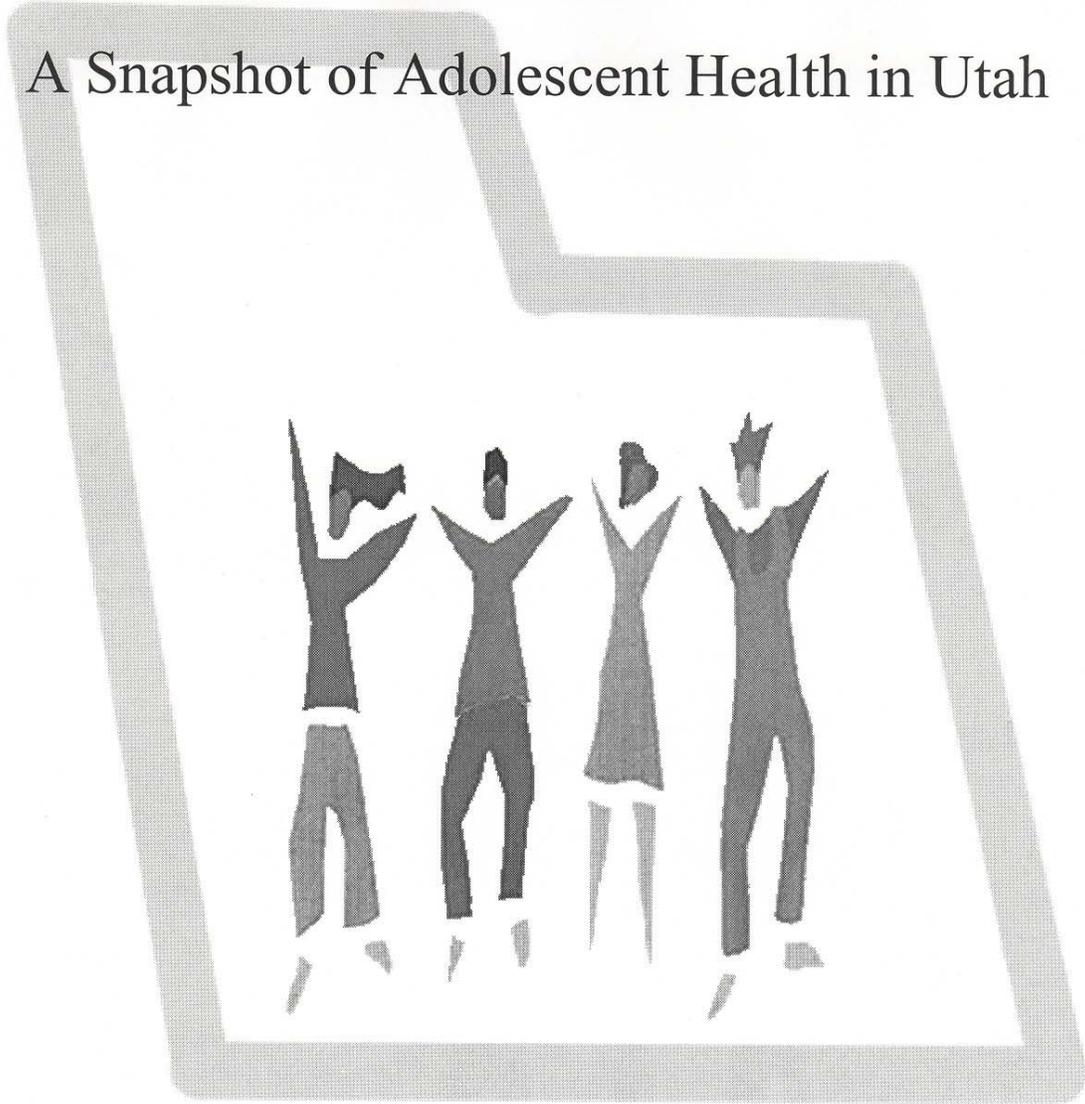


# *How Healthy Are Utah's Adolescents?*

A Snapshot of Adolescent Health in Utah



Utah Department of Health  
Division of Community and Family Health Services  
Maternal and Child Health Bureau  
**2003**



# ***Acknowledgements***

This Utah Adolescent Health Report is the result of a broad-based collaborative effort involving various individuals and agency partners with a high level of interest, expertise, and commitment to the well being of Utah’s adolescent population.

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# ***EXECUTIVE SUMMARY***

Adolescents in Utah are similar to their peers nationally, although differences exist between Utah youth and national youth in some areas.

This report highlights a number of health-related areas that pertain to Utah adolescents.

## ***Overall Health***

- Preliminary data for 2001-2002 indicate that 98.3% of Utah adolescents are covered for the second dose measles vaccine.
- In 2001, 15% of Utah high school students were overweight or at risk of becoming overweight compared to 24% of U.S. high school students.
- The number of youth with diabetes increased nearly two-thirds, from 1,132 in 1991 to 1,800 in 2001.
- Utah adolescents 15-19 years were hospitalized at a lower rate than their national counterparts (467 vs. 600 per 10,000).

## ***Health Behaviors***

- High school students reporting participation in vigorous physical activity decreased from 77% in 1999 to 67% in 2001.
- Approximately 18% of Utah youth reported that they had done something that might have put them at risk for HIV.
- Smoking among Utah youth declined from 11.9% in 1999 to 8.3% in 2001. However, use of chewing tobacco increased from 2.8% to 3.8%.
- More than 40% of Utah high school students reported ever using alcohol, with 18% reporting current use, 11% reporting heavy, episodic drinking during the past month, and 17.1% reporting having ridden with a driver who had been drinking. Almost 6.5% of students reported driving after drinking alcohol.
- More than 19% of Utah students reported ever using marijuana including 9.7% reporting current use; 4.5% reported first use before age 13.
- Cocaine use among Utah students ranged from 4.1% who reported they had ever used to 2.7% who reported current use.
- The highest percentage of substance abuse reported by Utah youth involved sniffing substances, with 12.2% who reported they had ever sniffed to get high, and 5.1% who reported current sniffing.
- Heroin and methamphetamine use was reported by 2.7% and 5.3% of Utah students respectively.
- Steroid use was reported by 4.2% of Utah students.
- More than 2% of Utah students reported that they had used a needle for drug use.

## ***Safety***

- More than 8% of Utah students indicated that they had carried a weapon on school property and more than 5% of students reported that they did not go to school on

one or more of the previous 30 days because they felt unsafe at school, or on their way to or from school.

- The rate of child abuse in Utah is only slightly lower than that of the U.S. (11.2 per 1000 children vs. 12.2 per 1000 children). Utah has a higher rate of abuse among females compared to the national rate for females (13.4 per 1000 vs. 12.9 per 1000).
- Utah ranked 8<sup>th</sup> highest in the country for bicycle fatality rates among all ages between 1992 and 2000. Utah has one of the lowest rates of bicycle helmet use.
- Suicide is the leading cause of death for Utah males aged 15-19, with a rate of 24.9 per 100,000 persons compared to the U.S. rate of 13.3 per 100,000.
- More than 27% of Utah youth reported that during the past 12 months they had felt so sad or hopeless almost every day for two or more consecutive weeks that they stopped doing some usual activities.
- Utah's motor vehicle traffic crash fatality rate for adolescents is lower than the national rate (21.9 per 100,000 adolescents in Utah in 1999-2001 vs. 28.4 per 100,000 adolescents nationally in 1999).
- Although Utah's adolescent homicide rate is lower than the national rate, homicide is currently the fifth leading cause of death among Utah's adolescents. Nationally, homicide is the 4<sup>th</sup> leading cause of death for adolescents aged 10-14 and the second leading cause of death for adolescents aged 15-19 years of age.
- Adolescents have the highest rate of traumatic brain injuries and second highest rate of spinal cord injuries compared to all other ages in Utah.
- Utah's rape rate is 15<sup>th</sup> highest in the nation, higher than the rates in New York, New Jersey, and California.

### ***Sexual Health***

- The chlamydia incidence rate for females aged 15-19 years in Utah was 658.99 cases per 100,000 persons compared to 2,406 cases per 100,000 persons in the U.S.
- Teen pregnancy rates in Utah are lower than national rates, with Utah ranking among the lowest ten in the nation.

### ***Criminal Activity***

- Offenses referred to the Juvenile Court declined 19% in 2001 from 1995 figures.
- Although reported gang membership declined in Utah, crimes related to gang activity significantly increased in 2001. More than 40% of gang members arrested for criminal activity in 2001 were age 21 or under.
- Graffiti comprised more than 70% of the reported gang activity in Utah in 2001.

# ***INTRODUCTION***

The Utah Adolescent Health Report was developed with three major purposes:

- To compile available data to describe the health status of Utah's adolescent population
- To build the foundation for a statewide needs assessment in regard to major health and health-related issues and health care needs among Utah teens
- To identify major health and health-related issues among this age group in Utah

Using available statewide and national data relative to key health status indicators, this report is intended to present a snapshot of the health status of Utah's adolescent population. The developers of the report are hopeful that the information, as well as the partnership building that was key to its development, will eventually lead to systems-related outcomes or changes. Anticipated systems-related outcomes include:

- Identification of missing or insufficient health-related adolescent-specific data
- Recommendations for further study on specific health problems and/or service delivery needs of Utah's teens
- Development of strategies for improving access, coordination, and delivery of services for adolescents
- Improved documentation to support resources needed to address adolescent health and health-related issues.



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# ***THE NATURE OF ADOLESCENCE***

## ***Adolescent Development***

Adolescence is the period of transition when children are moving from childhood to adulthood, and is one of the most dynamic stages of development. During adolescence, many dramatic physical, cognitive, social, and emotional changes take place. These changes present both opportunities and challenges for the adolescents, their families, health care providers, educators, and communities.

For this report, adolescents are defined as youth between the ages of 11-21 years.<sup>1</sup> Adolescence generally begins around age 11 for girls and a little later for boys.<sup>2</sup> The most noticeable changes occurring during adolescence are those involving physical, psychological, and sexual growth and development. The maturation process takes place at a difference pace for each individual. Changes may occur earlier in some and later in others.<sup>1</sup>

Changes that occur during adolescence represent a gradual process that occurs over 8 to 10 years. Adolescence is generally divided into three stages defined largely by the adolescent's psychological development, which often mirrors physical development.<sup>2</sup> Each adolescent is an individual; however, there are a series of physical, cognitive, social and psychological developmental tasks that every adolescent faces during the teen years. General characteristics of these three stages of adolescence (early, middle, and late) and the developmental tasks associated with each are described below and are summarized in Table 1.

### ***Early Adolescence: 11-14 years of age***

Early adolescence is characterized by a period of rapidly changing physical and sexual development (puberty). Typically, girls show signs of puberty about two years earlier than boys do. During early adolescence, most girls experience a rapid growth spurt, changes in fat distribution, and development of secondary sexual characteristics. For most boys, early adolescence marks the beginning of the early biological changes of puberty.

Dramatic physical changes are the hallmark of early adolescence. Young adolescents in particular are preoccupied with these physical changes and how others perceive them. Young adolescents tend to be egocentric and are very concerned with how they look. The onset of puberty and rate of development can vary greatly from adolescent to adolescent, and young adolescents may be concerned about whether or not their own rate of growth and development is "normal". Because of their sensitivity and modesty about their bodies, young teens have an increased need for privacy.

In addition, during early adolescence, cognitive (thinking) abilities are continuing to develop. Young adolescents have increasing potential for abstract and complex thinking, although their thinking still focuses mainly on the concrete and the present -- the "here and

now". Young teens tend to see individuals and their behaviors in somewhat rigid terms as good or bad, right or wrong, and have not yet developed an understanding of complex interrelationships or long-term consequences.

During early adolescence, the transition to middle school and/or high school frequently creates stress and/or anxiety due to new and unfamiliar environments, and to higher academic expectations. Truancy and school dropout rates tend to rise in early adolescence. During this age period, school becomes the main setting through which peer group standards or expectations are communicated. Peer pressure during this stage of development is very powerful and influential. Schoolmates can significantly influence adolescents' perceptions and attitudes about healthy and risky behaviors. Exploration and experimentation, usually in the company of peers, is another characteristic of early adolescence and continues throughout the adolescent period. While experimentation is essential for development, it may lead to an increase in risky behaviors, which may have both short-term and long-term significance to overall health.<sup>3</sup>

### ***Middle Adolescence (15-17 years)***

By the age of 15, most girls have completed the physiologic changes associated with puberty, while most boys are still in the process of physical maturation. Youth of this age are very sensitive to the social norms of their peer group, which influences choices in dress, hairstyle, language, music, and behavior. Friends become very important, and adolescents this age tend to have a small group of friends who share similar values, interests, and activities.

Middle adolescence is a challenging time for teens, filled with many new experiences, such as dating and driving. For most teens, this is a time of great creative energy. This stage of development can present challenges and rewards for families, as teens frequently test rules and question authority. Teens can be opinionated, resulting in family conflict, especially over issues such as dress, music, curfews, and behavior. As adolescents reach the legal age to drive, they gain mobility and independence that present not only new opportunities, but also significant risks.

Mood swings are a common characteristic of adolescence, but persistent feelings of sadness and depression during any stage of adolescence should not be dismissed as "normal" moodiness. Losses during this period, including problems with girlfriends or boyfriends, school failure, and parental divorce or death, can lead to depression and even suicide.

Cognitively, some 15 and 16 year-olds are moving away from concrete thinking and developing the capacity for abstract thought, problem solving, and planning for the future. Youth in middle adolescence are better able to understand complex interrelationships and to appreciate the perspectives of others. Academic expectations may present challenges for teens during this age period, particularly since academic performance during high school has major implications for future education and career choices. Many teens are able to use their capabilities to excel and to enhance their skills during this age period. However, this may be a time when some youth experience serious challenges to academic success, including undiagnosed learning disabilities, attention deficit hyperactivity disorder,

inadequate school resources, or lack of parental involvement. Youth facing such challenges may fail to achieve their academic potential, leading to truancy and school dropout, and thus, limiting future opportunities.

Adolescents at this age are working to discover their individual identity as they sort out their personal values and beliefs in an effort to gain a clearer sense of self. As their cognitive, moral, and social capabilities are increasing, adolescents are forming attitudes and values that will have a lasting impact on the quality of their lives, as well as those of their family and the community.<sup>1</sup>

### ***Late Adolescence (18-21 years)***

Key developmental tasks during late adolescence include achieving independence, creating an adult sense of self, and developing a capacity for mature emotional intimacy, while maintaining emotional ties to family. Most older adolescents have developed the capacity for more complex, abstract thinking, although they may not use this capacity consistently on a daily basis. During late adolescence, making personal, vocational, and educational choices is very important. Late adolescence is characterized by increasing psychological and social independence from the family. Late adolescence may also be a time, however, when some high-risk behaviors tend to peak, given greater personal freedom and/or lack of family and social support systems.

