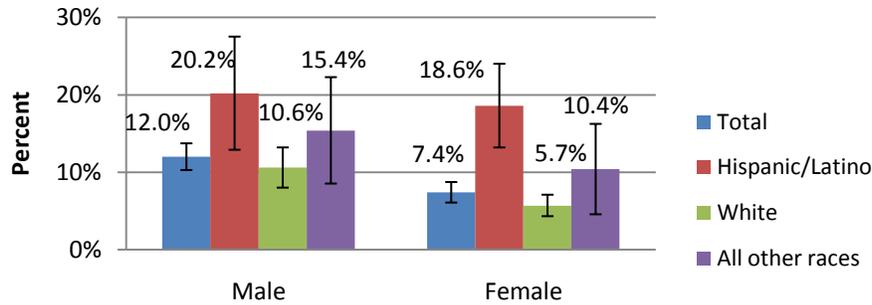


Source: WYDOT Crash Report 2004-2007

## YRBS SEATBELT USE

The Wyoming 2007 YRBS asked middle school and high school participants how often they wore a seat belt when riding in a car. Among Wyoming middle school students, boys reported to not wear a seat belt significantly more than girls. However, Hispanic girls reported a significantly higher percentage of no seatbelt use than non-Hispanic white girls.<sup>27</sup>

**Percent of Wyoming middle school students who never or rarely wore a seat belt when riding in a car, YRBS 2007**

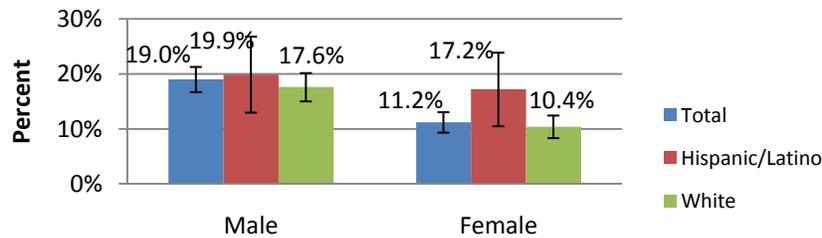


**Results by gender and race/ethnicity**

Source: WY YRBS 2007

Among Wyoming high school boys, almost 20% reported rarely ever wearing a seatbelt while riding in a car when driven by someone else. This percentage was significantly higher than that of Wyoming high school girls (11.2%). However, Hispanic girls reported a significantly higher percentage of no seatbelt use than non-Hispanic white girls.<sup>27</sup>

**Percent of Wyoming high school students who never or rarely wore a seat belt when riding in a car driven by someone else, YRBS 2007**



**Results by gender and race/ethnicity**

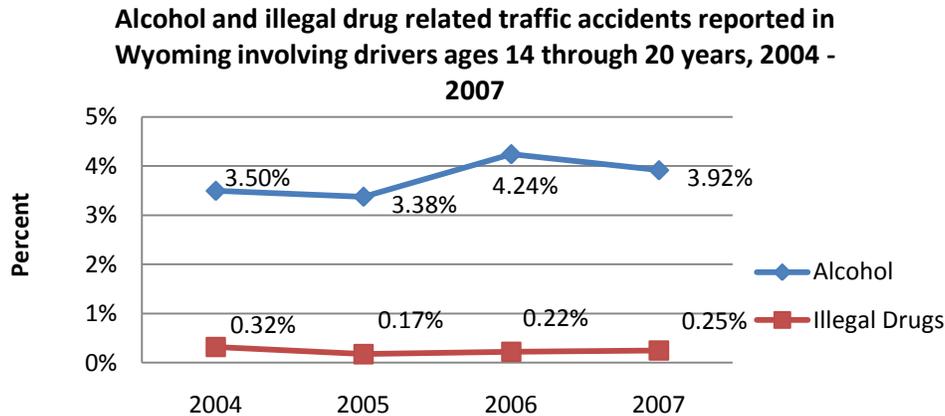
Source: WY YRBS 2007

The overall percentage of Wyoming high school students who reported rarely wearing seatbelts in 2007 was 15.5%. This was significantly higher than the 2007 national YRBS estimate of 11.1% ( $p < 0.01$ ).<sup>27</sup>

## CONTRIBUTING FACTORS TO MOTOR VEHICLE ACCIDENTS

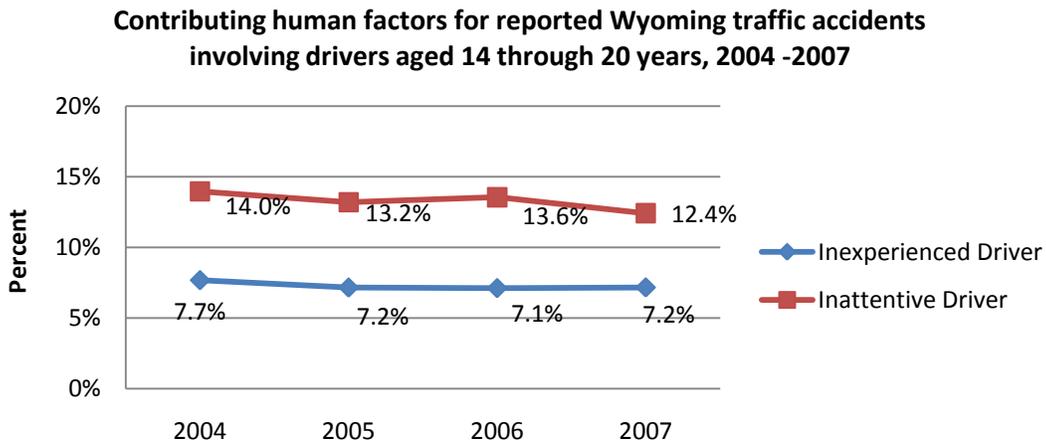
Accidents happen from multiple causes; some causes may be more frequent than others, or even more preventable. Some of the reported causes in 2007 for Wyoming adolescents ages 14 through 20 years were selected from 2004-2007 crash reports and presented below.<sup>53-56</sup>

The percentage of motor vehicle accidents for drivers 14 to 20 years involving alcohol or illegal drugs remained fairly constant from 2004 through 2007. Alcohol was more commonly involved than illegal drugs.<sup>53-56</sup>



Source: WYDOT Crash Report 2004-2007

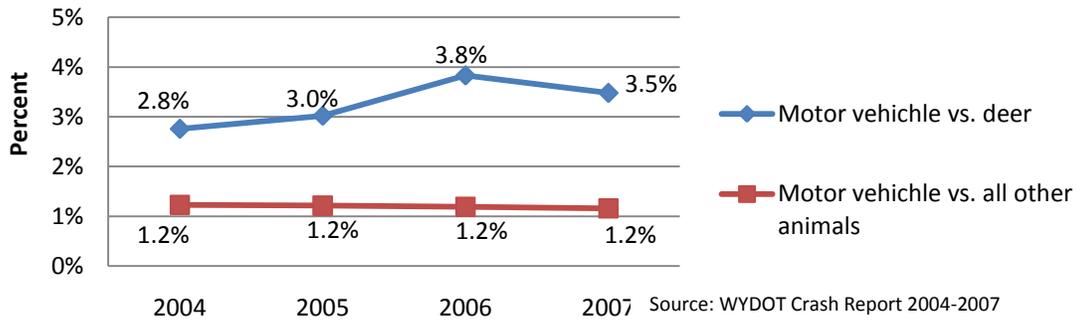
Inexperience and inattentive driving were the two most reported causes of accidents among Wyoming adolescents ages 14 to 20 years between 2004 and 2007. The percent in each category was consistent from year to year. The Wyoming comprehensive crash reports did not provide detailed definitions for the classification of driver (e.g. Inattentive Driver, No Violations, etc...)<sup>53-56</sup>



Source: WYDOT Crash Report 2004-2007

Among Wyoming adolescents ages 14 through 20 years, between 2004 and 2007, accidents involving deer are more common than accidents involving other animals. Other animals included horses, cows, other domestic animals, antelope, elk, sheep, moose, and other wild animals. The percent of accidents attributable to animals remained relatively stable from 2004-2007.<sup>53-56</sup>

**Animal related traffic accidents reported in Wyoming involving drivers ages 14 through 20 years, 2004-2007**

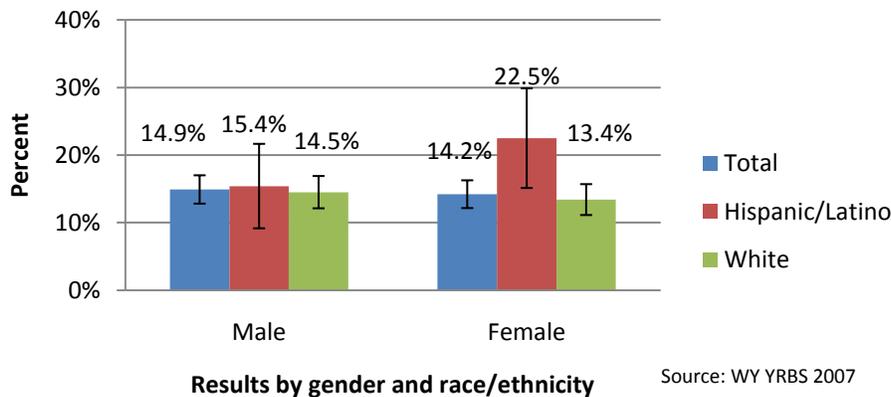


Source: WYDOT Crash Report 2004-2007

## YRBS DATING VIOLENCE

Wyoming high school students who participated in the 2007 YRBS were asked if they had a physical altercation with their boyfriend or girlfriend in the 12 months prior to taking the survey. The percentage of Wyoming high school boys and girls who reported ever being hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months was similar. There were no racial/ethnic differences in reported dating violence.<sup>27</sup>

**Percent of Wyoming high school students who were ever hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months, YRBS 2007**