While late adolescence should be a time of choice and empowerment, it may be a very frustrating time for youth with limited options. Some youth may be expected to begin working to help to provide for their families financially; others may already have families of their own to support. For others, the cost of college tuition may make higher education unaffordable. Adolescents whose academic performance in high school has been below standard may experience limited choices. Youth who have not yet developed marketable skills or sought vocational training may find employment options very limited. For older adolescents with special needs, the transition to adulthood may involve complex new issues, such as whether independent living is a realistic option.<sup>1</sup>

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***Table 1: Developmental Characteristics by Stages of Adolescence***

<b>Developmental Characteristics</b>	<b>Early Adolescence 11-14 years</b>	<b>Middle Adolescence 15-17 years</b>	<b>Late Adolescence 18 years to young adulthood</b>
<b>Physical</b>	Puberty begins (onset in girls usually precedes that in boys) Period of rapid growth	Most girls through puberty Most boys still physically maturing	Completion of physical maturity
<b>Psycho-social and body image</b>	Preoccupied with physical changes Concerned about others' perception of how they look Increased need for privacy	Mood swings common Concern with attractiveness	Adult sense of self More comfortable with body image
<b>Cognitive</b>	Focused mainly on "here and now" Not well developed understanding of complex interrelationships	Developing capacity for abstract thought Better understanding of complex relationships	Complex, abstract thought possible Making personal, educational, vocational goals important
<b>Peer Group</b>	Peers very influential	Very sensitive to social norms Friends very important Have small groups of friends	Peer group not as important Individual relationships more common
<b>Sexuality</b>	Sexual exploration and experimentation begins	Increased sexual activity Various relationships	Capacity for mature emotional intimacy
<b>Identity</b>	Identity changes begin	Trying to discover individual identity	Values more defined
<b>Independence</b>	Definition of independence-dependence begins	Questioning authority	Self-sufficiency begins Emancipation

Adapted from: Alaska Adolescent Health Advisory Committee (1995). *Alaska's Adolescents: A plan for the future*. Juneau, AK: Alaska Department of Health and Social Services.

## ***Risk and Protective Factors***

Adolescent development is affected by risk and protective factors, which can ultimately have profound effects on the health of an adolescent.<sup>1-8</sup> Research has shown that risk and protective factors affect adolescent behavior, which, in turn, influences health. The fewer the risk factors and the more the protective factors, the greater the possibility an adolescent has for achieving a state of well-being.

### ***Risk Factors***

Risk factors are indicators that predict the chance a behavior will occur.<sup>3,5-8</sup> Examples of risk factors that can affect the health of adolescents include: poor attachment to family, inattentive parents, antisocial behaviors in grades K-3, poor performance in school in grades 4 - 6, low resistance to friends who engage in problem behavior, poverty, and history of physical or sexual abuse.

### ***Protective Factors***

Protective factors are factors within the individual, family, community or environment that tend to change or counteract the effects of risk factors.<sup>1,5-8</sup> Examples of protective factors include a strong bond with at least one parent or other stable, caring adult; a supportive school atmosphere; opportunities for a meaningful contribution to family, school or community; a resilient temperament and a positive social orientation.

### ***Developmental Assets***

To better understand factors affecting the health of adolescents, in 1989, the Search Institute began to measure developmental assets among adolescents.<sup>9</sup> Since its inception, Search Institute has surveyed more than one million sixth to twelfth graders throughout the United States, developing a framework that identifies 40 critical factors affecting adolescent development, known as developmental assets (see Table 2). These factors, are divided into two primary categories, external and internal assets. External assets include support, empowerment, boundaries and expectations, and constructive use of time. Internal assets are further divided to include commitment to learning, positive values, social competencies, and positive identity.

The developmental assets are considered building blocks for healthy development of young people.<sup>10</sup> Research has shown that asset deficiency correlates with certain high-risk behavior, which affects health.<sup>11</sup> The fewer the assets an adolescent possesses, the greater the risk he or she has for behaviors and conditions such as problem alcohol use, illicit drug use, sexual activity, violence, tobacco use, depression, attempted suicide, antisocial behavior, school problems, and driving and alcohol. Research in 1996 and 1997 showed that of youth with 0-10 assets, 61% displayed violent behavior, whereas only 6% of those with 31-40 assets displayed violent behavior. Moreover, having a wealth of assets increases the chances for positive outcomes. Among youth with 31-40 assets, 88% reported that they maintain good health, whereas among those possessing 0-10 assets, only 25% reported maintaining good health.<sup>11</sup>

Identifying developmental assets can assist with understanding risk and protective factors that affect adolescents and which influence the overall health of adolescents.

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**Table 2: Forty Developmental Assets of Adolescence**

**EXTERNAL ASSETS**

<b>Support</b>	Family support	Family life provides high levels of love and support.
	Positive family communication	Young person and her or his parent(s) communicate positively, and young person is willing to seek advice and counsel from parent(s)
	Other adult relationships	Young person receives support from three or more non-parent adults
	Caring neighborhood	Young person experiences caring neighbors
	Caring school climate	School provides a caring, encouraging environment
<b>Empowerment</b>	Parent involvement in schooling	Parent(s) are actively involved in helping young person succeed in school
	Community values youth	Young person perceives that adults in the community value youth
	Youth as resources	Young people are given useful roles in the community
	Service to others	Young person serves in the community one hour or more per week
<b>Boundaries and Expectations</b>	Safety	Young person feels safe at home, at school, and in the neighborhood
	Family boundaries	Family has clear rules and consequences, and monitors the young person's whereabouts
	School boundaries	School provides clear rules and consequences
	Neighborhood boundaries	Neighbors take responsibility for monitoring young people's behavior
	Adult role models	Parent(s) and other adults model positive, responsible behavior
	Positive peer influence	Young person's best friends model responsible behavior
<b>Constructive Use of Time</b>	High expectations	Both parent(s) and teachers encourage the young person to do well
	Creative activities	Young person spends three or more hours per week in lessons or practice in music, theater, or other arts
	Youth programs	Young person spends three or more hours per week in sports, clubs, or organizations at school and/or in community organizations
	Religious community	Young person spends one hour or more per week in activities in a religious institution
	Time at home	Young person is out with friends "with nothing special to do" two or fewer nights per week

## INTERNAL ASSETS

<b>Commitment to Learning</b>	Achievement motivation	Young person is motivated to do well in school
	School engagement	Young person is actively engaged in learning
	Homework	Young person reports doing at least one hour of homework every school day
	Bonding to school	Young person cares about her or his school
	Reading for pleasure	Young person reads for pleasure three or more hours per week
<b>Positive Values</b>	Caring	Young person places high value on helping other people
	Equality and social justice	Young person places high value on promoting equality and reducing hunger and poverty
	Integrity	Young person acts on convictions and stands up for her or his beliefs
	Honesty	Young person "tells the truth even when it is not easy"
	Responsibility	Young person accepts and takes personal responsibility
	Restraint	Young person believes it is important not to be sexually active or to use alcohol or other drugs
<b>Social Competencies</b>	Planning and decision making	Young person knows how to plan ahead and make choices
	Interpersonal competence	Young person has empathy, sensitivity, and friendship skills
	Cultural competence	Young person has knowledge of and comfort with people of different cultural/racial/ethnic backgrounds
	Resistance skills	Young person can resist negative peer pressure and dangerous situations
	Peaceful conflict resolution	Young person seeks to resolve conflict nonviolently
<b>Positive Identity</b>	Personal power	Young person feels he or she has control over "things that happen to me"
	Self-esteem	Young person reports having a high self-esteem
	Sense of purpose	Young person reports that "my life has a purpose"
	Positive view of personal future	Young person is optimistic about her or his personal future

Source: Search Institute. (2001) Forty developmental assets of adolescence. Minneapolis, MN: Search Institute. Retrieved from: <http://www.search-institute.org>.

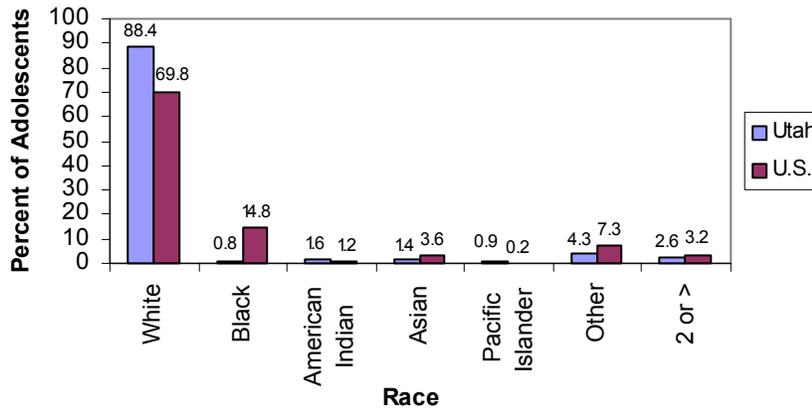
# CHARACTERISTICS OF UTAH ADOLESCENTS

Adolescents in Utah comprise a larger portion of the state’s population compared to national distribution of the population by age. More than 22% of Utah’s overall population is attributable to adolescents (ages 10-21) compared to 17.3% nationally.<sup>1</sup> This figure corresponds to age distribution among the Utah population compared to national age distribution in that Utah has a much higher proportion of younger people compared with other states.

## *Distribution among race and ethnic populations*

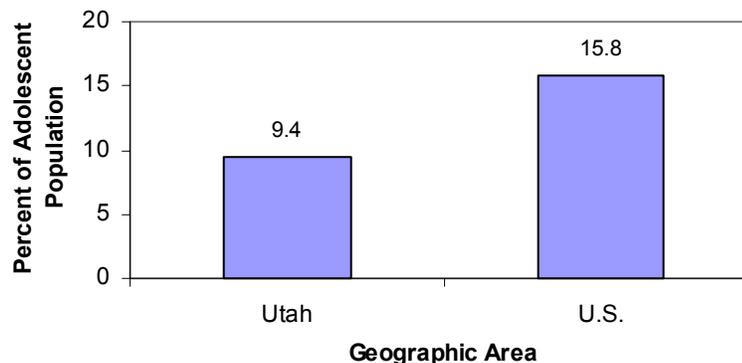
Utah’s adolescent population race and ethnic distribution are somewhat different from national figures as demonstrated in the figure.

**Distribution of Adolescents by Race, U.S. and Utah, 2000**



Source: U.S. Census Bureau. Census 2000. Census 2000 Summary File (SF-1). Detailed tables P12A through P12F. U.S. Department of Commerce. (2001).

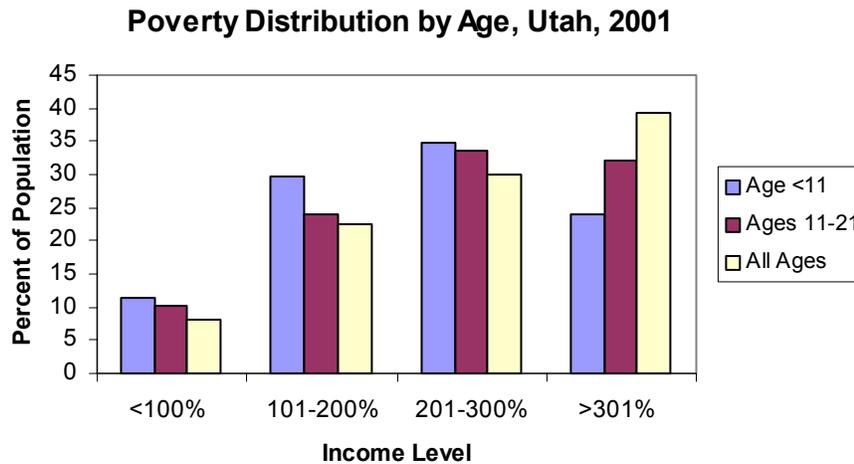
**Percent of Hispanic Adolescent Population, U.S. and Utah, 2000**



Source: U.S. Census Bureau. Census 2000. Census 2000 Summary File (SF-1). Detailed tables P12H. U.S. Department of Commerce. (2001).

## ***Poverty***

More young children and adolescents in Utah live in poverty than the general population of the state. Although adolescents are more likely to live in poverty than the overall Utah population, a smaller proportion of adolescents live in poverty compared to younger children in Utah.



Source: Office of Public Health Assessment. 2001 Utah Health Status Survey. Salt Lake City, Utah. Utah Department of Health. (2003).

## ***Household composition***

Utah adolescents are more likely to live in households with married couple families than their national counterparts. Almost 80% of Utah adolescents live in a married couple family household, more than 10% higher than national figures. Additionally, Utah adolescents are more likely to live in a household with one or more people less than 18 years of age. Almost 46% of Utah children live in a household with one of more people under age 18 compared to 36% of their national counterparts.

# ADOLESCENT HEALTH IN UTAH

## Physical Activity

### Definition

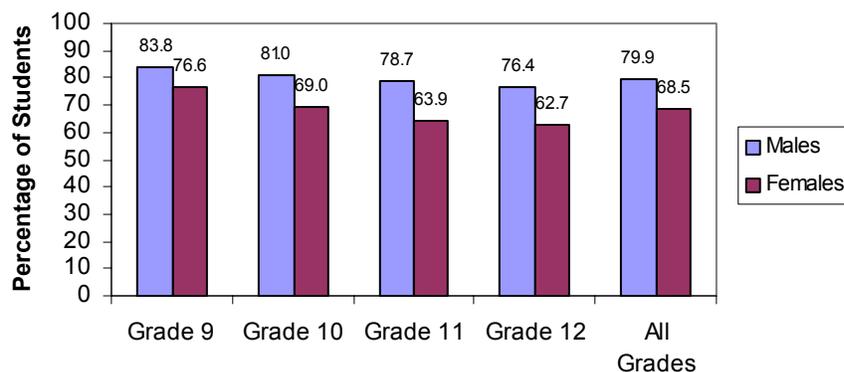
According to the Youth Risk Behavior Survey Surveillance (YRBS), the definition for moderate physical activity is participation in activities that cause sweating or hard breathing for 30 or more minutes on at least five of the seven days preceding the survey.<sup>1</sup> Vigorous physical activity is defined as activities that cause sweating or hard breathing for 20 or more minutes on three or more of the seven days preceding the survey.<sup>1</sup>

### How are we doing?

Physical activity trends among Utah adolescents have varied over time. According to YRBS 2001 data, 67% of Utah's high school students reported participating in vigorous physical activity, a decrease from 77% in 1999.<sup>1,2</sup> The level of vigorous physical activity among Utah youth decreases as students move into the upper grades of high school as noted in figure. More than 70% of 9<sup>th</sup> grade students reported participating in vigorous physical activity while only 59% of high school seniors reported doing so.<sup>1,2</sup> A higher percentage of males compared to females reported participating in vigorous physical activity. YRBS 2001 data indicated that 72% of males reported vigorous physical activity compared to 62% of girls. Utah has yet to reach the Healthy People 2010 objective of 85%.<sup>3</sup>

The percentage of students who attended physical education class on one or more days a week also decreased as teens became older. Among 9<sup>th</sup> grade students, 59% reported attending physical education class at least once each week compared to 42% of students in the 12<sup>th</sup> grade. In addition, only 30% of Utah's high school students reported participating in moderate physical activity in 2001.<sup>1</sup>

**Percentage of High School Students Who Reported Participating in Vigorous Physical Activity by Grade and Sex, Utah, 2001**



Source: National Center for Chronic Disease Prevention and Health Promotion. (2002). Youth risk behavior surveillance: United States, 2001. Morbidity and Mortality Weekly Report, 51 (SS04), 1-64. Atlanta, GA: Centers for Disease Control and Prevention.