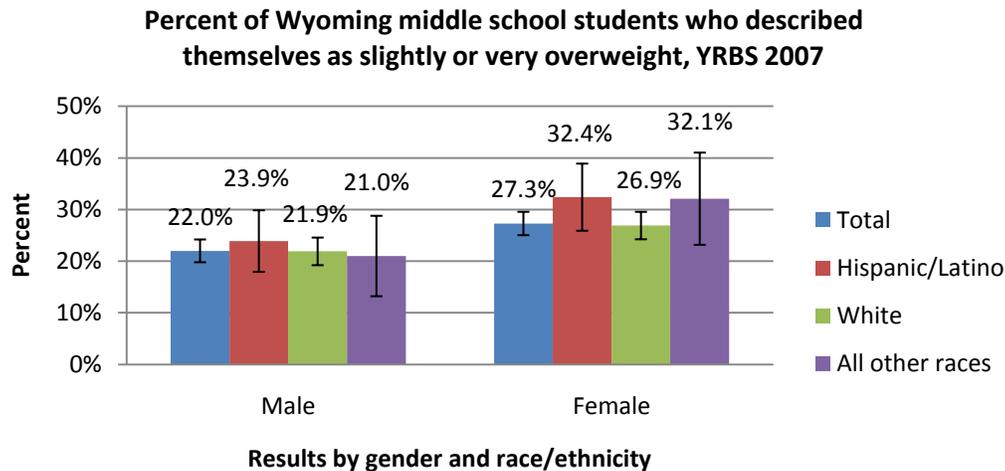
The overall percent of Wyoming high school students in the 2007 YRBS who were ever hit, slapped, or physically hurt on purpose by their boyfriend or girlfriend during the past 12 months was 14.7%. This was significantly higher than the 2007 national high school YRBS estimate of 9.9% ( $p < 0.01$ ). The national percent by gender was 8.8% male/11.0% female.<sup>27</sup>

## AT-RISK BEHAVIOR

### BODY WEIGHT PERCEPTION

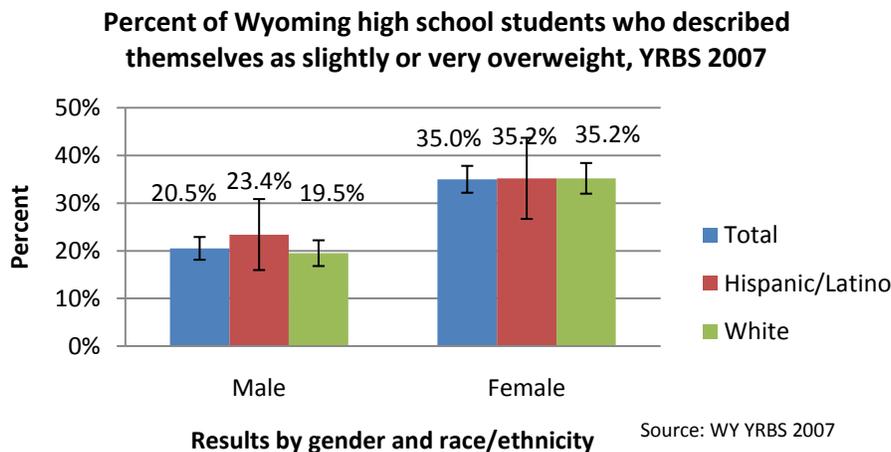
The Wyoming 2007 YRBS asked Wyoming middle school and high school students about their perceived image of their own body weight. These questions were followed up with other questions about fasting and purging which could be considered at-risk behavior in children and teens.<sup>27</sup> Results are presented below.

A higher percent of Wyoming middle school girls described themselves as slightly or very overweight than middle school boys, but the difference was not statistically significant.<sup>27</sup>



Source: WY YRBS 2007

A significantly higher percent of Wyoming high school girls reported themselves as slightly or very overweight than high school boys. The overall percent of Wyoming high school students who described themselves as overweight was 27.5%. This was not different from the 2007 national YRBS estimate of 29.3% ( $p = 0.17$ ).<sup>27</sup>

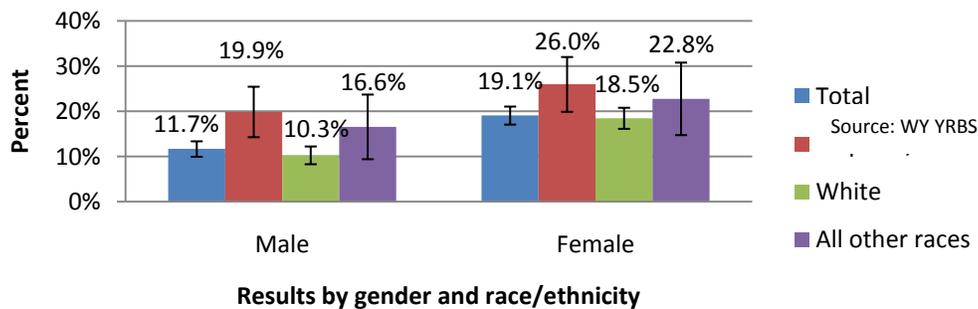


Source: WY YRBS 2007

## FASTING

The Wyoming 2007 YRBS asked both middle school and high school students if they had ever gone without eating for at least 24 hours to lose weight or to not gain weight. Among middle school students, a significantly higher percent of Wyoming middle school girls in the 2007 YRBS reported fasting behavior than did Wyoming boys. Hispanic/Latino boys reported a significantly higher fasting behavior than non-Hispanic white boys.<sup>27</sup>

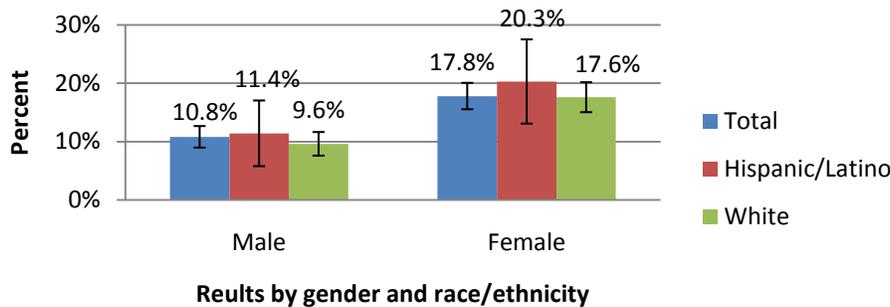
**Percent of Wyoming middle school students who had ever gone without eating for 24 hours or more to lose weight or to keep from gaining weight, YRBS 2007**



Source: WY YRBS 2007

The fasting behavior question posed to Wyoming high school students asked whether this behavior occurred in the 30 days before taking the survey. A significantly higher percent of Wyoming high school girls in the 2007 YRBS reported fasting behavior in the past 30 days more than did Wyoming high school boys. There was no racial/ethnic difference among Wyoming high school boys and girls who reported fasting behavior in the past 30 days.<sup>27</sup>

**Percent of Wyoming high school students who went without eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days, YRBS 2007**



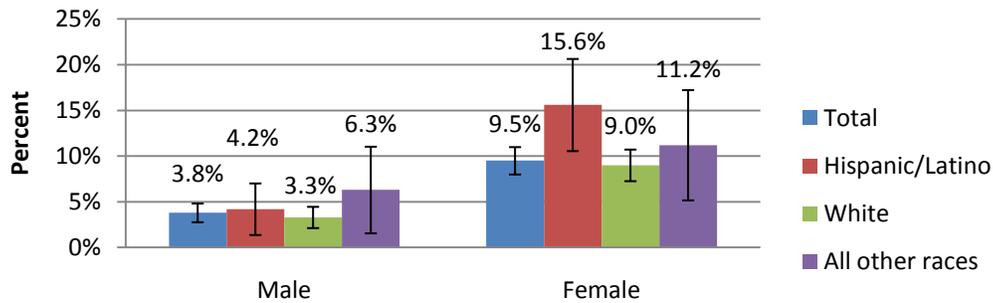
Source: WY YRBS 2007

The overall percent of Wyoming YRBS high school students who reported not eating for 24 hours or more to lose weight or to keep from gaining weight during the past 30 days was 14.3%. This was significantly higher than the 2007 national YRBS estimate of 11.8% ( $p < 0.01$ ). The 2007 national YRBS estimate for fasting by gender was 7.3% for boys and 16.3% for girls.<sup>27</sup>

## PURGING

The Wyoming 2007 YRBS asked middle school and high school students if they ever engaged in purging behavior to lose weight. Purging behavior was defined as taking laxatives or vomiting. Among middle school students, a significantly higher percent of purging behavior was reported by Wyoming middle school girls than middle school boys. There was no racial/ethnic difference among Wyoming middle school boys or girls who reported purging behavior.<sup>27</sup>

**Percent of Wyoming middle school students who had ever vomited or taken laxatives to lose weight or to keep from gaining weight, YRBS 2007**

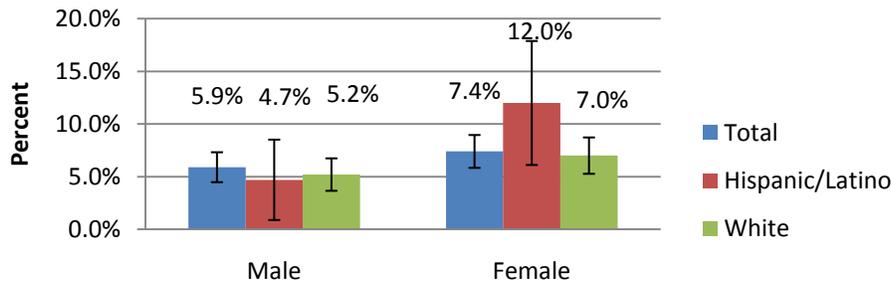


Results by gender and race/ethnicity

Source: WY YRBS 2007

The purging behavior question posed to Wyoming high school students asked whether this behavior occurred in the 30 days before taking the survey. Among Wyoming high school students, there was no significant difference between boys and girls who reported purging behavior.<sup>27</sup>

**Percent of Wyoming high school students who had ever vomited or taken laxatives to lose weight or to keep from gaining weight, YRBS 2007**



Results by gender and race/ethnicity

Source: WY YRBS 2007

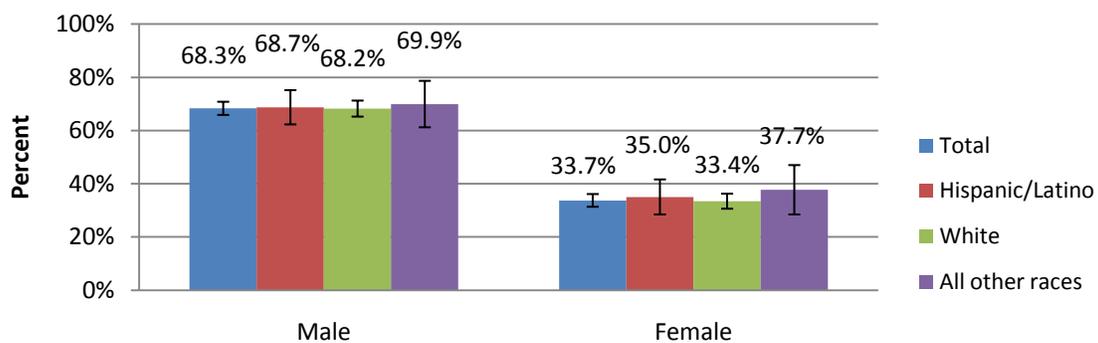
The overall percent of Wyoming YRBS high school students who reported purging behavior was 6.8%, and was significantly higher than the 2007 national YRBS estimate of 4.3% ( $p < 0.01$ ).<sup>27</sup>