### ***How does Utah compare to the U.S.?***

Fewer Utah teens reported that they did not participate in vigorous or moderate exercise (4.2%) than their national counterparts (10%).<sup>1</sup> Utah teens may have a slightly higher rate of physical activity because the percentage of students who report watching three hours or more of TV per day is much lower than the national average; 18% of Utah students compared to 38% of students nationwide.<sup>1</sup> More teens in Utah attended physical education class at least once each week than the national average (59% in Utah and 52% nationwide).<sup>1</sup> The greatest decline in vigorous physical activity among both males and females in Utah occurred between the 10<sup>th</sup> and 11<sup>th</sup> grades.<sup>2</sup>

### ***Why is it important?***

Physical activity reduces the risk of developing heart disease, high blood pressure, diabetes, and colon cancer. It promotes psychological well-being and reduces feelings of stress, depression and anxiety. Regular physical activity also builds lean muscle, improves strength, decreases body fat, and builds strong bones.<sup>4</sup> Evidence also suggests that physical activity is associated with improved academic outcomes.<sup>5</sup>

### ***What are the risk factors?***

Television, video games, and the computer offer attractive sedentary pastimes for adolescents. Youth, ages 2 to 18, spend an average of four hours a day watching television or videotapes, using the computer, or playing video games.<sup>6</sup> Neighborhood safety is another factor affecting the amount of physical activity youth get outside of school. If children live in communities without safe places to walk, ride a bike, or play, they must rely on sedentary activities. As schools are pressured to improve academic performance, time allocated to recess and physical education may be reduced.<sup>7</sup>

### ***What is being done?***

Organized in 1999 by the Utah Cardiovascular Health Program, the Alliance for Cardiovascular Health in Utah (ACHU), represents over 75 organizations and agencies throughout the state. The goal of ACHU is to develop and implement a statewide plan to promote cardiovascular health. The School Nutrition and Physical Activity Workgroup, one of four ACHU workgroups, has developed a plan that includes strategies to improve, develop, and/or implement policies and environments that support increased physical activity opportunities in school communities. ACHU conducted the first Symposium for Leaders in Education in fall 2001 to educate decision-makers about the link between healthy school environments and student achievement. ACHU will continue to pursue opportunities to present this information to local school boards, administrators, teachers, parents, and legislators, as well as advocate for increased physical activity opportunities in schools. Another objective is to conduct end of level testing for nutrition, physical education, and fitness in at least one Utah school district.

### ***Where do we go from here?***

1. The Utah Department of Health Cardiovascular Health Program will provide the leadership needed to implement the three-year state plan developed by the Alliance for Cardiovascular Health in Utah. Objectives include advocating for "Safe Routes to School" educating decision makers about the link between physical activity and

improved academic performance, advocating for policies that increase the opportunities for physical activity in schools, and designing a tool for end of level testing for physical education and fitness.

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# Nutrition and Overweight

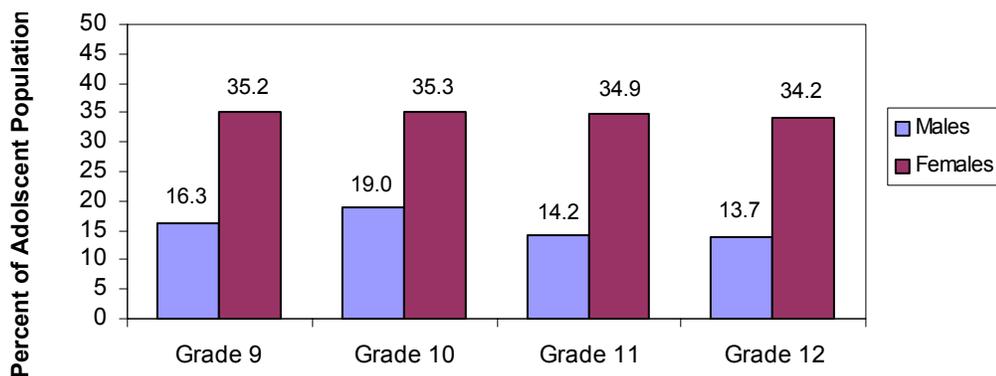
## Definition

Overweight or excess body weight is often defined in terms of body mass index or BMI. The BMI is calculated using an individual's height and weight. Overweight is defined in this report as greater than or equal to the 95<sup>th</sup> percentile for BMI by age and sex based on reference data from the National Health and Nutrition Examination Survey I.<sup>1</sup> The term "at risk of becoming overweight" is defined as greater than or equal to the 85<sup>th</sup> percentile but less than the 95<sup>th</sup> percentile for BMI by age and sex based on reference data from the National Health and Nutrition Examination Survey I.<sup>1</sup>

## How are we doing?

According to 2001 YRBS data, almost one-third of Utah high school students (28.7%) perceived that they were overweight.<sup>2</sup> In fact, about 15% of Utah adolescents were at risk of becoming overweight or were overweight in 2001.<sup>2</sup> A higher percentage of female students thought that they were overweight; however, more male students actually were overweight or at risk of becoming overweight. Female students were more likely to engage in exercising, dieting, or both to lose weight compared to their male peers. Efforts to lose weight through exercise and dieting have increased over time among Utah high school students. In 1997, almost one-fourth of Utah high school students reported engaging in weight control activities, compared to 34% in 1999 and 40.5% in 2001. In 2001, 22.9% of adolescents reported eating five daily servings of fruits and vegetables, a decrease from 25.8% in 1999.<sup>2</sup> More male students reported eating five daily servings of fruits and vegetables compared to female students in 2001 (25.1% and 20.4% respectively.)<sup>2</sup>

**Percentage of High School Students Who Perceived Themselves as Being Overweight by Grade and Sex, Utah, 2001**

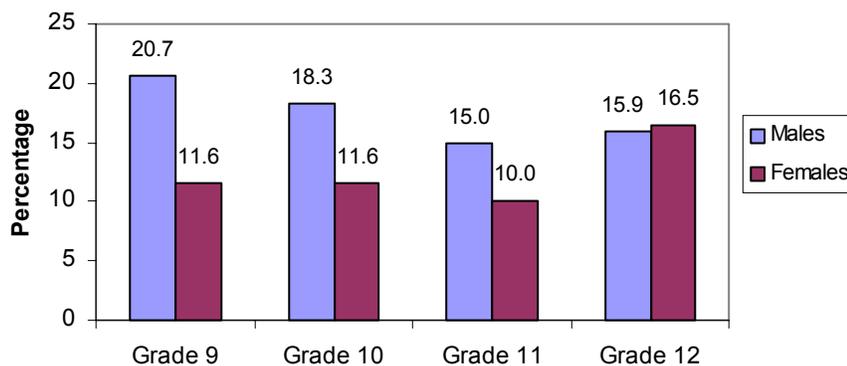


Source: National Center for Chronic Disease Prevention and Health Promotion. Adolescent and School Health. (2002). Youth 2001 online. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>.

### ***How does Utah compare to the U.S.?***

Almost 30% (29.2%) of U.S. high school students thought they were overweight in 2001 compared to 28.7% of Utah students.<sup>2</sup> As in Utah, female high school students in the U.S. were more likely to believe that they were overweight compared to their male classmates.<sup>2</sup> In 2001, 15% of Utah high school students were overweight or at risk of becoming overweight compared to 24% of U.S. high school students.<sup>2</sup> In both Utah and the U.S., approximately 60% of high school students reported that they exercised to lose weight or avoid weight gain.<sup>2</sup> In contrast, about 40% of Utah high school students dieted to control their weight compared to 43.8% nationally.<sup>2</sup> In 2001, 21.4% of U.S. high school students reported eating five servings of fruits and vegetables a day, slightly lower than that for Utah students.<sup>2</sup>

**Percentage of High School Students Who Were at Risk of Becoming Overweight\* or were Overweight\*\* by Grade and Sex, Utah, 2001**



\* Defined as greater than or equal to the 85<sup>th</sup> percentile but less than the 95<sup>th</sup> percentile for body mass index by age and sex based on reference data from the National Health and Nutrition Examination Survey I.

\*\* Defined as greater than or equal to the 95<sup>th</sup> percentile for body mass index by age and sex based on reference data from the National Health and Nutrition Examination Survey I.

Source: National Center for Chronic Disease Prevention and Health Promotion. Adolescent and School Health. (2002). Youth 2001 online. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>.

### ***Why is it so important?***

In the U.S., 10% to 15% of children and adolescents are overweight.<sup>3</sup> In fact, the percentage of overweight youth has almost doubled in the last 20 years.<sup>4</sup> Obesity is not a benign condition. Risk factors for cardiovascular disease, such as type 2 diabetes, high blood lipids, and high blood pressure occur more often in overweight youth.<sup>5</sup> Of concern, 60% of obese children 5 to 10 years of age already have at least one risk factor for heart disease and 25% have two or more.<sup>3</sup> Overweight children and adolescents are more likely to become overweight or obese adults who are at increased risk for high blood pressure, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems and some types of cancer.<sup>6,7</sup> Obesity can affect overall quality of life by limiting mobility and physical endurance as well as through social, academic, and

job discrimination.<sup>8</sup> It is important to note that dietary and activity habits formed during childhood and adolescence may be difficult to change later in life, thereby affecting the prevalence and burden of future chronic disease in this population.

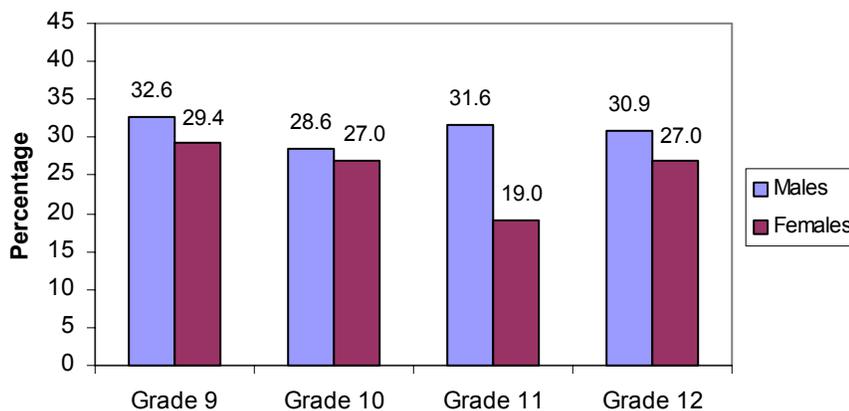
### ***What are the risk factors?***

Poor dietary habits, increased consumption of calorie-dense foods, and decreased levels of physical activity have contributed to the increased prevalence of overweight and obese youth.<sup>9</sup> Eating patterns have shifted in an unhealthy direction with increased serving sizes, availability of convenience foods, and more meals eaten away from home.<sup>10</sup> Fewer than one-fourth of U.S. high school students are eating the recommended five or more servings of fruits and vegetables each day.<sup>2</sup> While lower fat milk has replaced higher fat milk, total milk consumption by adolescents has decreased by 36%.<sup>11</sup> At the same time, consumption of soda and non-citrus juices has increased.<sup>12</sup> Intake of iron, folate and calcium by girls remains below recommended levels.<sup>11</sup> The deteriorating quality of the adolescent diet also impacts future health status. Reduced calcium intake by adolescent girls may increase the risk of developing osteoporosis as an adult.<sup>11</sup>

Children are also spending more time watching television and less time being physically active. In fact, 13.9% of American children watch television more than five hours a day.<sup>13</sup> These children are about eight times more likely to be overweight when compared to children who watch television for two hours a day or less.<sup>14</sup>

Physical activity declines during adolescence.<sup>7</sup> Only about two-thirds of U.S. high school students reported engaging in vigorous physical activity in a recent survey.<sup>2</sup> In addition, just 52% of U.S. high school students were enrolled in a physical education class in 2001.<sup>2</sup>

**Percentage of High School Students Who Reported Eating Five Daily Servings of Fruits and Vegetables by Grade and Sex, Utah, 2001**



Source: National Center for Chronic Disease Prevention and Health Promotion. Adolescent and School Health. (2002). Youth 2001 online. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>.

### ***What is being done?***

Schools have been identified as a key setting in which to prevent and decrease the prevalence of overweight and obesity. Some of the activities currently being conducted are listed below.

The Utah Department of Health's Cardiovascular Health Program (CHP) conducted a research project at Northwest Middle School using a social marketing framework. Fruit and vegetable consumption, self-efficacy, eating behaviors, attitudes toward fruits/vegetables, and availability and presentation in the cafeteria were examined through surveys, focus groups and one-on-one interviews with students, parents, faculty, and food service employees. Using a three-pronged approach, the interventions targeted the student body, cafeteria, and parents. Since the results of this intervention indicated the importance of the cafeteria in impacting consumption, the CHP conducted further research with school and district food service staff. Information obtained from this research indicated the need to develop additional resources. These resources include offering preparation and presentation tips, recipes, idea sharing among districts, and promotional items (using age appropriate visuals and messages). Resources are provided during Utah School Food Service Association annual meetings. Information is also shared in the Association's newsletter.

The CHP is partnering with the Utah Dairy Commission to pilot a vending machine project in four middle schools. This project is being conducted to determine the success of offering nutritious food items in vending machines. Formative research is in process to determine the types of healthy products students will buy, how much they will spend, promotional channels available in schools, ideas for designing audience appropriate messages, and ideas for incentives. After the vending machines are in place, additional information will be collected to determine the items with the highest sales, impact on sales of the existing machines, and profit margin and revenue issues. Results of this pilot project will be shared with school, district, and state administrators, food service and child nutrition staff as well as nutrition advocates in communities, and local, state, and federal public health officials.

### ***Where do we go from here?***

The Alliance for Cardiovascular Health in Utah, School Nutrition and Physical Activity Workgroup has developed a plan that includes strategies to address nutrition in secondary schools. One such strategy includes creating school health councils to address a school's specific needs. Another includes working with the State Office of Education, Child Nutrition Program to implement the guide, "Changing the Scene", a policy and environment driven resource. Working with a broad set of allies in this process including government, school district superintendents, teachers, food service, boards of education, food industry, parents and the community to develop policies and supportive environments is paramount for success.

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# ***Oral Health***

## ***Definition***

Oral health for the adolescent population is defined as a lack of dental decay and dental caries experience (the diseases of the teeth), gingivitis and periodontal disease (the diseases of the gums), chronic oral-facial pain, oral cancers, oral soft tissue lesions and birth defects such as cleft palate.

## ***How are we doing?***

Data concerning disease rates are not available specifically for adolescents in Utah. Based on statewide surveys of younger children 6-8 years of age which indicated that 22% had untreated caries and 58% had caries experience, it is reasonable to predict that there is substantial dental disease.<sup>1</sup> According to YRBS 2001 Utah data, almost 4% of Utah students reported that they had used chewing tobacco or snuff in the previous 30 days. Use of chewing tobacco or snuff was much more prevalent among male students, with 6.7% reporting that they used it compared to less than 1% among female students.<sup>2</sup> The dental disease rate among Utah adolescents is compounded by the fact that only 2% of Utah's population lives in communities with fluoridated water.

## ***How does Utah compare with the U.S.?***

In the U.S., 78% of adolescents by age 17 have had a cavity and 7% have lost at least one permanent tooth. About one-third of the population across all age groups has untreated dental decay. Tooth decay is five times as common as asthma and seven times as common as hay fever in the 5-17 year old age group.<sup>3</sup> Nationally almost 15% of male students reported using chewing tobacco or snuff in the previous 30 days.<sup>3</sup> Of all Americans on public water systems, 62% are drinking optimally fluoridated water.<sup>4</sup>

## ***Why is it important?***

Dental caries is one of the most common health problems in the United States and it is the most common chronic childhood disease. Oral health problems affect a young person's eating, nutritional status, speaking, and learning ability. More than 51 million school hours are lost each year nationally because of dental disease.<sup>3</sup>

According to the recent Surgeon General's Report on Oral Health, "Oral health is integral to general healthy. You cannot be healthy without oral health."<sup>3</sup> Periodontal disease has been linked to other conditions such as diabetes control, preterm births, low-birth weight, heart and lung diseases. Oral diseases are preventable with proper preventive care, sealants, fluoride, and a healthy lifestyle.

Oral and pharyngeal cancers represent approximately 3% of all cancers. The five-year survival rate remains low at about 50%.<sup>5</sup> Tobacco is responsible for more than 75% of deaths caused by oral and pharyngeal cancer.<sup>6</sup>

### ***What are the risk factors?***

Personal risk factors associated with increased oral disease among adolescents include: not brushing or flossing daily, inadequate fluoride, using tobacco, constant snacking on foods or drinks that promote the development of tooth decay, oral piercings, and not using mouthguards for contact sports. Lack of regular dental care and lack of dental insurance are systemic risk factors. Other population risk factors include racial and ethnic minority and low socioeconomic status.

### ***What is being done?***

Implementing fluoridation in Salt Lake and Davis Counties will improve adolescents' oral health as well as the oral health for individuals of all ages in these counties. Davis County began fluoridating some water systems in May 2002, with a projected completion date of Spring 2003. Salt Lake County implementation date is set for Fall 2003.

The Utah Department of Health Oral Health Program is collaborating with other programs and divisions in the Utah Department of Health as well as its community partners to develop effective strategies to increase access to oral health care by identifying the barriers to access and utilization of care. The program is working with the Oral Health Coalition to support state infrastructure to address issues of poor access and utilization, especially for low-income uninsured or under-insured individuals. In conjunction with the Utah Dental Association and the UDOH Tobacco Prevention Program, oral cancer screenings and tobacco cessation initiatives are being promoted. The Oral Health Program is collaborating with Healthy Choice Vending Advocacy to improve the healthy quality of foods and drinks dispensed in junior high and high school vending machines.

Annual Oral Health Summits address access, insurance, and utilization issues and bring together individuals representing many aspects of the issues to find solutions.

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# ***Mental Health***

## ***Definition***

Mental health problems include diagnosable emotional, behavioral and mental disorders. Youth may experience mental illness, such as depression, bi-polar, attention deficit hyperactivity disorder (ADHD), anxiety, conduct disorder, eating disorders, schizophrenia, and certain other mental illnesses. Co-existing behavioral and mental disorders are particularly concerning for the increased risk for violent or suicidal behaviors.

## ***How are we doing?***

Many youth suffer from the effects of mental illness, although it is not known precisely how many youth in Utah suffer from mental illness. However, data from the 2000 Utah Child Health Survey indicated that 31% of youth between the ages of 12 and 17 reported their mental health as not being good in the past 30 days, with the largest number of days, 2.2, reported as not being good in the last 30 days.<sup>1</sup>

For youth with special health care needs, the problem is even greater. Youth with special health care needs between the ages of 12 and 17 reported having 5.0 days in the past month when mental health was not good.<sup>2</sup> As with the general population, youth with special health care needs comprised the largest percentage of youth by age group reporting mental health as not being good, comprising 54.2% of those reporting poor mental health. Interestingly, among youth in the general population as well as youth with special health care needs, poor mental health was reported more frequently among males than females (26.9% and 27.4% v. 22.4% and 27.4%).<sup>1,2</sup> More than 27% of Utah youth responding to YRBS 2001 reported that during the past 12 months they had felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities.<sup>3</sup>

## ***How does Utah compare to the U.S.?***

National estimates indicate that one in five children and adolescents experiences signs and symptoms of a diagnosable mental health disorder, yet only 5% experience “extreme functional impairment”.<sup>4</sup> The 2001 YRBS national data indicated that more than 28% reported that during the past 12 months they had felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing some usual activities, slightly higher than the percentage of Utah students.<sup>5</sup> Because Utah has a higher proportion of youth between the ages of 10 and 17 compared to the national average, Utahns have a larger burden in providing services to mentally ill youth.

## ***Why is it important?***

Mental health is a critical component of overall health and well being. Mental health affects how a person thinks, feels and acts, as well as learning, making judgements and choices, engaging in relationships, and self-esteem. Mood regulation and ability to handle stress are impacted by mental health. Mental illness may be associated with substance use, which may exacerbate the mental disorder, or youth may use substances, such as alcohol or drugs, in response to the mental illness.<sup>5</sup> Adolescence is a time of transition from childhood to adulthood when issues related to self-esteem, mood regulation, body image, sexuality,

independence from family, and possible risk-taking behaviors become challenging for youth and their family. Youth with mental illness may have more difficulty making the transition through adolescence smoothly. Hormones may influence mood stability during adolescence, a problem that can be magnified in the presence of mental illness. Youth with mental illness who get appropriate assessment and treatment are more likely to develop into productive, contributing members of society. Treating adolescent mental illness will greatly enhance the quality of life for these youth and their family members. Lack of recognition and treatment may result in lost time from school, academic failure, and interference with adolescent development. Adolescents with mental disorders are at increased risk of substance abuse and suicide. Depression may recur within five years especially with previous episodes, severity of the initial episodes, presence of depression in parents, and poor compliance with treatment.<sup>5</sup>

### ***What are the risk factors?***

A broad range of factors may increase risk for developing mental health disorders in adolescence, including chemical imbalances, central nervous system injury, intellectual disabilities, low birth weight, family history of mental and addictive disorders, chronic illness, multigenerational poverty, and caregiver separation or abuse and neglect.<sup>4</sup> Other risk factors may include increased psychosocial stress, loss of a parent or breakup of a romantic relationship, physical or sexual abuse, family violence, and substance abuse. Adolescents who have depression and substance abuse disorders are at high risk for suicide. Individuals with mental health disorders are less likely to obtain meaningful employment, more likely to commit suicide, and they are more often involved in illegal drug use. Some types of mental illness lead to violent and abusive behavior.

### ***What are we doing?***

Health care providers are getting better at recognizing the signs and symptoms of mental disorders among youth. The difficulty is finding appropriate treatment for youth. Cost for mental health services is a major barrier to care for many individuals due to lack of insurance, or insurance that limits or doesn't cover mental health treatment or that limits visits. Community mental health centers provide a wide continuum of low-cost services throughout the state primarily for persons with severe mental disorders. Most community mental health centers are overwhelmed and unable to meet the needs in their service areas, primarily because of limited resources and staffing. Another major barrier to serving persons in need of treatment continues to be the stigma attached to mental illness and treatment, and society's lack of understanding that many mental disorders are biological in nature. Successful programs are those that are long-term intense interventions that address multiple factors in a youth's life, such as family issues, social isolation, school, delinquency and violence.<sup>5</sup>

Efforts to raise awareness about adolescent mental illness, and youth suicide and youth violence prevention initiatives are taking place on a limited basis. The Parent Teacher Association and the National Alliance for the Mentally Ill are working in the schools to educate students on where to go when faced with depression or other mental illness.

### ***Where do we go from here?***

In Utah, several strong advocacy groups are continually providing information and education to dispel the stigma of mental illness. Others are seeking legislative appropriations and private donations to raise money to assist those needing treatment who are unable to pay.

NAMI (National Alliance for the Mentally Ill) is working hard for mental health parity to include mental health treatment as part of regular health insurance benefits. Due to the economic recession and budget cutbacks, these efforts have suffered in recent times. We need to be certain that the plight of persons suffering from mental illness is continually before the public so the importance and magnitude of it will be recognized.

The following is a list of issues to address in ensuring that youth are appropriately screened and referred as needed:<sup>4</sup>

- Preventive interventions have been shown to be effective in reducing the impact of risk factors for mental disorders and improving social and emotional development by providing, for example, educational programs for young children, parent-education programs, and nurse home visits.
- Primary care and the schools are major settings for the potential recognition of mental disorders in children and adolescents, yet trained staff is limited, as are options for referral to specialty care.
- Families have become essential partners in the delivery of mental health services for children and adolescents.
- Cultural differences exacerbate the general problems of access to appropriate mental health services. Culturally appropriate services have been designed but are not widely available.

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# Substance Use

## Alcohol Use

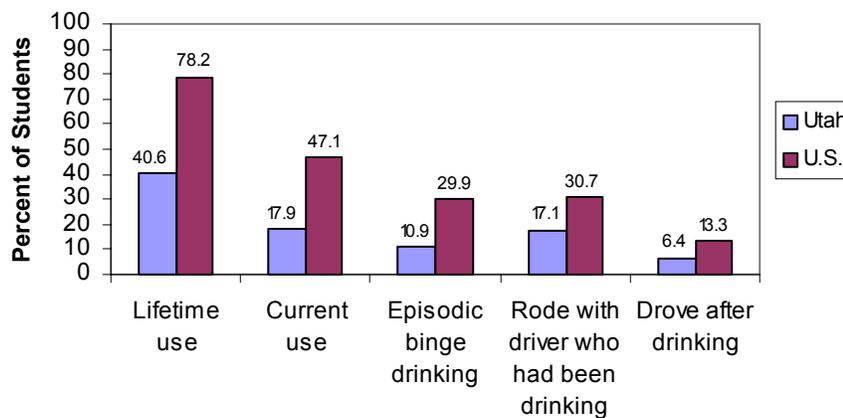
### Definition

Alcohol use is defined in this report as current use, (use in the past 30 days), and lifetime use (ever having used alcohol). Heavy episodic use is defined as having 5 or more drinks within a couple of hours, on one or more of the previous 30 days.

### How are we doing?

In Utah, current use of alcohol among students in grades 7-12 declined from 24.5% in the mid 1980s to 18.8% in 1997.<sup>1</sup> According to the 2001 YRBS, 40.6% of Utah high school students reported ever using alcohol, with 18% reporting current use, 11% reporting heavy, episodic drinking during the past month. Almost 6.5% reported driving after drinking alcohol, and 17.1% reporting having ridden with a driver who had been drinking.<sup>2</sup> These figures indicate a decline in adolescent alcohol use in each area measured. The 1997 Bahr Survey determined that 5.8% of Utah students in grades 7-12 were classified as possibly dependent on alcohol, which translates into an estimated number of 13,000 students who may be dependent on alcohol in Utah.<sup>1</sup> In 2001, 217 Utah teens were arrested for driving under the influence (DUI).<sup>3</sup> In 2001, 11.8% of admissions to substance abuse treatment were for alcohol only in Utah and 19.9% of admissions for alcohol with secondary drug use were for individuals aged 12-20 years.<sup>4</sup>

**Alcohol Use by High School Students, Utah and U.S., 2001**



Source: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. (2002). Youth 2001 Online. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>

### ***How does Utah compare with the U.S.?***

Utah's rates are lower than the national rates for adolescent alcohol use. Nationally, 78% of high school students reported having ever used alcohol, with 47% reporting current use, and 29.9% reporting heavy, episodic drinking. Almost 31% of youth nationally (30.7%) reported having ridden with a driver who had been drinking, and 13.3% reported having driven after drinking alcohol.<sup>2</sup> The National Household Survey data indicate that Utah youth age at first drink, 15.7 years, is the same as the national average. The survey data indicated a lower estimate of current use at 10.3% compared to YRBS, but this survey is conducted among youth ages 12-17 rather than only high school students.<sup>5</sup> Utah's predominant religion advocates abstinence from alcohol, which apparently has a significant effect on Utah's teen drinking rates.

### ***Why is it important?***

Adolescence is a critical time to establish healthy behaviors that persist into adulthood. The use of alcohol has a sizable impact on the health of teens. Alcohol abuse can result in a series of educational and social problems that lead to adverse outcomes as an adult, including failure to complete high school, unemployment, and criminal activity. Alcohol use has been linked to physical fights, academic and occupational problems, and illegal behavior. Alcohol use is a factor in deaths from motor vehicle crashes and intentional injuries. Long-term alcohol misuse, which may begin during adolescence, is associated with significant health problems, such as liver disease, cancer, cardiovascular disease, and neurological damage. Dependence on alcohol and other drugs is also associated with psychiatric problems such as depression, anxiety or antisocial personality disorder.

### ***What are the risk factors?***

Age is a risk factor. The 1997 Bahr Survey shows that students in grades 9-12 are 2-3 times more likely to use alcohol than those in grades 7-8.<sup>1</sup> Risk factors for multiple adverse behaviors, such as tobacco use, illicit drug use, and physical violence are similar and often interrelated. These risk factors include school difficulties or failure, low self-esteem, associating with peers who engage in risky behaviors, family members who engage in risk behaviors or have addictions to substances, perceived risk of substance use, etc.

### ***What is being done?***

Prevention activities to reduce teen alcohol use are both school and community based. Each school district receives federal funding through the "Safe and Drug Free Schools Dollars" to implement programs such as peer support, counseling and life skills training. Local substance abuse agencies work with young people in the schools as well as with those outside of the school setting. These activities are often paired with other substance abuse related issues. "Prevention Dimension" is a statewide school-based curriculum for K-12<sup>th</sup> grade teachers that was developed in a collaborative effort with State Board of Education, Office of Education, Division of Substance Abuse, and the Department of Health. This program won an award for exemplary performance and has been in existence since 1983.

### ***References***

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[www.dasis.samhsa.gov/webt/quicklink/UT01.htm](http://www.dasis.samhsa.gov/webt/quicklink/UT01.htm).
  5. Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (2001). National household survey on drug abuse, 1999. Washington, DC: U.S. Department of Health and Human Services.

## Tobacco Use

### Definition

Cigarette smoking is defined as the percentage of students in grades 9-12 who smoked cigarettes on one or more of the past 30 days.

Chewing tobacco is defined as the percentage of students in grades 9-12 who used chewing tobacco, snuff, or dip on one or more of the past 30 days.

### How are we doing?

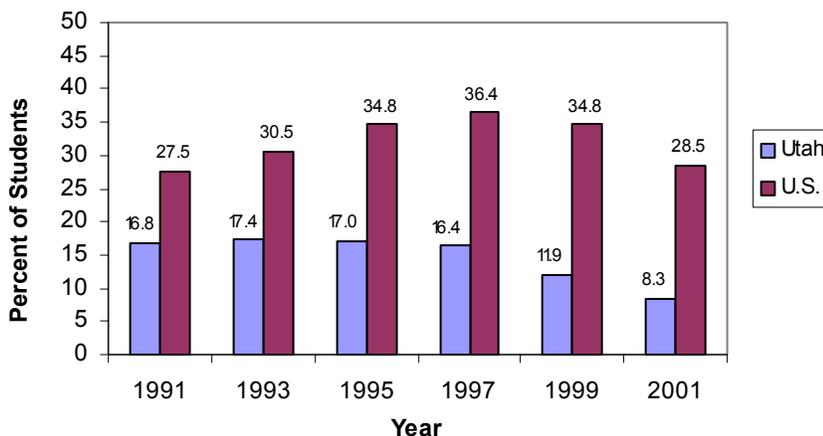
The percentage of Utah's youth smoking cigarettes increased from 10% to 17% from 1984 to the mid-90s.<sup>1,2</sup> In 2001 the rate declined to 8.3% of Utah youth.<sup>2</sup> Although these findings are promising, it is important to note that these declines may be partially explained by a change in Utah's school survey law in 1999, which requires active parental consent. As a result of the consent law change, the response rates for the 1999 and 2001 YRBS surveys were significantly lower than those achieved in earlier years.<sup>2</sup>

In 1995, monitoring the use of chewing tobacco was incorporated into the YRBS. Between 1995 and 1997 the rate of chewing tobacco use remained relatively steady between 6% and 7% among Utah youth. The percentage of Utah youth reporting use of chewing tobacco was 2.8% in 1999, which increased in 2001 to 3.8%.