## WEAPONS

Hunting is a way of life for many Wyoming residents and a popular sport for others. It is tradition to teach this sport to adolescents at an early age. It is not uncommon for an adolescent to have handled a gun, knife, or club, as these are tools of the hunting trade. The 2007 Wyoming YRBS asked middle school and high school students about their exposure status to weapons.<sup>27</sup>

Among Wyoming middle school students, over two-thirds of boys reported ever carrying a weapon compared to just over one third of girls. The percent of boys who ever carried a weapon was significantly higher than girls. There was no racial/ethnic difference among boys or among girls for those who reported ever carrying a weapon.<sup>27</sup>

**Percent of Wyoming middle school students who ever carried a weapon, such as a gun, knife, or club, YRBS 2007**



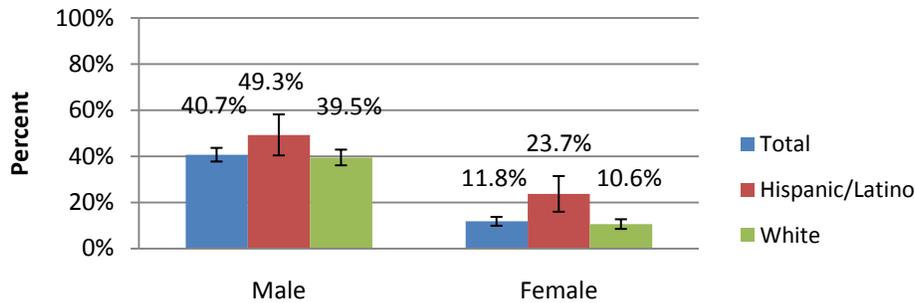
**Results by gender and race/ethnicity**

Source: WY YRBS 2007

The overall percent of Wyoming middle school students who reported ever carrying a weapon was 51.6%.<sup>27</sup> Hunting is also popular in Montana; one of Wyoming's neighboring states. This question was also asked of the 7<sup>th</sup> and 8<sup>th</sup> grade students in the Montana YRBS. The percent of students who reported ever carrying a weapon was less than half of Wyoming students (24.2%).<sup>57</sup>

This question was modified for Wyoming high school students, asking whether this behavior occurred on one or more 30 days before taking the survey. Among Wyoming high school students, 40% of boys reported carrying a weapon on one or more days compared to less than 12% of girls. This was a significant difference. While there was no racial/ethnic difference among high school boys who reported carrying a weapon one or more days of the past 30, Hispanic/Latino girls reported a significant higher percent of this behavior compared to non-Hispanic white girls.<sup>27</sup>

**Percent of Wyoming high school students who carried a weapon such as a gun, knife, or club on one or more of the past 30 days, YRBS 2007**



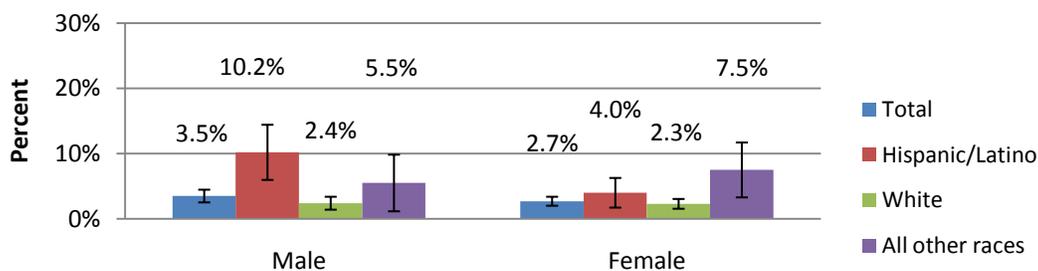
Source: WY YRBS 2007

**Results by gender and race/ethnicity**

The overall percent of Wyoming YRBS high school students who carried a weapon in 2007 was 26.5%. This percent is significantly higher than the national 2007 YRBS high school estimate of 18.0% ( $p < 0.01$ ). The national estimate by gender was 28.5% for boys and 7.5% for girls.<sup>27</sup> In Montana, the reported overall percent from the 2007 Montana high school YRBS was 22.1% for a similar question. The percent for Montana high school boys was 35.2%, and 8.8% for girls.<sup>57</sup>

Because hunting is a common sport among Wyoming residents, adolescent exposure to weapons may not be cause for concern. The 2007 YRBS asked middle school and high school students if they had brought weapons onto school property. Wyoming middle school students were asked if they had brought a gun to school with the intent to harm or bully another person at least once in the 12 months prior to the survey. The percent of Wyoming middle school boys and middle school girls who reported carrying a firearm in the past 12 months onto school property was similar. The percent of Wyoming Hispanic/Latino middle school boys who reported carrying a firearm onto school property in the past 12 months was significantly higher than non-Hispanic white boys. There was no racial/ethnic difference among middle school girls.<sup>27</sup>

**The percent of middle students who had a handgun, rifle, or shotgun in their possession or in their vehicle on school property with the intent to harm/bully another person one or more times during the past 12 months, YRBS 2007**

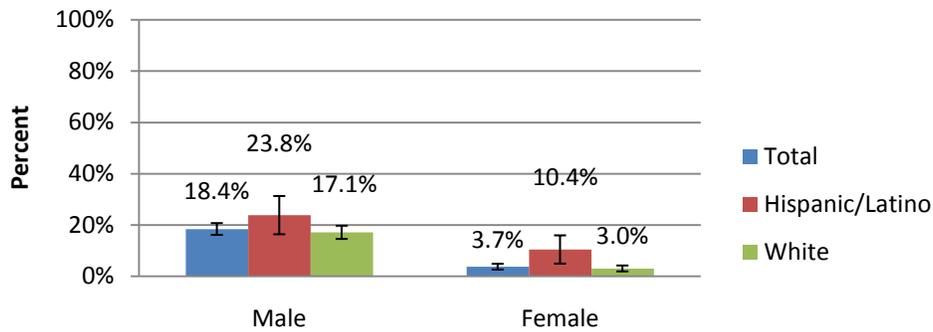


Source: WY YRBS 2007

**Results by gender and race/ethnicity**

Wyoming high school students were asked if they had carried a gun, knife or club onto school property at least once in the past 30 days prior to the survey. A significantly higher percent of Wyoming high school boys reported carrying a weapon onto school property on one or more of the past 30 days than high school girls.<sup>27</sup>

**Percent of high school students who carried a weapon such as a gun, knife, or club on school property on one or more of the past 30 days, YRBS 2007**



**Results by gender and race/ethnicity**

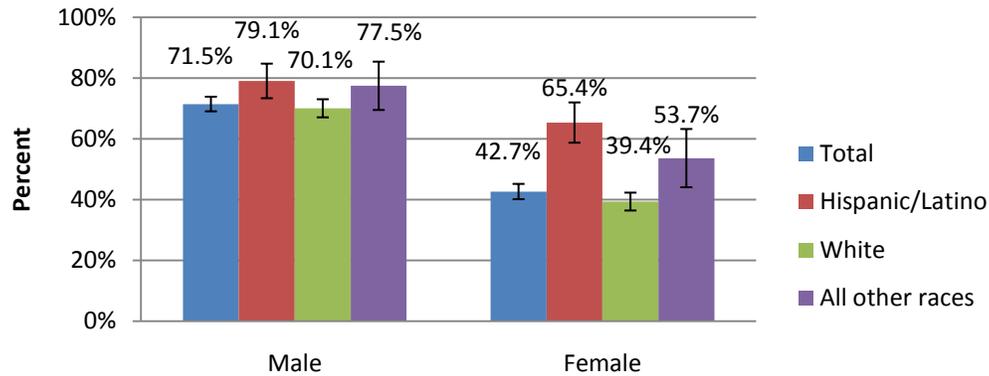
Source: WY YRBS 2007

The overall percent of Wyoming high school students that reported carrying a weapon onto school property on one or more of the past 30 days was 11.4% and was significantly higher than the 2007 national YRBS estimate of 5.9% ( $p < 0.01$ ).<sup>27</sup> The Montana 2007 YRBS reported an overall percent of 9.7% of high school students that carried a weapon in the past 30 days. This included 15.6% of boys, and 3.7% of girls.<sup>57</sup>

## FIGHTING

The Wyoming 2007 YRBS asked middle school and high school students if they had been in a physical fight. Among middle school students, the percent of boys who had ever been in a physical fight was significantly higher than girls. Among middle school boys, there was no difference between race and ethnicity. Among middle school girls, both Hispanic/Latino girls and girls of all other races reported a significantly higher percent of ever being in a physical fight than non-Hispanic white girls.<sup>27</sup>

**Percent of Wyoming middle school students who have ever been in a physical fight, YRBS 2007**

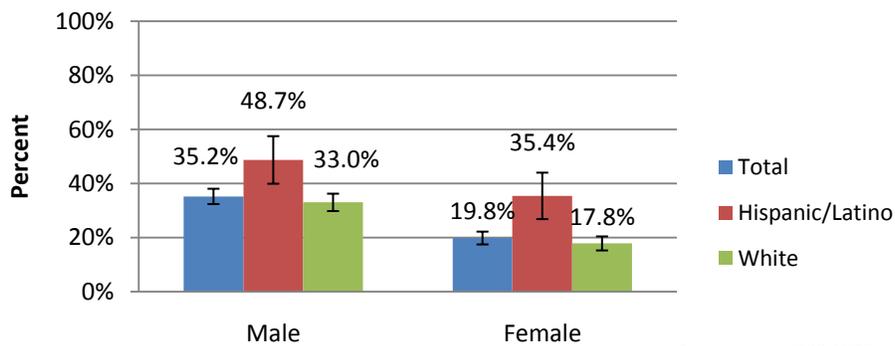


Source: WY YRBS 2007

**Results by gender and race/ethnicity**

Wyoming high school students were asked if they had been in at least one physical fight in the 12 months before the survey. Almost half of Hispanic/Latino high school boys reported being in a physical fight within the last year compared to 33% of non-Hispanic white boys. This difference was significant. Hispanic/Latino high school girls also reported a significantly higher percent of fighting than non-Hispanic high school white girls.<sup>27</sup>