### How does Utah compare with the U.S.?

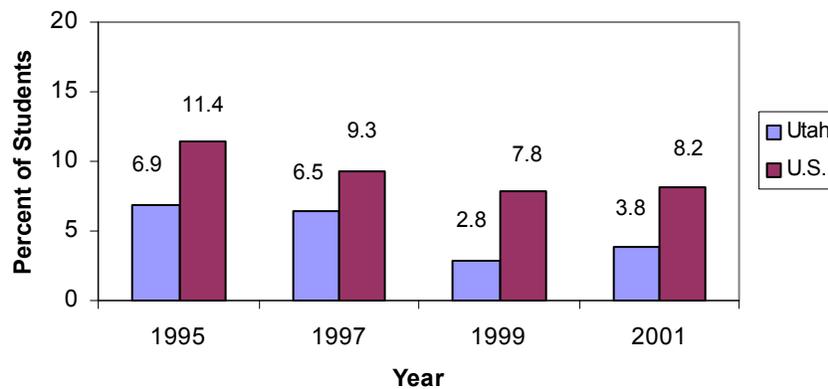
Utah's youth smoking rate has been lower than the national average for many years. The two figures illustrate the rates for Utah and U.S. youth. In 2001, Utah's smoking rate for students in grades 9-12 was 8.3% compared to an average of 28.5% nationwide. Additionally, the use of chewing tobacco among youth nationally was significantly higher in 2001 at 8.2% compared with Utah youth at 3.8%.<sup>2</sup> Recent nationwide surveys indicate that youth smoking rates in states with comprehensive tobacco prevention and control programs (California, Massachusetts, Florida, Oregon) have declined, whereas the rates in numerous states without comprehensive programs have increased or remained at the same level.

**Students Who Reported Current Cigarette Use,  
Utah and U.S., 1991-2001**



Source: National Center for Chronic Disease Prevention and Health Promotion (2002). YRBS: Youth 2001 Online. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>

### Students Who Reported Use of Chewing Tobacco, Utah and U.S., 1995-2001



Source: National Center for Chronic Disease Prevention and Health Promotion (2002). YRBS: Youth 2001 Online. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>

#### ***Why is it important?***

Tobacco use is the leading cause of preventable disease and death in the United States. Smoking increases the risk for chronic lung disease, coronary heart disease, and stroke, as well as cancers of the lungs, larynx, esophagus, mouth, and bladder. The use of chewing tobacco has been linked to lung, larynx, esophageal, and oral cancers.

Among adolescents, the short-term health effects of smoking include respiratory system damage, addiction to nicotine, and the associated risk of other drug use. Long-term health consequences of adolescent smoking are reinforced by the fact that most young people who smoke regularly continue to smoke throughout adulthood.<sup>3</sup> More than 90% of youth who use tobacco daily report experiencing at least one symptom of nicotine withdrawal when they last attempted to quit.<sup>2</sup> Since most tobacco users become addicted to nicotine as adolescents, preventing the initiation of tobacco use among teens is crucial for reducing tobacco-related death and disability.

The overwhelming majority of adults who smoke began by the age of 18.<sup>4</sup> Each day an estimated 3,000 U.S. children and adolescents become regular users of tobacco.<sup>4</sup> Three-quarters of adolescents who are daily cigarette smokers or smokeless tobacco users report that they continue to use tobacco because they find it hard to quit.<sup>5</sup>

#### ***What are the risk factors?***

Risk factors for tobacco use are mostly related to adolescence since almost 90% of smokers become addicted to nicotine while they are still teenagers. Risk factors for tobacco use include:<sup>4,5,6,7</sup>

- Having friends who smoke
- Having parents or an older sibling who smoke
- Inability to refuse offers to use tobacco

- Believing that tobacco use is “normal” (overestimating the number of people who actually use tobacco)
- Believing that tobacco use somehow benefits youth
- Having easy access to tobacco products
- Being exposed to tobacco ads and promotion
- Having a low self-image
- Having parents who are not involved in their children’s lives
- Coming from a family of low socioeconomic status

### ***What is being done?***

The Utah Department of Health Tobacco Prevention and Control Program aims at reducing teen tobacco use through a variety of programs and initiatives. These programs include school and community based prevention and cessation programs, the "Truth About Tobacco" media campaign, the statewide Utah Tobacco Quit Line (1-888-567-TRUTH) with specialized services for teen tobacco users, and enforcement of state laws that prohibit tobacco sales to adolescents under the age of 19. Since 2001, the Utah Department of Health has received funds from the American Legacy Foundation to develop a statewide anti-tobacco youth advocacy movement, the Phoenix Alliance. In addition to building youth coalitions across the state and providing anti-tobacco education at major youth events, the Phoenix Alliance has become an important partner for the statewide anti-tobacco media campaign.

### ***Where do we go from here?***

Next steps to reduce initiation of teen tobacco use in Utah and to promote quitting include:

- Continuing to fund and develop comprehensive tobacco prevention and control programs at the community level
- Continuing to counter tobacco industry advertising by testing, developing and airing anti-tobacco media messages targeted to adolescents
- Expanding retailer education programs that clarify the importance of laws regulating youth access to tobacco
- Conducting further research into risk factors for adolescent tobacco use and working with youth in developing and expanding programs to address these risk factors

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## *Marijuana Use*

### *Definition*

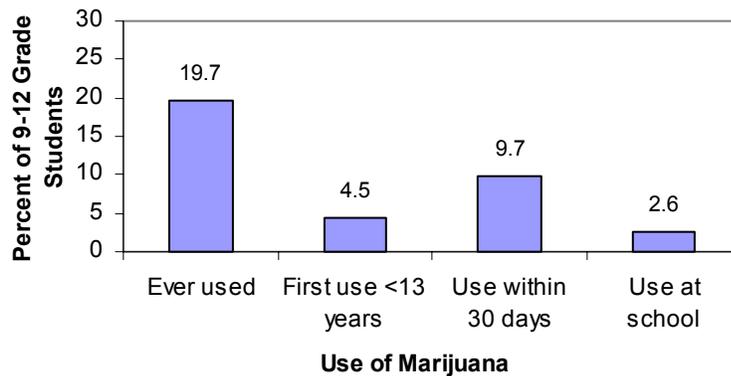
The most common measures of marijuana use are defined by current and lifetime use. Current use of marijuana is defined as having used marijuana in the past 30 days. Lifetime use is defined as ever using marijuana during a lifetime.

### *How are we doing?*

Since 1989, there has been an upward trend in marijuana use among Utah students in grades 7-12. In 1989, 6% of students had used marijuana during the past month compared to 9.8% in 1997.<sup>1</sup> YRBS 2001 data indicate that 19.7% of Utah students reported ever use, with 9.7% reporting current use, and 4.5% reporting first use before age 13.<sup>2</sup> According to the 1997 Bahr Survey, 4.9% of Utah students in grades 7-12 were classified as potentially dependent on marijuana and classified as needing treatment.<sup>1</sup>

In 2001, of individuals admitted to substance abuse treatment for marijuana, 62.5% were between the ages of 12-20 years, the largest age group admitted for marijuana treatment.<sup>3</sup>

**Marijuana Use by 9-12 Grade Students,  
Utah, 2001**



Source: National Center for Chronic Disease Prevention and Health Promotion (2002).  
YRBS: Youth 2001 Online. Atlanta, GA: Centers for Disease Control and Prevention.  
Retrieved from: <http://www.cdc.gov/nccdphp/dash/yrbs/2001/youth01online.htm>

### *How does Utah compare with the U.S.?*

Fewer Utah student report marijuana use compared to those nationally. Although rates of use went up with age, the increase in Utah was much smaller than the national averages. According to the 2002 Monitoring the Future (MTF) Study, 19.2% of 8<sup>th</sup> grade students, 38.7% of 10<sup>th</sup> grade students, and 47.8% of 12<sup>th</sup> grade students reported ever use of marijuana, while 8.3% of 8<sup>th</sup> grade students, 17.8% of 10<sup>th</sup> grade students, and 21.5% of 12<sup>th</sup> grade students reported current use.<sup>4</sup> The 1997 Bahr Survey indicated that 7.8% of 8<sup>th</sup> grade students in Utah, 12.5% of 10<sup>th</sup> grade students and 13.5% of 12<sup>th</sup> grade students reported current use.<sup>1</sup>

Nationally since 1972, the number of new users among youth between the ages of 12 and 17 has been greater than young adults. The number of 12 to 17 year olds who initiated use of marijuana has steadily increased from 0.8 million in 1990 to 1.6 million per year between 1996 and 2000.<sup>5</sup>

According to Treatment Episode Data Set (TEDS) marijuana was the primary substance of abuse for more than 126,000 adolescent and college-age admissions for treatment nationally. Marijuana was the primary substance of abuse for 53.4% of youth treatment admissions compared with 14.8% for all other ages.<sup>6</sup> In Utah, 47.6% of youth admitted for treatment in 2001 indicated marijuana as the primary substance compared to 17.8% of overall admissions.<sup>6</sup>

### ***Why is it important?***

Marijuana use has short-term and potentially long-term health effects. Short-term effects of marijuana include problems with memory, learning, thinking and problem solving, distorted perception (sight, sound, time, touch), loss of coordination, increased heart rate, and anxiety. These effects can be magnified when other drugs are mixed with marijuana. Marijuana can play a major role in motor vehicle crashes due to distorted judgement and perceptions. When users combine marijuana with alcohol, as they often do, the hazards of driving can be more severe than with either substance alone. Since marijuana contains some of the same and sometimes even more of the cancer-causing chemicals found in tobacco, someone who smokes marijuana may be taking in as many cancer-causing chemicals as someone who smokes cigarettes. People who smoke marijuana often develop the same kinds of breathing problems that cigarette smokers have including coughing and wheezing. They tend to have more chest colds than non-users and are at greater risk of lung infections like pneumonia.

Despite decreasing rates of adolescent use overall, youth surveys and law enforcement sources suggest that drugs continue to have a strong presence in schools across the country. YRBS 2001 data indicate that nationally 28.5% of high school students were offered, sold, or given an illegal drug on school property during the previous 12 months compared to 22.5% of Utah students.<sup>2</sup> Second only to alcohol and cigarettes, 77.4% of students nationally report that marijuana is fairly easy or easy to get.<sup>4</sup>

### ***What are the risk factors?***

Adolescents who are vulnerable to other delinquent behaviors are also at risk for marijuana use. Some specific risk factors are low neighborhood attachment, extreme economic deprivation, family conflict, school difficulties or failure, low self-esteem, use of tobacco or other substances, association with peers who engage in risky behaviors, family members who engage in risk behaviors or have addictions to substances, etc.

Risk can be buffered by protective factors, such as opportunities and rewards for prosocial involvement at school and in the community, strong religious background, and opportunities to bond with adults who provide clear beliefs and healthy standards.

### ***What is being done?***

Prevention activities to reduce teen drug use are both school and community based. These

activities are often paired with other substance abuse related issues. “Prevention Dimension”, is a statewide school-based curriculum for K-12<sup>th</sup> grade teachers that was developed in 1983 in a collaborative effort with State Board of Education, Office of Education, Department of Human Services Division of Substance Abuse, and the Department of Health. The curriculum teaches youth the skills they need to resist pressures to engage in marijuana use and make healthy lifestyle choices. In addition to this curriculum, each school district receives federal funding through the “Safe and Drug Free Schools Dollars” program to implement programs such as peer support, counseling and life skills training. Local substance abuse agencies work with young people in the schools as well as with those outside of the school setting to reduce the risk of youth using marijuana and other substances. Communities are providing mentoring and other programs for youth that allow for positive role models to help them establish healthy beliefs and standards.

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1. Bahr, S., et. al. (1998). Drug use among Utah students, 1997. Provo, UT: Brigham Young University.
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## Other Drug Use

### Definition

Percent of teens ages 12-17 who have used a drug other than marijuana. Drugs may include: cocaine, heroin, hallucinogens, inhalants, and non-medical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives.

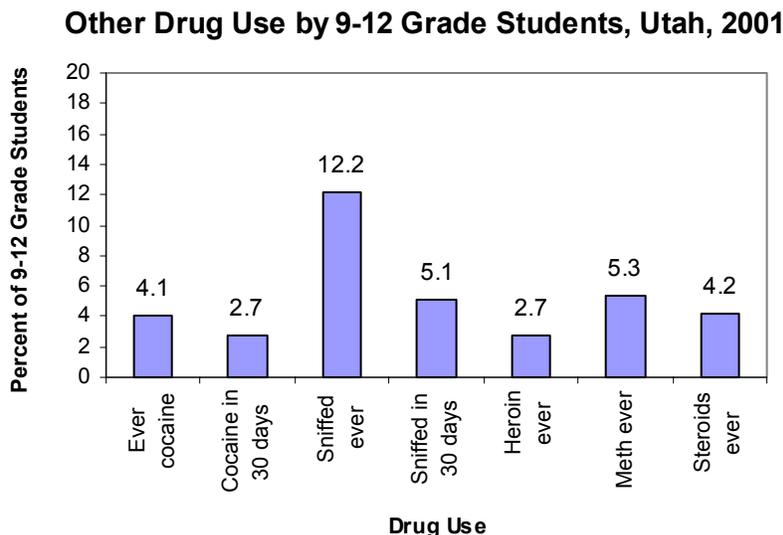
### How are we doing?

In Utah, teen use of illicit drugs other than marijuana remains relatively low. The figure shows other drug use for Utah students. According to 2001 YRBS data, cocaine use among Utah students ranged from 4.1% who reported they had ever used to 2.7% who reported current use. Sniffing substances involved the highest percentage of substance abuse reported by Utah youth, with 12.2% reporting they had ever sniffed to get high, and 5.1% who reported current sniffing. Heroin and methamphetamine use was reported by 2.7% and 5.3% of Utah students respectively. Steroid use was reported by 4.2% of Utah students. More than 2% of Utah students reported that they had used a needle for drug use.<sup>1</sup>

### How does Utah compare with the U.S.?

Drug use among Utah youth is generally lower than youth nationally, with exception of current sniffing of glue, breathing the contents of aerosol spray cans, or inhaling paints or sprays to get high.<sup>1</sup> Nationally, among youth aged 12 to 17, 10.8% were current drug users, higher than the 2000 rate of 9.7%.<sup>2</sup> Drug use tends to increase with age among young persons. According to the 2002 Monitoring the Future Study, 4.7% of 8<sup>th</sup> grade students, 8.1% of 10<sup>th</sup> grade students, and 11.3% of 12<sup>th</sup> grade students reported that they had used illicit drugs other than marijuana in the past 30 days.<sup>3</sup>

Lower use rates among Utah youth are generally attributed to relatively lower risk factors and higher protective factors among adolescents in Utah compared to those in many other parts of the country.