**Percent of Wyoming high school students who were in a physical fight one or more times during the past 12 months, YRBS 2007**



Source: WY YRBS 2007

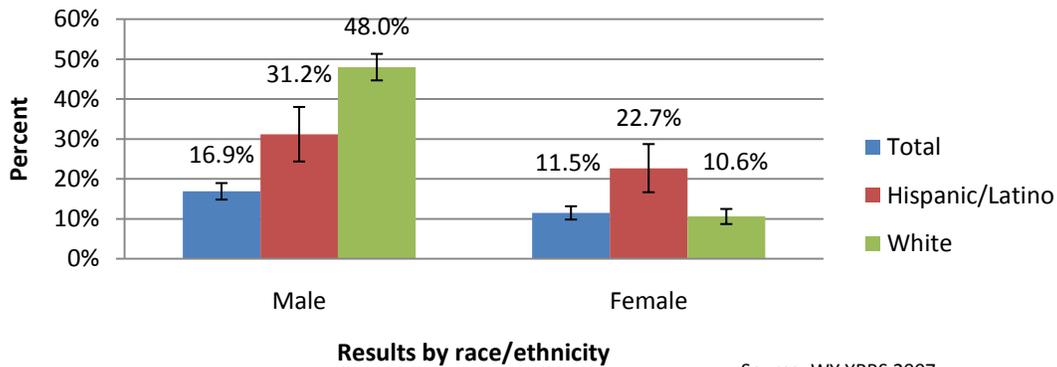
**Results by gender and race/ethnicity**

The overall percent of Wyoming high school students who reported having engaged in fighting within the last 12 months of the survey was 27.9%. This percent is significantly lower than the 2007 national high school YRBS estimate of 35.5% ( $p < 0.01$ ).<sup>27</sup>

## SEXUAL BEHAVIOR

The Wyoming 2007 YRBS asked students about sexual behavior. The YRBS goal was to examine behavior that contributes to unintended pregnancy and sexually transmitted diseases. The overall percent of all middle school students who reported ever having sexual intercourse was 14.3%. Almost 50% of non-Hispanic white middle school boys reported having had sexual intercourse in 2007. This was significantly higher than Hispanic middle school boys. Hispanic/Latino girls who reported having sexual intercourse was significantly higher than non-Hispanic white girls.<sup>27</sup>

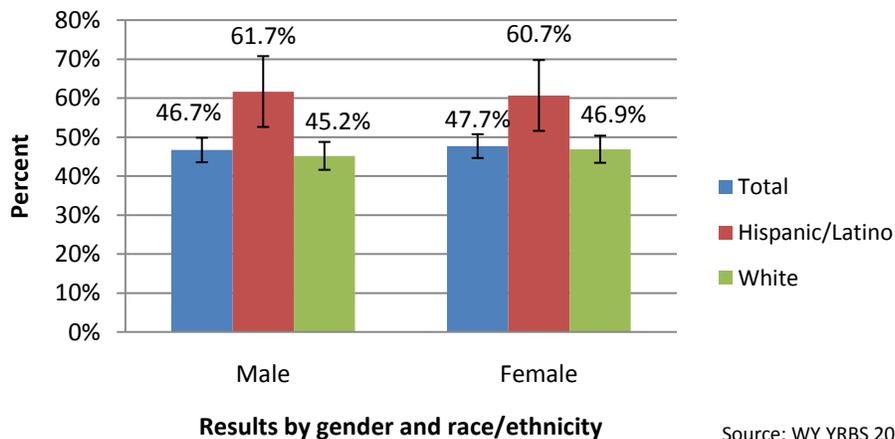
**Percent of Wyoming middle school students who ever had sexual intercourse, YRBS 2007**



Source: WY YRBS 2007

Among Wyoming high school students, a similar percent of boys and girls reported ever having sexual intercourse. These percents were similar to the 2007 YRBS national estimates of 49.8% for boys and 45.9% for girls. The overall percent of Wyoming students who ever had sexual intercourse was 47.2%. In Wyoming two-thirds of Hispanic/Latino boys and two-thirds of Hispanic/Latino girls reported ever having sexual intercourse compared to about 45% each for white boys and white girls. This was a significant difference.<sup>27</sup>

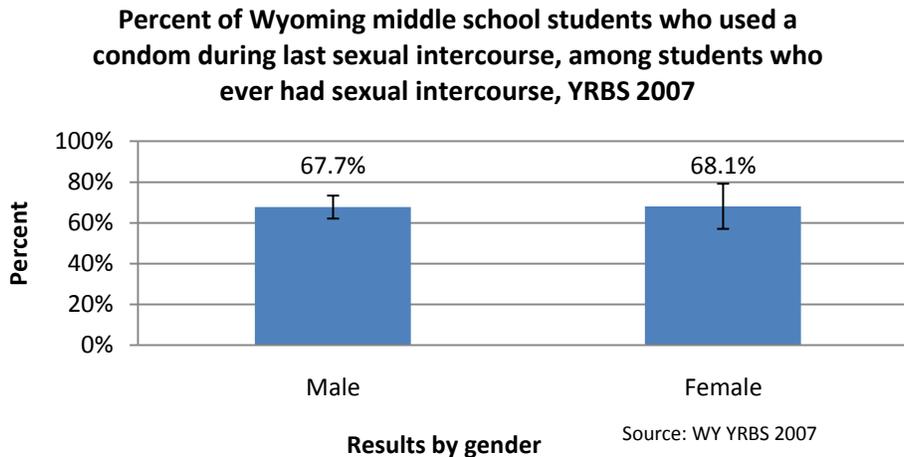
**Percent of Wyoming high school students who ever had sexual intercourse, YRBS 2007**



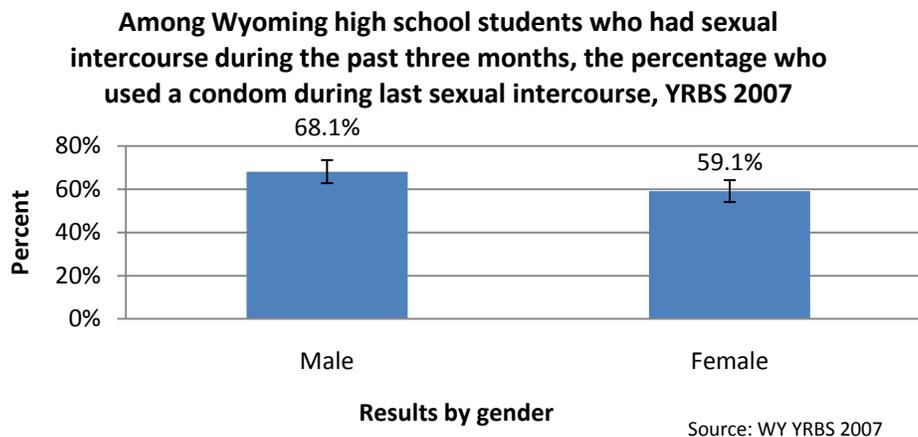
Source: WY YRBS 2007

## CONDOM USE

Among the students that had reported sexual intercourse, the Wyoming 2007 YRBS asked middle school and high school students about condom use. More than two-thirds of middle school boys and girls reported using a condom the last time they had sexual intercourse. There was no significant difference between the two genders.<sup>27</sup>



High school students who had sex in the past three months were asked if they used a condom. Condom use among Wyoming high school students who reported having sexual intercourse in the past three months was not significantly different between boys than girls. This was similar the 2007 national YRBS results. Of those who had sex in the past three months and used a condom, boys reported 68.5% use and girls reported 54.9%.<sup>27</sup>

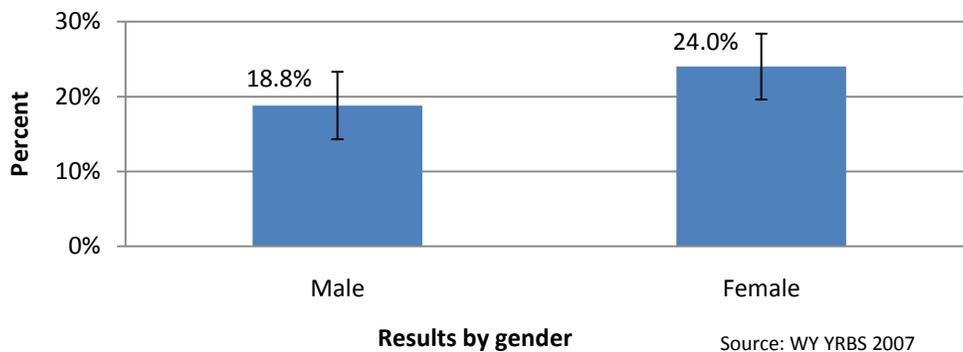


Among Wyoming high school students who reported having sex in the past three months, the overall percent who used a condom during the last sexual intercourse was 63.1%, and not statistically different from the 2007 national YRBS high school estimate of 61.5% ( $p = 0.47$ ).<sup>27</sup>

## BIRTH CONTROL PILL USE

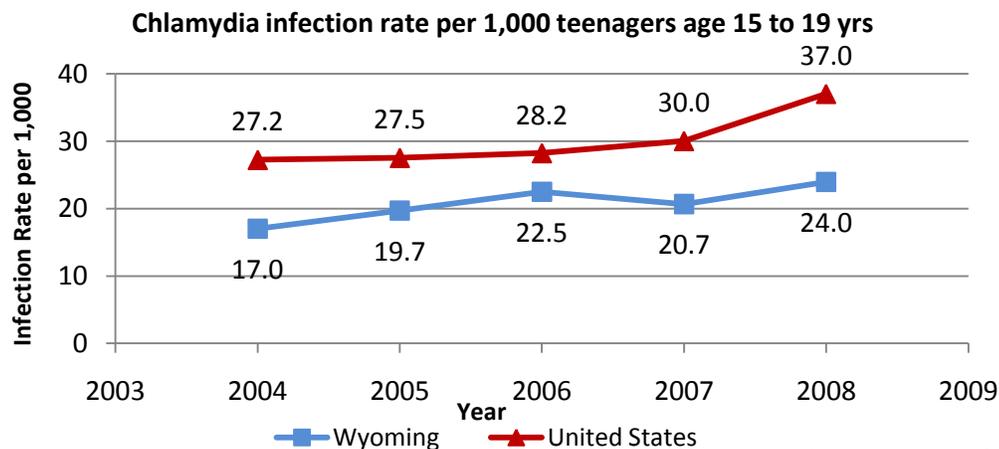
The Wyoming 2007 YRBS asked high school students who were sexually active in the last three months if their partner was using a birth control pill. Among Wyoming high school students who reported having sexual intercourse in the past three months, the overall percent who reported having used birth control pill to prevent pregnancy was 21.5%, this represents a significantly higher percent than the 2007 national high school YRBS estimate of 16.0% ( $p < 0.01$ ).<sup>27</sup>

**Percent of Wyoming high school students who used birth control pills to prevent pregnancy before last sexual intercourse, among Wyoming high school students who had sexual intercourse during the past three months, YRBS 2007**



## CHLAMYDIA INFECTION

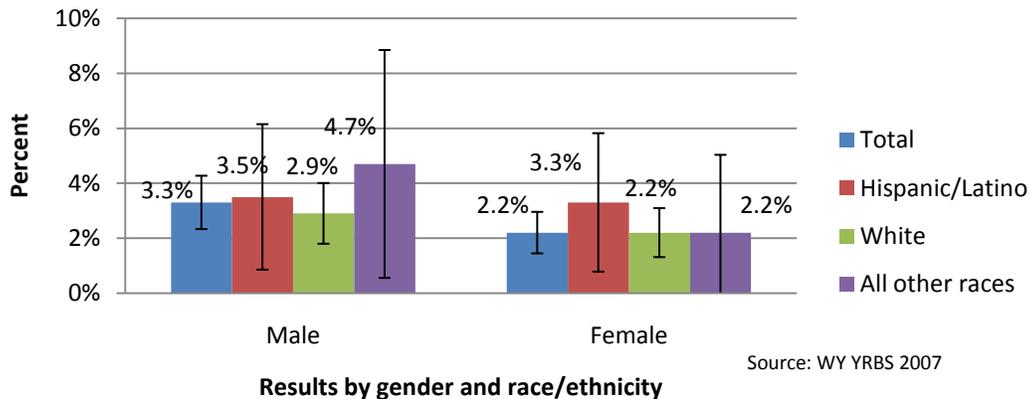
In 2008, Wyoming's Chlamydia rate for teens ages 15 to 19 years was 23.9 cases per 1,000 women. Wyoming's infection rate has been less than the U.S. infection rate since 2004. This includes infection for both males and females.<sup>23, 58</sup>



## TOBACCO USE

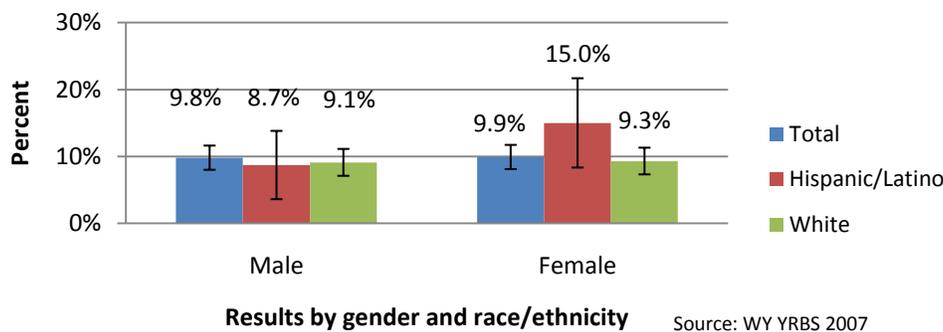
The Wyoming 2007 YRBS asked middle school and high students about frequent cigarette use. Less than 5% of middle school students of any race and ethnicity smoked 20 or more cigarettes in the past 30 days before the survey. There was no difference by gender, race and ethnicity.<sup>27</sup>

**Percent of Wyoming middle school students who smoked cigarettes on 20 or more of the past 30 days, YRBS 2007**



Among high school students, 54.4% of students reported ever trying a cigarette. This was significantly higher than the national YRBS estimate of 50.3%. Approximately 10% of boys and 10% of girls reported frequent cigarette use in the 30 days before the survey. The highest percent was among Hispanic/Latino girls, but it was not significantly different from non-Hispanic girls or boys.<sup>27</sup>

**Percent of Wyoming high school students who smoked cigarettes on 20 or more of the past 30 days, YRBS 2007**



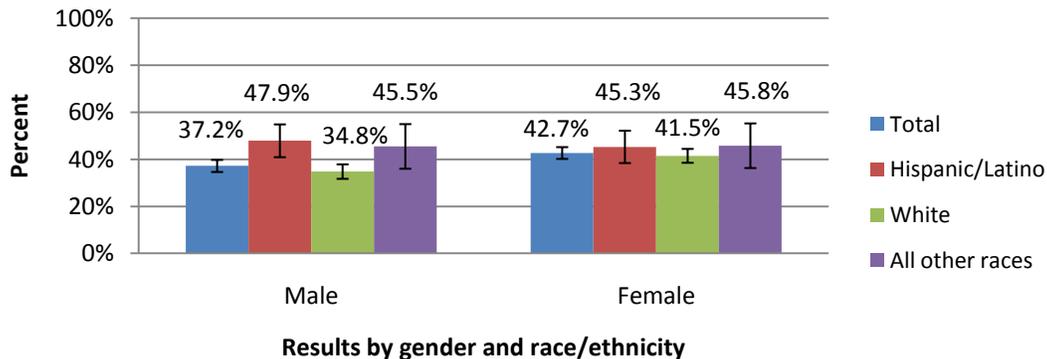
The overall percent of Wyoming high school students who reported having smoked cigarettes on 20 or more days during the past 30 days before the survey was 9.9%. This was not statistically different from the 2007 national YRBS high school estimate of 8.1% ( $p = 0.18$ ).<sup>27</sup>

Exposure to smoking at an early age is a concern. In 2007, 19.0% of Wyoming high school students reported cigarette smoking for the first time before age 13 years. This was greater than the national estimate of 14.2%. The percent of Wyoming high school students who reported having tried cigarette smoking for the first time before age 13 years declined since 2001 from 24.1% to 19% in 2007.<sup>27</sup>

## SECOND-HAND SMOKE EXPOSURE

The Wyoming 2007 YRBS asked middle school and high students about exposure to cigarette smoke in an enclosed area. The percent of Wyoming middle school girls who reported being in an enclosed area with someone who was smoking was significantly higher than middle school boys. Hispanic/Latino boys reported a significantly higher exposure to second hand smoke than non-Hispanic white boys. There was no difference by race and ethnicity among middle school girls.<sup>27</sup>

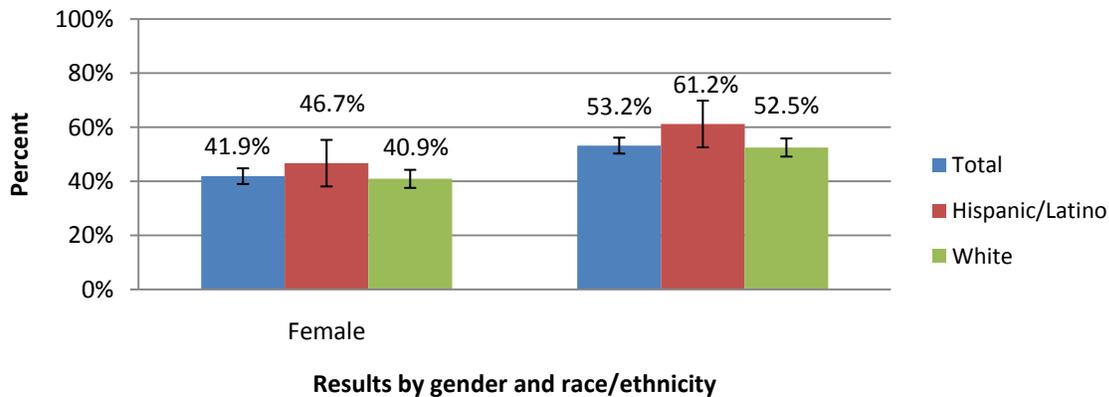
**Percent of Wyoming middle school students who have been in an enclosed space (such as a car or the same room) with someone who was smoking, YRBS 2007**



Source: WY YRBS 2007

High school students were asked about cigarette smoke exposure in an enclosed area within the seven days prior to the survey. The overall percent of Wyoming YRBS high school students who reported being in an enclosed area on one or more of the past seven days with someone who was smoking 47.3%. Over half of Wyoming high school girls reported exposure to second hand smoke compared to 40% of boys.<sup>27</sup>

**Percent of Wyoming high school students who have been in an enclosed space (such as a car or the same room) with someone who was smoking cigarettes on one or more of the past seven days, YRBS 2007**



Source: WY YRBS 2007

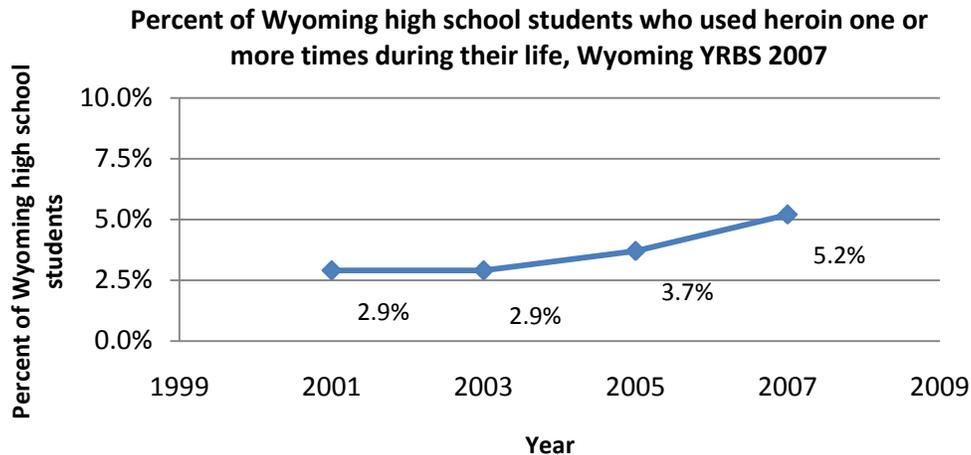
## ALCOHOL AND HEROIN USE

The Wyoming 2007 high school YRBS asked students about alcohol and different drug use. Presented below is selected data taken from the survey.