Source: National Center for Chronic Disease Prevention and Health Promotion. (2002). Youth 2001 Online. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: [www.cdc.gov/nccdphp/dash/yrbs](http://www.cdc.gov/nccdphp/dash/yrbs).

### ***Why is it important?***

Drug use can result in short-term and long-term health problems, as well as increasing the risk for pregnancy and sexually transmitted infections. On a social level, it may result in poor performance in school, inability to maintain employment, criminal activity, etc. Illicit drug use is one of the largest factors in rising jail and prison populations. Many crimes from burglary and check fraud to gang-related murders are in some way connected to illicit drug use.

### ***What are the risk factors?***

Age is a risk factor. Risk factors for illicit drug use are similar as those for other substance use experimenting. Youth who are vulnerable to drug use are also at risk for delinquent behavior. Adolescents who have low self-esteem, mental illness and tend to succumb to peer pressure may be more likely to use drugs to compensate.

### ***What is being done?***

Prevention activities to reduce teen drug use are both school and community based. These activities are often paired with other substance abuse related issues. "Prevention Dimension" is a statewide school-based curriculum for K-12<sup>th</sup> grade teachers that was developed in a collaborative effort with State Board of Education, Office of Education, division of Substance Abuse, and the Department of Health. School-based programs, such as Prevention Dimension, teach teens the skills they need to resist pressures to use drugs and have a healthy lifestyle. Communities are providing mentoring and other programs for youth at risk that allow for positive role models to help the teens establish healthy beliefs and clear standards. National advertising shows teens and parents the dangers of drugs and promotes an anti-drug message.

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# ***Sexual Behavior***

## ***Sexual Activity***

### ***Definition***

Sexual experience, in particular age at first intercourse, represents a critical indicator of the risk for pregnancy and sexually transmitted infections. Sexual activity is defined as heterosexual, vaginal intercourse for the purposes of this report.

### ***How are we doing?***

The Utah Youth Risk Behavior Survey (YRBS) does not include questions on sexual activity due to state law restricting such questions without parental consent. However, the YRBS question about whether youth have done anything to place themselves at risk for HIV is used as a proxy for sexual experience. In 1999 (most recently available data), approximately 18% of Utah youth responded positively to that question, with 6% indicating they were not sure.<sup>1</sup> Another measure of sexual activity is teen pregnancy. (See adolescent pregnancy section.)

### ***How does Utah compare to U.S.?***

YRBS 2001 data indicate that for the U.S. as a whole, 45.6% of all high school students reported they had had sexual intercourse during their lifetime, a drop from 49.9% of students reporting sexual intercourse in 1999.<sup>2</sup> Experience with sexual intercourse increased with each grade level with 34.4% of 9<sup>th</sup> grade students compared to 60.5% of 12<sup>th</sup> grade students reporting sexual intercourse.<sup>2</sup> Male students were more likely to report sexual intercourse than female students (48.5% vs. 42.9%).<sup>2</sup>

Among currently sexually active students nationwide in 2001, 58% reported that either they or their partner had used a condom during last sexual intercourse, and 18.2% reported that either they or their partner had used birth control pills before last sexual intercourse, an increase from 16.2% in 1999.<sup>2</sup>

### ***Why is it important?***

The medical and social consequences of adolescent sexual activity are a national health concern highlighted by unintended pregnancies and the acquisition of STIs (sexually transmitted infections), including human immunodeficiency virus (HIV). It is estimated that a sexually active teenager who does not use contraceptives has a 90% chance of becoming pregnant within one year.<sup>3</sup> According to the Pregnancy Risk Assessment Monitoring System data, 84% of Utah teens reported that their pregnancies were unintended.<sup>4</sup> How to best decrease pregnancy and STI rates among adolescents is the focus of much debate, with particular controversy surrounding the roles of sexuality education and condom availability for youth. While most states require schools to teach one or both subjects of sexuality and STI education, most also give local policymakers wide latitude in crafting their own policies. What little substantive guidance states do provide is heavily weighted toward stressing abstinence. The U.S. Surgeon General's report "Call to Action to Promote Sexual Health and Responsible Sexual Behavior" cites published scientific

evidence that endorses an approach to sexuality education that balances the importance of abstinence with assuring awareness of optimal protection from sexually transmitted diseases and unintended pregnancy, for those who are sexually active.<sup>5</sup>

### ***What are the risk factors?***

In general, an adolescent's gender, age, socioeconomic status, family environment, sexual orientation, religious commitment, and individual life experience are factors that can exert an influence on whether, when and how she or he will be sexually active. It is true for teenagers, as it is for adults, that sexual expression can be either positive or negative depending on the context. Children who are reared in sexually negative environments may have more difficulty having sexually positive experiences. Some adolescents may engage in sexual activity when the real needs they seek to satisfy may be increased self-esteem, alleviation of a sense of loneliness, meeting societal expectations of what it means to be "masculine" or "feminine", expressions of anger, or escape from boredom.

### ***What are we doing?***

The Utah Department of Health oversees the Utah Abstinence Education Program which allocates federal funding to community projects throughout the state to provide abstinence education to youth aged 9-14. These projects vary in method but all promote abstinence from sexual activity, tobacco, alcohol and other drug use. They also include a parent component that is designed to assist parents in talking with their youth about sexuality issues in the home. The Utah Department of Health also works closely with the State Office of Education to assure that curriculum related to human sexuality is complete, accurate and age appropriate.

### ***Where do we go from here?***

Since abstinence is the only way to prevent STIs and pregnancy, all adolescents should be encouraged to abstain from sexual activity. For those adolescents who have been sexually active, they should be counseled as to the benefits of postponing future sexual relationships. Parents need to have accurate knowledge to discuss sexuality issues with their children.

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## ***Sexually Transmitted Diseases***

### ***Definition***

Sexually transmitted diseases are reported as the number of chlamydia, gonorrhea, and syphilis cases among 15-19 year-olds per 100,000 Utah adolescents in the same age group.

### ***How are we doing?***

In 2002, the chlamydia incidence rate was 55.1 cases per 100,000 for female adolescents 10 to 14 years and 4.0 per 100,000 male adolescents 10-14 years.<sup>1</sup> Among Utah youth 15 to 19 years of age, the rates were much higher at 811.1 cases per 100,000 females and 193.3 per 100,000 males. The largest proportion of reported chlamydia cases in 2002 occurred among individuals between 15-24 years of age, with 71.29% or 2,222 of 3,117 cases of males and of females 68.72% or 2,142 of 3,117.<sup>1</sup>

In 2002, the gonorrhea incidence rate for female adolescents 10-14 years was 1.1 cases per 100,000 with no reported cases for male adolescents. Among adolescents 15-19 years of age, gonorrhea rates were 34.97 cases per 100,000 females and 17.7 cases per 100,000 males.<sup>1</sup>

In 2002, there were no cases of early syphilis among female or male adolescents aged 10-19 years.<sup>1</sup>

### ***How does Utah compare to the U.S.?***

Chlamydia rates were lower for Utah in comparison to the U.S. rates. For 2002, the chlamydia incidence rate for females aged 15-19 years in Utah was 811.1 cases per 100,000 persons, compared to 2,536.1 cases per 100,000 persons in the U.S.<sup>1</sup> The incidence rate for males aged 15-19 years in Utah is 191.4 compared to 375.9 cases per 100,000 persons in the U.S.<sup>2</sup>

The rates for gonorrhea in 2002 were lower in Utah compared to the U.S. rates for adolescents aged 15-19 years at 17.7 and 33.0 cases per 100,000 persons for males and females, respectively.

The age- and gender-specific U.S. incidence rates for primary and secondary syphilis for males and females respectively within the age group 15-19 years were 1.4 and 2.5 cases per 100,000 persons in 2001. There were no cases of primary and secondary syphilis in Utah among 15-19 year-olds in 2002.

### ***Why is it important?***

Each year, nearly 3 million teenagers are infected with a Sexually Transmitted Disease (STD) in the United States.<sup>3</sup> Two-thirds of all STDs occur among individuals in the age group of 15-24 years in the U.S.<sup>4</sup> This finding is evident in Utah as well; 71.3% of chlamydia cases occurred among those between 15-24 years of age in 2002. Untreated chlamydia and gonorrhea can be detrimental to the reproductive systems of both males and females. Females are at higher risk for developing pelvic inflammatory disease (PID) and

both men and women may become infertile due to chlamydial and/or gonorrheal diseases.<sup>2</sup> Risk for acquiring more serious diseases, such as HIV, also increases when an individual is infected with chlamydia and/or gonorrhea.<sup>2</sup>

### ***What are the risk factors?***

The disproportionate incidence of STDs among adolescents may be due to adolescent risk behaviors, such as having multiple (sequential or concurrent) sexual partners rather than single, long-term relationships; engaging in unprotected intercourse; and selecting partners at higher risk. In addition, adolescent women may be more susceptible to STDs such as chlamydia due to physical immaturity of her reproductive organs.<sup>2</sup>

### ***What are we doing?***

The Utah Minor Consent Law allows adolescents between the ages of 14 and 19 years to be tested and treated for a STD without the consent of a parent. Therefore, teens are able to access confidential testing and services.

Seven of Utah's 12 local health departments have health clinics where adolescents can be tested and treated for STDs at minimal or no cost. Planned Parenthood Association of Utah has locations throughout Utah that also provide STD services at minimal cost. Condoms, for prevention of subsequent STDs and re-infection, are also available.

Adolescents that test positive for a reportable STDs (chlamydia, gonorrhea, and syphilis) are confidentially counseled by a local public health nurse for education, proper treatment, and sexual partner information for follow up. This process potentially prevents spread of the disease and re-infection.

STD educational pamphlets and books are available from the Utah Department of Health. In addition, presentations are available upon request. The Utah Department of Health STD Control Program, along with select local health departments, currently provide STD presentations upon request to adolescents in schools and other adolescent facilities. Presentations given in high schools require prior permission from the school's principal, and some schools require a permission note from the parents.

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## *Adolescent Pregnancy*

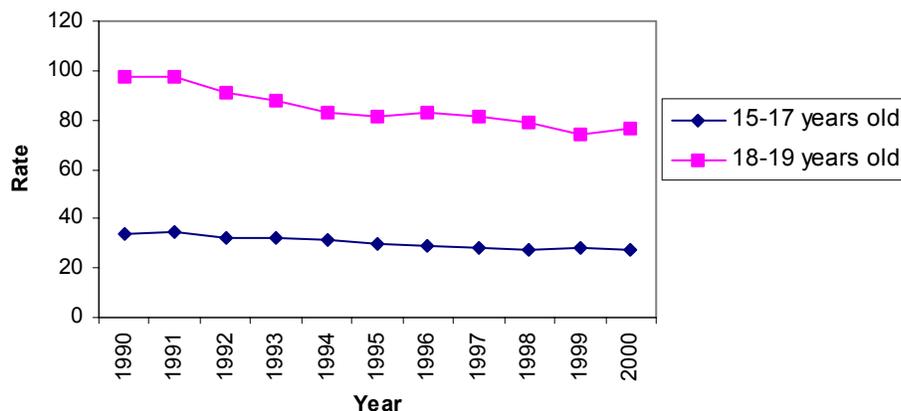
### *Definition*

The adolescent pregnancy rate is reported as the number of live-born infants plus fetal deaths and abortions to girls aged 15-19 per 1000 Utah females in the same age group. The reported teen pregnancy rate is likely an underestimate of the actual rate because it excludes miscarriage, estimated to be equal to approximately 20% of live births and 10% of abortions.

### *How are we doing?*

Since 1991, Utah's teen pregnancy rate has been gradually declining for both 15-17 year old females, as well as among 18-19 year old females. The figure below shows the trend in pregnancy rates among adolescents in Utah. The rate for 15-17 year old females in 1991 was 34.2 pregnancies per 1,000 which had dropped in 2000 to 27.1 pregnancies per 1,000 15-17 year old females. For young women between the ages of 18 and 19 years, the pregnancy rate in 1991 was 96.9, which dropped in 2000 to 76.4 per 1,000 18-19 year old females.<sup>1,2</sup>

**Pregnancy Rates by Age Group, Utah, 1990-2000**



Source: Office of Vital Records and Statistics. (2002). Utah's vital statistics births and deaths, 2000. Salt Lake City, UT: Utah Department of Health.

### *How does Utah compare with the U.S.?*

Teen pregnancy rates in Utah are lower than national rates. In the U.S. in 1997, among 15-19 year old females, 94.3 pregnancies occurred for every 1,000 compared to 50.6 pregnancies for every 1,000 females between 15-19 years in Utah. During the year 2000, the pregnancy rate for Utah females 15-19 years of age decreased to 48.8 per 1,000. Utah's teen pregnancy rate for 15-19 year olds ranked among the lowest ten in the nation during 1997, the most recent year for which comparison data are available.<sup>1</sup>

### *Why is it important?*

Teen pregnancy can have serious consequences for individuals, families, and communities.

Pregnancy in adolescence may be associated with inadequate prenatal care, higher rates of low birth weight and infant mortality, and repeat pregnancies during the teen years. Children born to an adolescent mother are more likely to encounter additional health risks compared with children born to non-teenage mothers. In addition, teen parenthood is associated with poverty, high costs of health care and public assistance, and low educational attainment. Giving birth as a teen places women at risk for socioeconomic disadvantage for their lifetime. <sup>1</sup>

### ***What are the risk factors?***

Sexual activity places teens at risk for pregnancy. Teens who earn “C” or lower grades, smoke tobacco, drink alcohol, use drugs, and date steadily are more likely to be sexually active. Teens who have suffered sexual abuse are at greater risk for becoming sexually active, thus have a higher risk of becoming pregnant. Teens who smoke, are of low socioeconomic status and members of ethnic and racial minority groups may be at greater risk for teen pregnancy. <sup>2</sup>

### ***What are we doing?***

The Utah Department of Health promotes teen pregnancy prevention through the following activities:

- Providing district-specific data to local health departments regarding teen pregnancy
- Analyzing data to identify characteristics of Utah teens who become pregnant
- Supporting the work of the Utahns Concerned with Adolescent Pregnancy and Parenting (UCAPP) Coalition
- Promoting abstinence from sexual activity, tobacco, alcohol and other drug use among youth aged 9-14 years through the MCH Title V funding to community projects to provide abstinence education through a variety of methods throughout the state
- Promoting prenatal care and education when pregnancy occurs
- Providing services such as Baby Your Baby, the Pregnancy RiskLine, the Reproductive Health Program, and Women, Infants, and Children Special Supplemental Feeding Program (WIC) to support teens who do become pregnant

The Utah Department of Health works closely with the Utah State Office of Education to assure that curriculum related to human sexuality is complete and age appropriate as allowed by state laws. The Department also collaborates with the Department of Workforce Services coordinator of the TANF funded Out-of-Wedlock Pregnancy Prevention grantees to assure that pregnancy prevention needs are being met throughout the state.