In 2007, 76.1% of Wyoming high school students reported having had at least one drink of alcohol on at least one day during their life. Of these, 28.8% of Wyoming high school students reported having drunk alcohol for the first time before age 13. This percent was greater than the U.S. estimate that reported 23.8% of first time occurrence.<sup>27</sup>

Binge drinking in the Wyoming 2007 YRBS was defined as having five or more alcoholic drinks in one day. High school students were asked how often they had at least five drinks in the 30 days before the survey. Overall, 29.4 % of students reported binge drinking behavior on at least one day in the preceding 30 days. This was greater than the 2007 YRBS national estimate of 26.0%.<sup>27</sup>

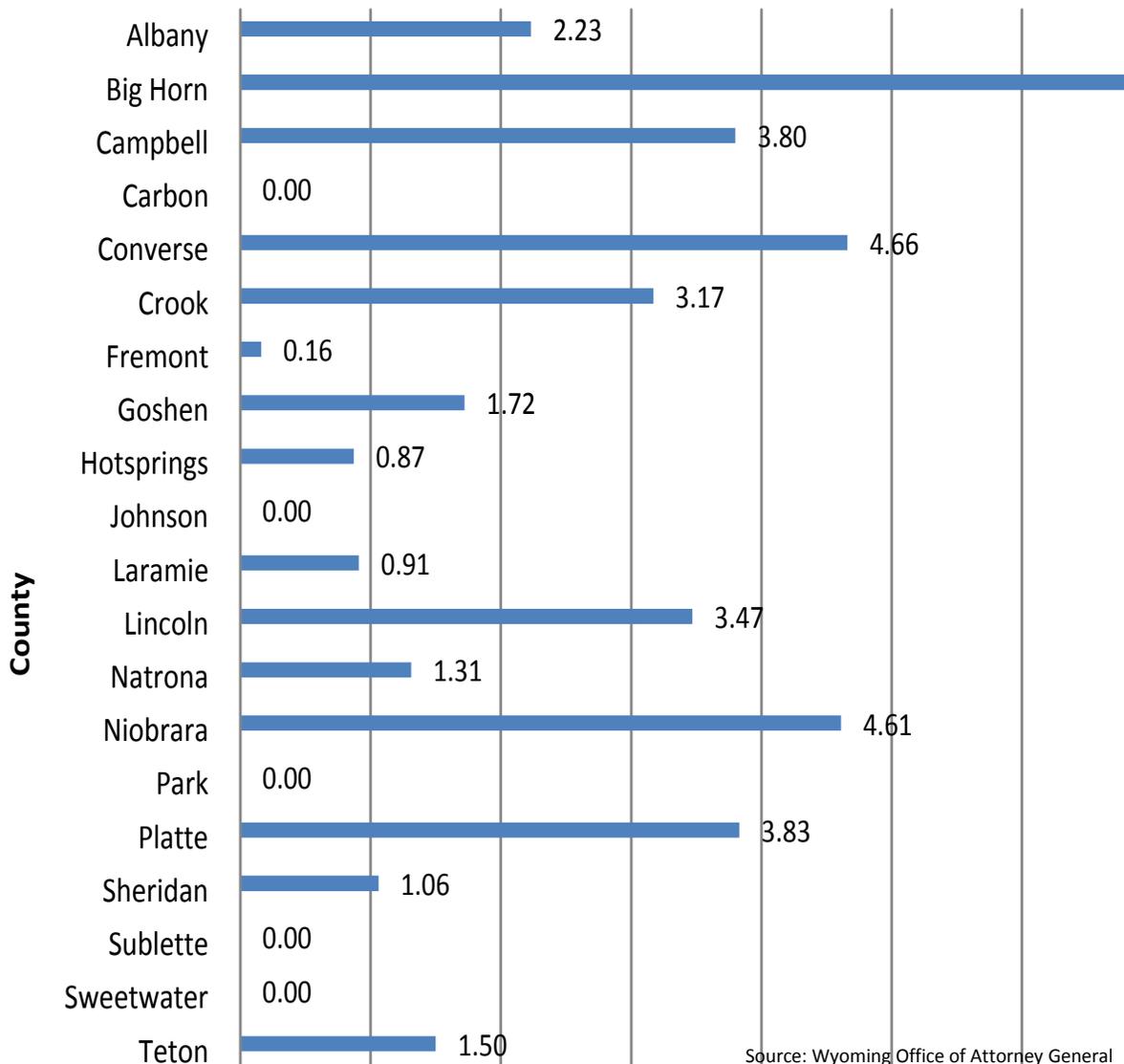
Heroin use among Wyoming high school students has increased from 2.9% in 2001 to 5.2% in 2007.<sup>27</sup>



## CRIME INVOLVING CHILDREN

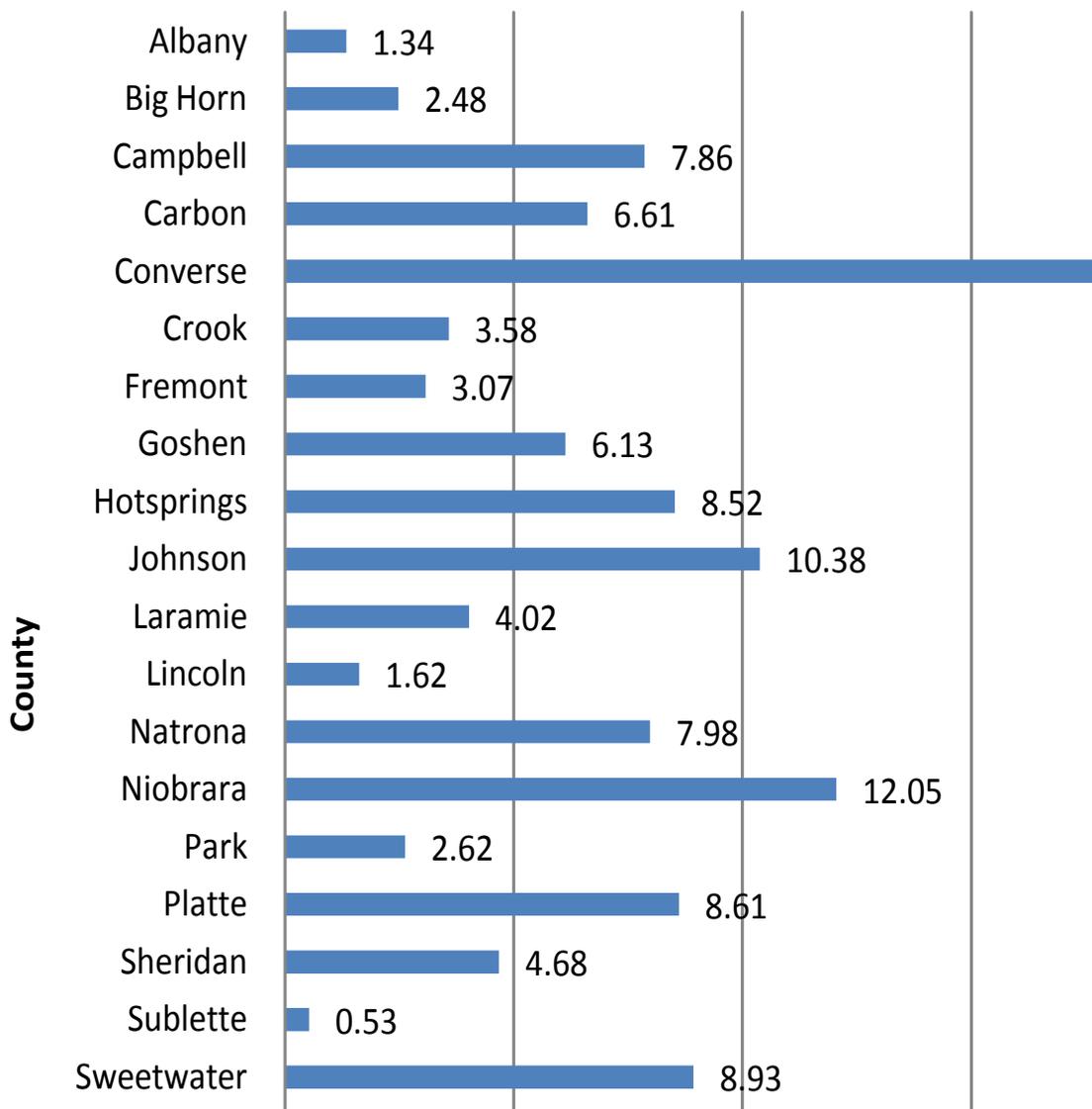
Children may be placed in safe housing to escape situations of domestic violence. In 2007, the total number of Wyoming children ages 0-17 years who were provided with safe shelter at domestic violence shelters was 251. The rate of children placed in safe shelter varied by county. Data for the WIND River Indian Reservation was combined with data from Fremont County.<sup>59</sup>

**Rate per 1,000 of Wyoming children 0 to 17 who were provided shelter at domestic violence shelters by county, 2007**



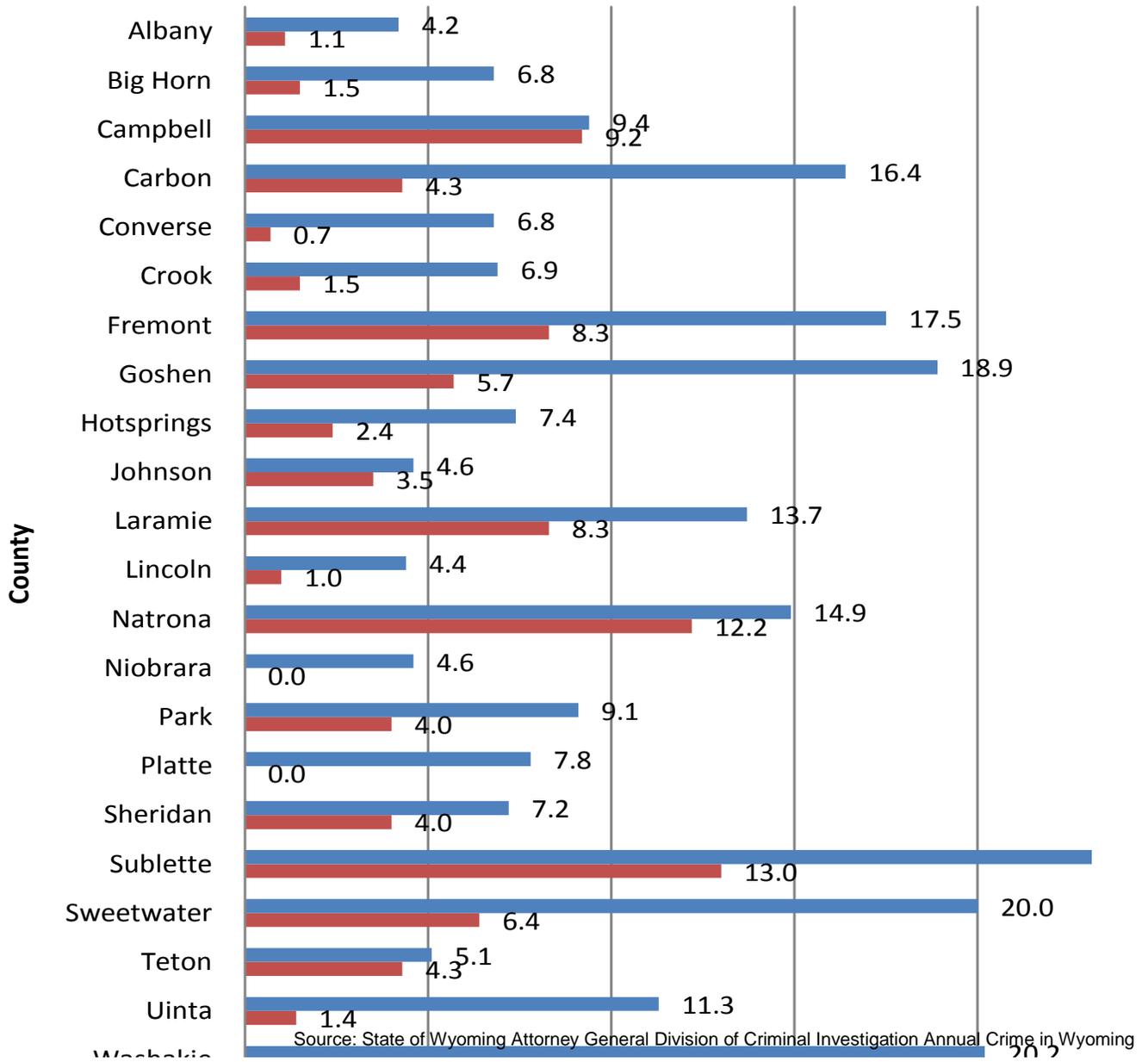
Substantiated child abuse cases are those that have been investigated by a Child Protection Services worker who has found credible evidence that abuse or neglect occurred. The total number of substantiated child abuse cases in 2007 in Wyoming was 778.<sup>60</sup>