### ***Where do we go from here?***

- Encourage and support parents in their efforts to educate their children about responsible sexual behavior by providing parents factual, reality-based comprehensive sexuality education that includes abstinence as the gold standard

- Help youth create and maintain strong connections to parents and other positive adult role models
- Promote educational success and provide an enhanced sense that life holds positive options
- Identify preteens and teens at risk for school failure and support them to remain in school
- Provide knowledge, reinforce positive social norms, and enhance social skills through various types of risk reduction education
- Promote adequate prenatal care for all pregnant teens

### ***References***

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# Chronic Illness

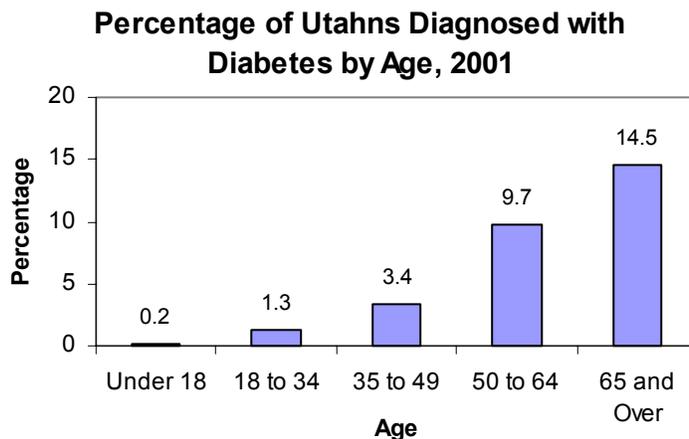
## Diabetes

### Definition

There are two major types of diabetes: type 1, often called juvenile diabetes or insulin-dependent diabetes, and type 2 diabetes, often called adult-onset diabetes or non-insulin dependent diabetes.<sup>1,2</sup> Type 1 diabetes is an autoimmune disorder characterized by the body's inability to produce insulin. This type of diabetes can occur at any age, but individuals who develop diabetes prior to age 30 usually have type 1. Only 5% to 10% of individuals with diabetes have type 1, but individuals with this type must use insulin daily, through either injections or pumps in order to survive. Type 2, on the other hand, is typically found in individuals who are older, overweight, and/or sedentary. However, type 2 diabetes is found in some children.

### How are we doing?

Between 1991 and 2001, diabetes prevalence in the Utah population increased from 2.1% of the population to 3.5%.<sup>3</sup> This increase, however, was not evident in all age groups. Prevalence rates increased among middle-age and older Utahns, while remaining steady among younger age groups. Nevertheless, because of overall population size increase the number of youth with diabetes increased nearly two-thirds, from 1,132 in 1991 to 1,800 in 2001.



Source: Office of Public Health Assessment. (2002). Overview of the 2001 Health Status Survey, Salt Lake City, UT: Utah Department of Health.

The most recent data from the 2001 Utah Health Status Survey show that the older the age group, the greater likelihood of having been diagnosed with diabetes. In particular, only an estimated 0.2% of Utahns under the age of 18 had been diagnosed with diabetes. This percentage increases with age to approximately 15% among those aged 65 and over.<sup>3</sup>

### ***How does Utah compare to the U.S.?***

National prevalence of diabetes is estimated to be 1.7 cases per 1,000 individuals under the age of 20.<sup>1</sup> The estimated prevalence of diabetes for this age group in Utah is slightly higher at about 2.3 per 1,000.<sup>3</sup>

### ***Why is it important?***

Diabetes, in particular, type 1 diabetes, is one of the most frequently encountered chronic diseases among youth.<sup>2</sup> Diabetes diagnosed during youth is generally type 1, or insulin-dependent, diabetes. Type 2 diabetes is also found in children, though the majority of diabetes diagnosed in children is type 1. Onset of diabetes peaks between ages 10 and 12 for females and between ages 12 and 14 for males.

Without daily insulin treatment, individuals with type 1 diabetes will develop ketoacidosis, an acute condition characterized by extremely high blood glucose levels, often requiring hospitalization. Ketoacidosis is one of the most preventable complications of diabetes. Once it develops, however, immediate treatment is necessary to prevent unconsciousness and death.<sup>1,4</sup> In 2000, there were 365 hospital discharges for Utah youth less than 18 with diabetes listed as any diagnosis. Of these, nearly half (180) had ketoacidosis as the primary diagnosis.<sup>5</sup>

Long-term complications of diabetes can be devastating, extracting a tremendous toll on quality of life and health care costs. Among youth with diabetes, diligence in monitoring and controlling blood sugar levels is imperative in order to prevent or delay complications. Tight blood glucose control can significantly reduce the risk of eye, nerve, and kidney damage.<sup>2</sup>

Adolescence is a difficult time in general. Having to cope with the additional demands associated with diabetes may pose significant challenges for some teens. The need for constant monitoring of blood glucose levels, frequent insulin injections, and dietary restrictions may make some teens feel embarrassed in front of their peers. Maintaining good blood glucose levels through appropriate diet and exercise is important in adolescence to establish healthy behaviors that carry the adolescent to a healthier adulthood.

### ***What are the risk factors?***

The exact cause of type 1 diabetes in youth is unknown, although it appears that an individual must have a genetic predisposition combined with exposure to some environmental trigger before it will develop. Environmental factors that trigger diabetes have not been specifically identified, but recent research suggests that infections, such as mumps, rubella, or coxsackie B, may play a role. Although less than 1% of American youth have diabetes, the risk increases to 2-3% if the mother has type 1 diabetes and to 6% if the father has type 1 diabetes.<sup>1,4</sup> Type 2 diabetes in adolescence is associated with obesity and family history of the disease. Overall, there is little difference in prevalence of diabetes by gender, but there is wide variation by race and ethnicity across the U.S., especially within the context of age. Among youth, non-Hispanic whites have the highest risk of developing diabetes. Among middle-age and older adults, African Americans, Native Americans, Hispanics, and even Asian Americans have a substantially greater risk of developing diabetes than non-Hispanic whites.<sup>2</sup>

### ***What is being done?***

Medicaid and the Children's Health Insurance Program (CHIP) cover diabetes supplies for children up to age 19 who qualify for the programs. Individuals of all ages may be eligible to participate in a state-funded high-risk insurance pool sponsored by the state and administered by Regence Blue Cross/Blue Shield. This program was established to accommodate individuals with diabetes who might not otherwise qualify for health insurance coverage.

Diabetes can be an extremely stressful disease. Diabetes educators play a critical role in helping diagnosed youth learn about and adjust to the lifestyle modifications required for good diabetes control.

Support groups often help individuals cope with the demands of managing diabetes. For example, the Foundation for Children and Youth with Diabetes provides year-round activities for young people with diabetes. A week-long teen retreat is held during the summer complemented by several weekend activities held throughout the year. Small fees apply, but waivers may be available, depending on the activity. Leadership opportunities are also available for youth attending the workshops and activities.

In addition, the American Diabetes Association sponsors "The Clubhouse" for young children with diabetes. Several Clubhouse events are held in Utah each year for children with diabetes.

### ***Where do we go from here?***

Adequate funding for research is essential for developing treatments and ultimately finding a cure for diabetes. Numerous clinical trials have been conducted under the auspices of the Juvenile Diabetes Research Foundation, a not-for-profit, non-governmental, organization.<sup>6</sup> Stem cell research, gene therapy, and use of viruses to prevent nerve damage caused by diabetes are examples of the exciting research currently being conducted.

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# Asthma

## Definition

Asthma is a chronic lung disease caused by airway inflammation, which causes airflow obstruction.

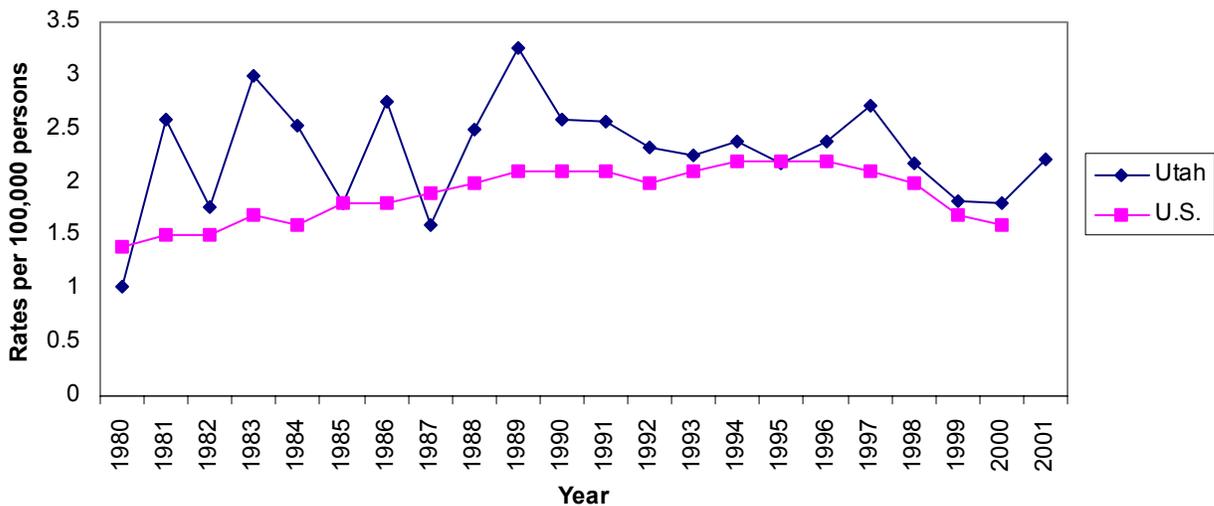
## How are we doing?

As of 2001, about 5% of Utahns are under medical care for asthma representing a 1% increase from previous findings.<sup>1,2</sup> Since 1995, Utah's hospitalization rate due to asthma has slightly declined which may indicate higher use of medication and lower occurrence of hospitalizations due to asthma.<sup>3</sup> During 2001, 2 adolescents per 10,000 adolescents 15 – 19 years of age were hospitalized because of asthma. Of all adolescent hospitalizations, 0.5% was due to asthma with an average of a 2.6 days stay and \$4,800 total average charges on average.

## How does Utah compare with the U.S.?

During 2001, asthma-related hospitalizations comprised about 0.6% of all hospitalizations in Utah, while nationally, 1.5% of all hospitalizations were due to asthma.<sup>3,4</sup> In Utah, 57% of adolescents hospitalized during 2001 due to asthma were female compared to 66% nationally. Utah's death rate due to asthma has been higher than the national rate since 1981, with the exception of only three years during the time from 1981 to 2000.<sup>6,7,8</sup>

**Asthma Mortality Rates for Utah and U.S., 1980-2001**



\*Rates for Utah and US have been age-adjusted to the 2000 US standard population

\*\* 2000 US Asthma Mortality data not available.

Note: Utah mortality rates are based on small numbers

U.S. Data Source: National Center for Health Statistics

Utah Data Source: Utah Department of Health, Office of Vital Records and Statistics

### ***Why is it important?***

Asthma is one of the 10 leading chronic conditions that restrict activity. Approximately 15 million people in the United States are reported to have asthma. Among those, 5 million are children. It is estimated that more than \$6 billion are spent for asthma care annually. Asthma is a leading cause of missed school days in the United States with more than 10 million school days missed annually. Asthma accounts for more than 5,000 deaths each year in the United States. Asthma morbidity and mortality are largely preventable with improved patient education and clinical management.

### ***What are the risk factors?***

Risk factors for asthma include:

- Genetic predisposition
- Indoor environmental exposures, such as tobacco or pollens
- Sensitivity to allergens, drugs, foods
- Viral respiratory infections
- Weather conditions
- Immune system
- Diet
- Obesity
- Exercise

### ***What is being done?***

Asthma surveillance information is not readily available at the state or local level. The Utah Department of Health initiated the Utah Asthma Program in 2001 in order to develop a reliable surveillance system. When established, the asthma surveillance system will provide a more in-depth understanding of the asthma burden in Utah, including population sub-groups that are at higher risk of asthma. The program also established a community network for schools, and employers to create and enhance effective interventions to prevent and control asthma.

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## *Adolescents with Special Health Care Needs*

### ***Definition***

Special Health Care Needs is defined as adolescents with a chronic physical, mental, emotional or behavioral condition for which they experience significant functioning problems and/or that require health and health-related services of an amount and type beyond that required by teens generally.

### ***How are we doing?***

Nationally, the prevalence of Children with Special Health Care Needs (CSHCN) has been estimated to be between 16-19%, although a recent study indicated that 23.3% of adolescents in the study fell into the special health care needs group.<sup>1</sup> In Utah, 12.6% of children were reported as CSHCN.<sup>2</sup> These children include those who had any of the following conditions that had lasted or were expected to last for at least 12 months:

- Prescription medications
- Needs more services (medical, educational, mental health) than most children
- Restricted physical activity
- Physical/speech/other therapy
- Mental health treatment
- Durable medical equipment/special equipment
- Life-threatening allergies
- Special diet
- Individualized Education Plan, Early Intervention, Special Education classes
- Learning or behavioral difficulties

The most common conditions among Utah children were behavioral (35.2%) and asthma or respiratory conditions (19.5%). The prevalence of special health care needs increases with age mainly due to the easier recognition of some disorders as children mature. In Utah, 17.6% of adolescents are reported as having special health care needs, with prevalence more slightly more common among female adolescents (17.8%) compared to male adolescents (17.3%), although the overall prevalence among girls is lower.

Issues for children with special health care needs include: a higher percentage of days reported in “fair” or “poor” health (8.5% vs. 1.8%); more sick days (3.8 vs. 2.3); and, more days with mental health reported as “not good” (4.2 vs. 1.5) compared to the general population of children in the state.

Children with special health care needs were more likely to be covered by insurance than other children. A higher percentage of children with special health care needs children have access to services than for children in the general population (21% vs. 14.9%).

### ***References***

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# ***Violence and Injuries***

## ***Unintentional vs. Intentional Injury***

The field of violence and injury prevention divides injury by type, either intentional (suicide, homicide), or unintentional (motor vehicle crashes, falls). Unintentional injuries, commonly known as “accidents”, are a leading cause of premature death and disability. Injury prevention professionals use the term “injury” rather than “accident” because most injuries are predictable and thus preventable or out of an individual’s control. The change in terminology from “accidents” to unintentional injuries was a conscious effort to emphasize preventability.

Unintentional injuries are an increasingly important public health issue because of the burdens of loss of life, disability, and economic consequences that include health care costs and loss of productivity. The true impact of injury in the lives of Utahns has been difficult to quantify, partly because of inadequate data. The numbers of injuries treated in urgent care centers, outpatient clinics, physician offices, schools, or at home are not known.