## Rate per 1,000 of substantiated child abuse cases for aged 0 to 17 years by county, Wyoming 2007



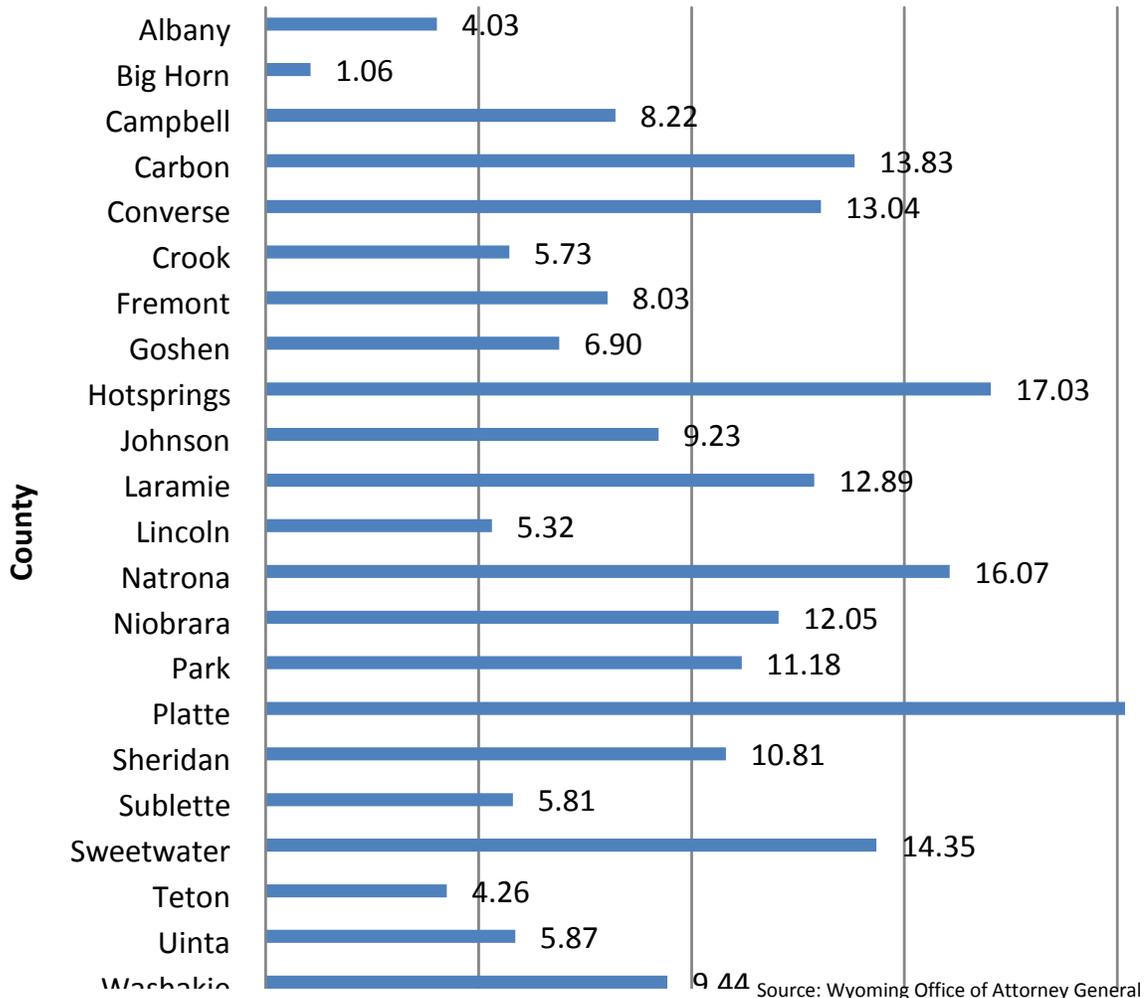
There were a total of 1,167 juvenile arrests in Wyoming in 2008. A juvenile is defined as a child or adolescent aged 0 through 17 years. Arrests by gender total 786 for male and 381 for female juveniles. The total number of arrests and the ratio between genders differed by county.

## The Wyoming crime arrest rate per 1,000 for children and adolescents aged 0 through 17 years by county and gender Wyoming 2008



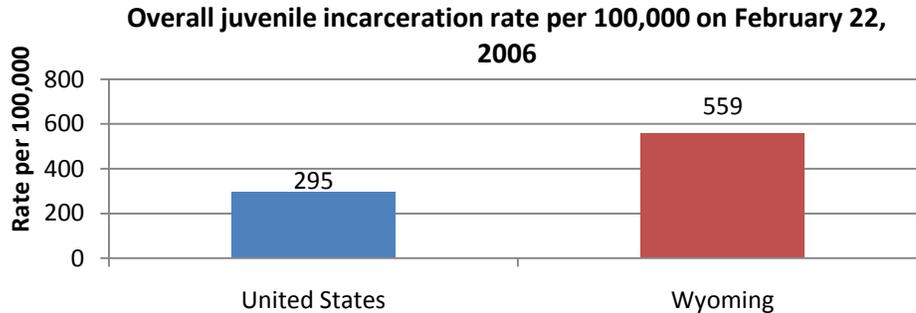
Alcohol related arrests include violation of liquor laws, public intoxication and driving under the influence. In 2008, there were 1,349 alcohol related juvenile arrests in Wyoming.<sup>61</sup>

## The Wyoming alcohol arrest rate per 1,000 for children and adolescents aged 0 to 17 years by county and gender, 20



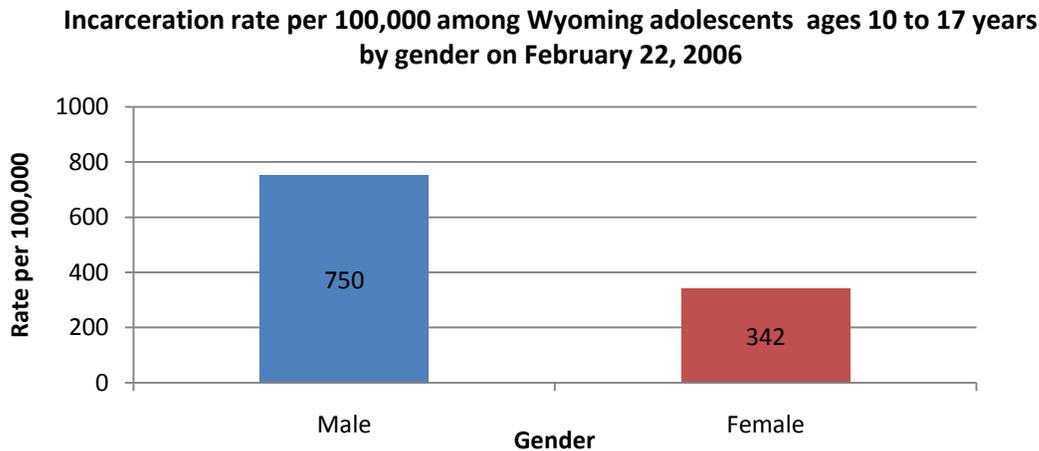
## JUVENILE INCARCERATION

The lower age limit for juveniles in all states is 10 years of age. The upper age limit for juveniles varies among states with the minimum age being 15 years and the maximum age being 17 years. In Wyoming, a juvenile is an individual between the ages of 10 and 17 years. Incarceration refers to placement in an out-of-home residential facility by the court system. In 2006, the incidence of overall juvenile incarceration was 1.9 times greater in Wyoming than the rest of the U.S.<sup>62</sup>



Source: Office of Juvenile Justice and Delinquency

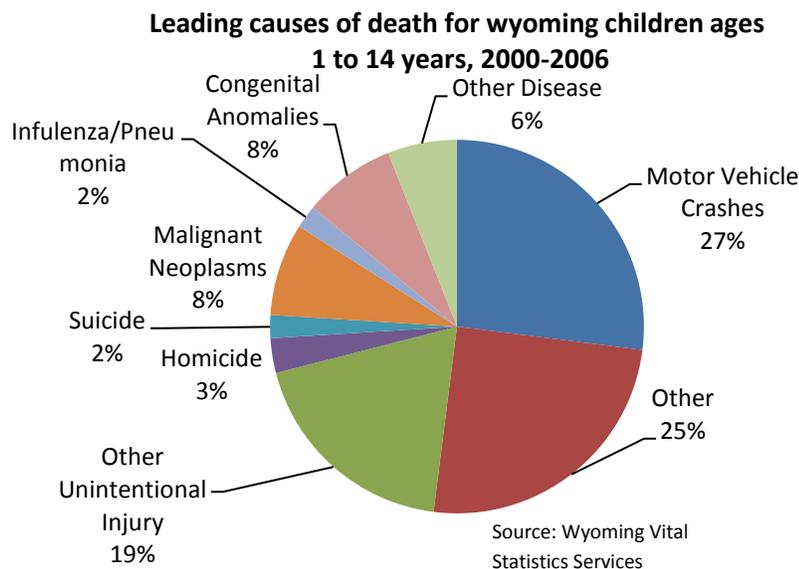
The Wyoming juvenile incarceration rate for males was more than double the juvenile incarceration rate for females in 2006.<sup>63</sup>



Source: Office of Juvenile Justice and Delinquency

## MORTALITY

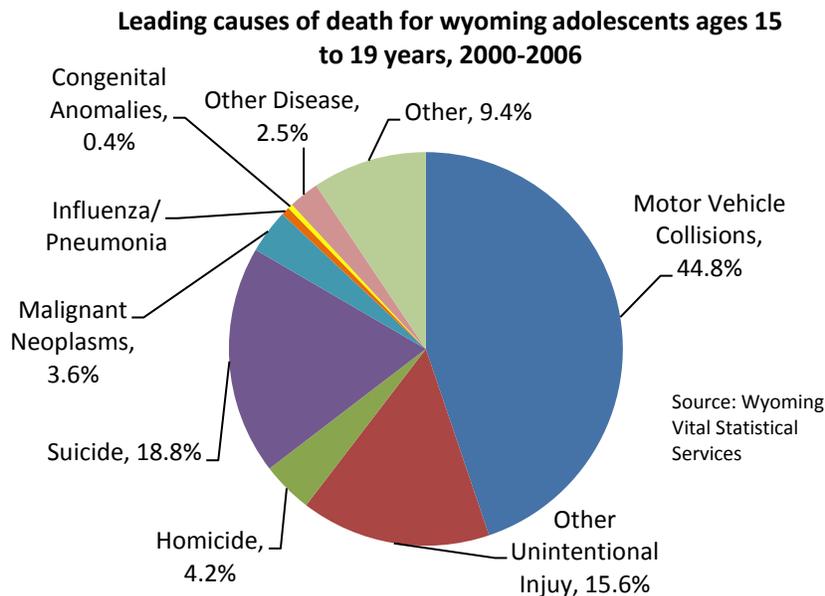
Mortality information was calculated from “Number of deaths from 113 selected causes” reports by Wyoming Vital Statistic Services and the National Vital Statistics Program. In this presentation “Other”, “Other Unintentional Injury” and “Other Disease” were defined as the following: “Other” included, but was not exclusive to, septicemia, hernia, respiratory conditions, parasitic and infectious diseases, and non-classified; “Other Unintentional Injury” included, but was not exclusive to, exposure to smoke/fire, falls, water accidents, air and space accidents, and drowning; “Other Disease” included, but was not exclusive to, diabetes, heart diseases, non-malignant cancer, and respiratory illness.<sup>23</sup>



The leading causes of death for Wyoming children ages 1 to 14 years in 2006 were motor vehicle crashes (MVCs), other, and other Unintentional Injury.<sup>23</sup> The U.S. mortality data is presented in the table below and shows Other Disease as the greatest source of mortality in 2006 followed by other Unintentional Injury and MVCs for the same age group.<sup>22</sup> The table below however, has ages broken into groups 1 to 4 years, 5 to 14 years and 15 to 24 years.

2006 U.S. Mortality Estimates <sup>22</sup>			
	Ages 1 to 4	Ages 5 to 14	Ages 15 to 24
Motor Vehicle Crashes	13%	22%	32%
Other	17%	10%	4%
Other Unintentional Injury	22%	15%	15%
Homicide	8%	6%	16%
Suicide	0%	4%	12%
Malignant Neoplasms	7%	15%	5%
Influenza/Pneumonia	3%	1%	1%
Congenital Anomalies	11%	6%	1%
Other Disease	19%	22%	12%

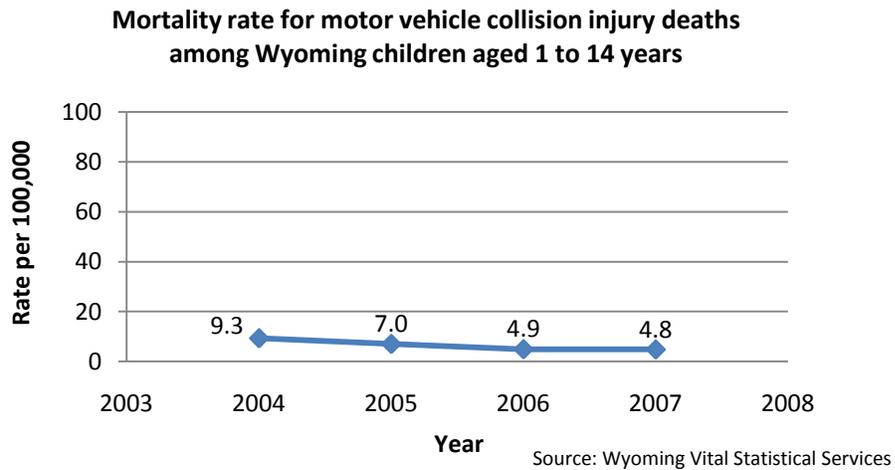
Among Wyoming adolescents ages 15 through 19 years in 2006, MVCs accounted for almost 45% of fatalities. The second and third most prevalent causes of death were suicide and Other Unintentional Injury. The US reported mortality for adolescents ages 15 to 24 (shown in the previous table), and in 2006 the three leading causes of mortality in descending order were MVCs, homicide and Unintentional Injury.<sup>22</sup>



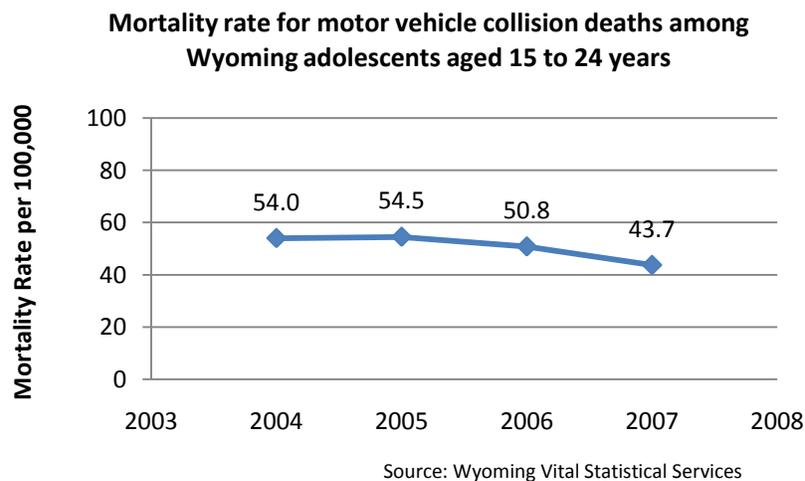
Source: Wyoming Vital Statistical Services

## MORTALITY TRENDS

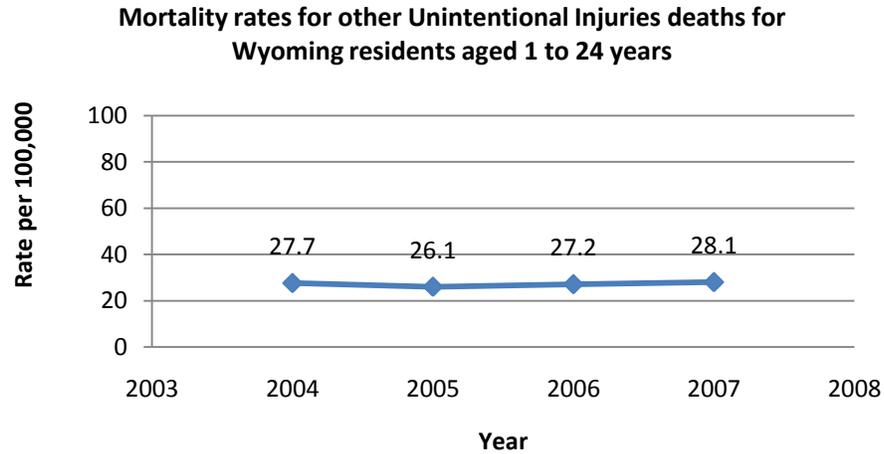
MVC deaths among children ages 1 to 14 years decreased 2004 to 2006, but remained stable from 2006 to 2007.<sup>23</sup>



MVC deaths among adolescents ages 15 to 24 years has decreased since 2005.<sup>23</sup>



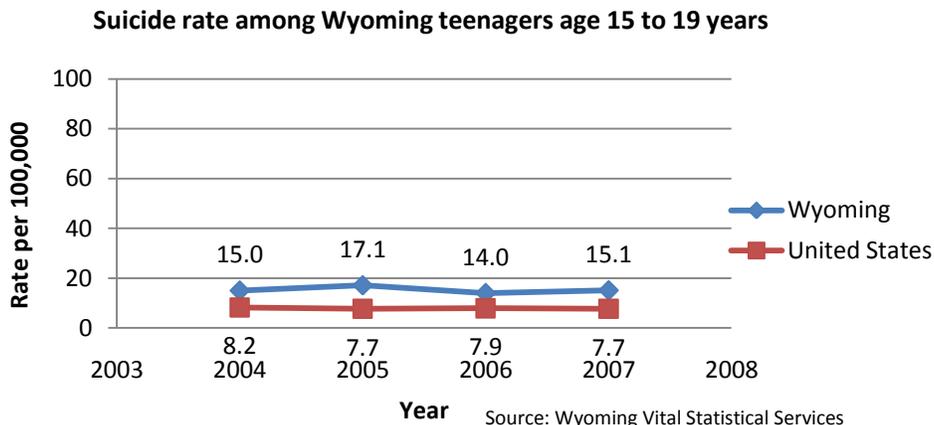
Other Unintentional Injury mortality rates include deaths that resulted from choking, falls, drowning, firearms, poisoning, and pedestrian injuries.<sup>22</sup>



Source: Wyoming Vital Statistical Services

In 2007, Wyoming’s Other Unintentional Injuries mortality rates for children ages 1 to 24 years was approximately two and half times the U.S. Other Unintentional Injury rate of 11.4 per 100,000 for the same age group.<sup>22-23</sup>

The suicide rate among Wyoming teens ages 15 to 19 years was double the U.S. rate for teens ages 15 to 19 years between 2004 and 2007.<sup>22-23</sup>



Source: Wyoming Vital Statistical Services

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