### ***Overview of Utah Youth Safety***

YRBS 2001 Utah data provide some interesting information about students injuries, weapons, (gun, knife or club) and a sense of safety. The data indicate that 6% of Utah students reported carrying a gun with the past month, while 16.8% indicated that they had carried a weapon during this time. More than 8% of Utah students indicated that they had carried a weapon on school property and more than 5% of students reported that they did not go to school on one or more of the previous 30 days because they felt unsafe at school, or on their way to or from school. Almost 8% of students reported that they had been threatened or injured with a weapon on school property during the previous 12 months and about 12% of students reported that they had been in a physical fight on school property in the past year. Almost 30% of students (27.9%) reported that they had been in a physical fight during the past year, with 3.7% reporting that the fight had resulted in injuries requiring treatment. More than 9% of students reported that they had been hit, slapped or physically hurt on purpose by their boyfriend or girlfriend in the previous 12 months; 11% of males reported this problem compared to 8% of females.<sup>1</sup>

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## ***Abuse and Neglect***

### ***Definition***

Child abuse and neglect are defined as the maltreatment of a child aged 0 through 17 years. Maltreatment is physical abuse, sexual abuse, physical neglect, medical neglect, emotional maltreatment, or exploitation of a child. Utah law requires that anyone who suspects that a child is being abused or neglected report either to law enforcement or the Department of Human Services, Division of Child and Family Services (DCFS). Child abuse and neglect data for Utah adolescents are available for the ages 12 through 17.

### ***How are we doing?***

The rate of child abuse among Utah children overall has fluctuated over the past several years. The incidence of overall substantiated child abuse in Utah during 2000 was 12.1 per 1,000 children, a slight decrease from the 1999 rate of 12.2 per 1,000 children.<sup>1,2</sup> In 2000, 8,660 cases of child abuse or neglect were substantiated, with an additional 17,513 unsubstantiated.<sup>1</sup> Child abuse and neglect rates tend to decrease with increasing age. The rate of child abuse and neglect during 2000 among Utah youth ages 12-15 was 11.2 per 1,000, and for youth ages 16-17 was 6.2 per 1000.<sup>1</sup> In 2000 the occurrence of abuse among females was higher than among males (13.4 vs. 10.9) in Utah.<sup>1</sup>

### ***How does Utah compare with the U.S.?***

In the U.S., the child abuse and neglect rate was 12.2 per 1000 children, only slightly higher than Utah's rate.<sup>1</sup> In 2000, the rate of child abuse and neglect among youth ages 12-15 nationally was 10.4 per 1,000, and the rate for youth ages 16-17 was 5.8 per 1000, slightly lower than Utah's rate.<sup>1</sup> As in Utah, the occurrence of abuse among females was higher than among males (12.9 vs. 11.4) in the U.S. in 2000.<sup>1</sup> Unfortunately, Utah has a higher rate of abuse among females than the national rate for females. Maltreatment recurrence within six months of the initial report among children in the U.S. was 8.6 compared to 7.1 among Utah children in 2000.<sup>1</sup>

Utah children experience maltreatment differently than children nationally. The following table shows the differences in maltreatment types among Utah children compared to national figures. Utah children are more likely to experience psychological maltreatment and less likely to experience neglect compared to the national counterparts.

## Type of Substantiated Maltreatment of Youth between the Ages 12 and 17, U.S. and Utah, 2000

Type of Maltreatment	Utah	U.S.
Psychological maltreatment	40.8	7.7
Neglect	29.3	59.8
Sexual abuse	19.6	10.1
Physical abuse	15.8	19.3
Other	9.5	16.6
Medical neglect	1.0	3.0
Total*	116.0	116.8

Source: U.S. Department of Health and Human Services, Administration for Families and Children. (2002). Child Maltreatment, 2000, Table 3-4 Victims by Maltreatment Type, 2000. Washington, DC: Administration for Families and Children. Retrieved from: [http://www.acf.hhs.gov/programs/cb/publications/cm00/table3\\_4.htm](http://www.acf.hhs.gov/programs/cb/publications/cm00/table3_4.htm)

\*Total percent is more than 100 because some youth are counted in more than one category depending on type(s) of maltreatment.

### *Why is it important?*

Recognition of abuse and neglect is important because they can lead to many other devastating problems for youth. Children who are abused may be more likely to abuse others over the course of their lives. Violence becomes perceived as a normal and acceptable response for many children who have lived with abuse for long periods producing an intergenerational cycle of violence.

It is important to recognize youth who are victims of child abuse and neglect because they are typically underserved. Abuse and neglect are often harder to substantiate among adolescents who are older and better able to cover up bruises or injuries better than younger children. Adolescents may be able to defend themselves better so abuse is sometimes ignored or seen as something that “they had coming”.

Children referred for possible child abuse and neglect are at risk for poor health due to higher rates of poverty, inattention to medical needs, previously unreported and/or untreated injuries, and inappropriate or unsanitary living conditions in the home. Poor health may continue into adulthood for these youth.

Abuse and neglect put youth at higher risk for violence, suicide, mental illness, and other problems, which diminish opportunities for growth, education, a healthy self-esteem, and the ability to be a productive member of society. Other risk factors are health-related problems that result when a childhood illness has not been properly treated. Some individuals will have poor health and life-long problems due to the neglect they experienced during their childhood.

Health information received at the time of an investigation is sketchy, at best. Unless the state has been given authority by the court, DCFS caseworkers cannot require families to obtain a medical exam or to pursue medical treatment. When referrals of alleged abuse or neglect are investigated, no mandatory health screening or health status exam is required unless the report alleges medical neglect, severe physical abuse or sexual abuse. Therefore,

the health status of every referred child is not known. However, when children go in to the care and custody of the state, they receive a complete physical exam (see the Foster Care section).

### ***What are the risk factors?***

Youth at risk for abuse include those from parents who were abused, who use substances, who have few support resources, have economic, housing or personal problems, have difficulty controlling anger or stress, have mental health issues, or appear uninterested in care, physical safety or nourishment of their children.<sup>2</sup>

### ***What is being done?***

Many state laws deal with abuse and neglect. Reports are investigated by the Department of Human Services, Division of Child and Family Services (DCFS) and services are offered in many of these cases. Individuals who abuse or neglect children are prosecuted to the full extent of the law. In addition, many services are offered to those who need them. Some youth are removed from their homes temporarily to be protected from abuse and neglect. Youth in the custody of the state receive full medical, dental, and mental health exams, and treatment, when necessary.

### ***Where do we go from here?***

It is important to educate people, particularly parents, on good parenting practices and appropriate ways to discipline children in order to avoid abuse and neglect. We need to promote public awareness of the growing problem of abuse and neglect and solicit public support for prevention, education and treatment.

Some groups believe there is too much intervention from DCFS and other government agencies into the lives of families. However, public policy, state and federal laws require that child abuse and neglect be reported, investigated, and appropriate steps taken to protect vulnerable children and to prosecute perpetrators.

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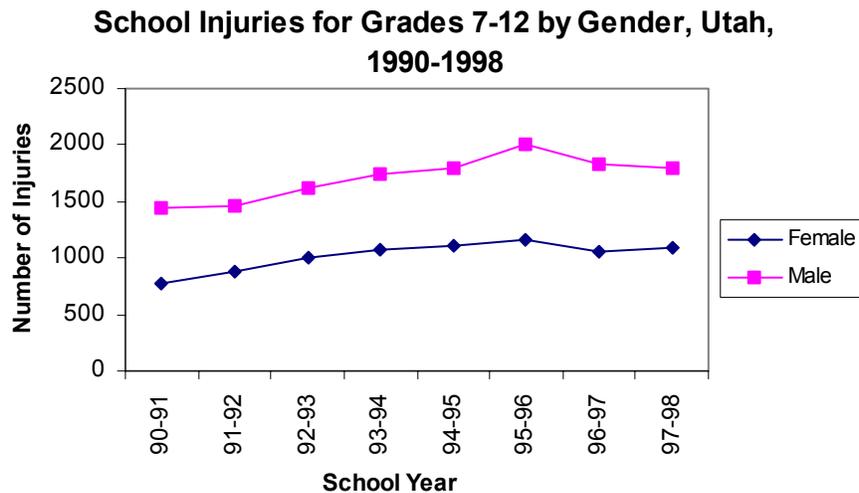
## School Injury

### Definition

A reportable school injury is one that causes the student to miss one half day or more of school or one that is serious enough to cause the student to be seen by a health care provider. A reportable injury can occur going to or from school, at school related activities (field trip, athletic event, etc.), before or after school, in a classroom, gymnasium, or another school location.

### How are we doing?

Since 1984, the Violence and Injury Prevention Program (VIPPP) has been gathering injury related school data from school administrators using the Student Injury Reporting System (SIRS). The Utah SIRS is one of the leading statewide school injury data systems in the United States. From 1990-1998, 21,803 injuries were reported involving children in the 7<sup>th</sup>-12<sup>th</sup> grades (approximately 12-18 years of age). The injury rate for this population increased from 11.9 per 1,000 students in the 1990-1991 school year to 13.0 per 1,000 students in the 1997-1998 school year. The rate of reportable school injuries has increased throughout the last eight years, which may be attributed to better reporting practices.<sup>1</sup>



Source: Violence and Injury Prevention Program. (2001). Student injury reporting system. Salt Lake City, UT: Utah Department of Health.

Note: Student injury report data for 1999-2001 school years are under analysis at present

### How does Utah compare with the U.S.?

On a national level, middle and high school students sustain more injuries than elementary school students do. Utah data show that elementary school students had more injuries than secondary school students did. Nationally, 31% of students who sustained injuries were aged 11-14 years (grade 6 through grade 9), and 41% were aged 15-19 years (grade 10 through grade 12).<sup>2</sup> In Utah, 38.3% were aged 11-14 years, and only 16.2% were aged 15-18 years. It is possible that secondary schools significantly under-report school injuries,

especially the high schools due to the following: 1) budget constraints, 2) staff shortage, 3) staff changeover, 4) other priority school duties or 5) students not reporting injury. Such under-reporting may account for the lower percentage of injuries in secondary school students in Utah.

Sports injuries are the largest single category of injuries for secondary students, accounting for 46% of all secondary school injuries in Utah compared to 55% nationally. Sport-related injuries are defined as injuries that occur during physical education classes, athletic training, athletic competition, or intramural competitions. This difference could be the result of one or both of the following: 1) under-reporting, or 2) using a different definition to gather sport-related injury data.<sup>2</sup>

### ***Why is it important?***

The SIRS provides injury professionals with accurate data that identify what injuries are occurring among students, when they are being injured, where they are being injured, and why they are being injured. Using these data allow VIPP staff to issue recommendations to school administrators and risk managers, as well as to assist decision makers in developing appropriate school policies and interventions.

Utah data indicated that 63% of all injuries occurred among boys; 44% of injuries occurred in gymnasiums and on athletic fields, 36% of injuries occurred during basketball, classroom activities, and walking. Fractures and possible fractures occurred more than other types of injury among this population. Appropriate interventions and prevention programs can minimize the serious impact of injury among students, thereby reducing costs to families and schools.

### ***What are the risk factors?***

Many factors place students at risk for injuries including:

- poor monitoring and lack of supervision of youth
- risk-taking behaviors among students
- poor decision-making skills by students
- inadequately maintained equipment
- lack of staff awareness of injury prevention
- lack of conditioning (sports-related injuries)
- lack of knowledge regarding appropriate safety procedures

### ***What is being done?***

The following activities have been implemented to increase the awareness of school injury prevention:

- bi-annual publication of a Student Injury Report
- publication of school injury data articles in professional journals
- continuing education for personnel to properly complete injury reporting forms in a timely manner
- education of all school district superintendents regarding data findings
- maintenance of an accurate and current school injury data base

- provision of current data to any interested party

Several measures can be taken to improve student injury reporting and subsequent prevention activities, such as developing a separate form for sport-related injuries; continuing community efforts with decision-makers at the local level to implement policy changes; and, developing stronger partnerships with the Office of Risk Management and the Utah School Boards Association.

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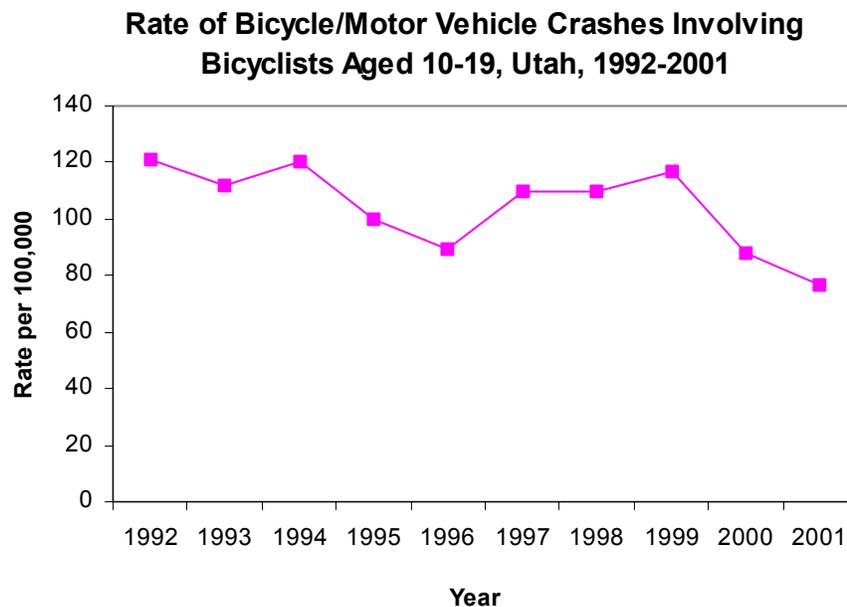
## ***Bicycle Injuries***

### ***Definition***

Bicycle injuries include all injuries reported to police of bicycle vs. motor vehicle crashes involving bicyclists. The term bicycle is inclusive of tricycles and pedal cycles, however is exclusive of motorized bicycles.

### ***How are we doing?***

In 2001, the rate of bicycle vs. motor vehicle crashes in Utah was the lowest in the past ten years at 77.1 per 100,000 persons aged 10-19, a dramatic decline from the 1992 rate of 120.4 per 100,000 persons.<sup>1</sup> Figure 1 illustrates the trend in bicycle injuries over time.



Source: Utah Department of Health, Office of Public Health Assessment, 2001

### ***How does Utah compare with the U.S.?***

Utah ranks relatively poorly compared to other states in bicycle safety. Utah ranked 8<sup>th</sup> highest in the country with a rate of 3.7/1,000,000 compared to the U.S. rate of 2.9/1,000,000 for bicycle fatality rates among all ages between 1992 and 2001.<sup>2</sup> In 2001, the Utah bicycle fatality rate for youth 10-20 years was 6.7/1,000,000 persons compared to the U.S. rate of 3.8/1,000,000 persons.<sup>2</sup> YRBS 2001 Utah data indicate that of those students who rode a bicycle during the previous year, more than 80% (84.5%) reported that they never or rarely wore a bicycle helmet compared to nationally.<sup>2,3</sup> In fact, helmet use by adolescents is even worse than the self-reported data from YRBS. According to an observation study, bicycle helmet use among adolescents is lower than use among any other age group in Utah. Only 5.7% of adolescent bicyclists were observed to wear helmets in 2001.<sup>4</sup> Additionally, Utah is one of 33 states that does not have any type of bicycle helmet law.

### ***Why is it important?***

Almost 150 (141) bicyclists aged 10-19 that were hit by motor vehicles were admitted as inpatients to Utah hospitals from 1992-1999. The total hospital charges for these bicyclists were \$2,005,894, with an average hospital charge of \$14,226.<sup>5</sup> An additional 475 bicyclists aged 10-19 were admitted as inpatients to hospitals in Utah from 1992 to 1999 for injury without motor vehicle involvement. The total of hospital charges for these bicyclists were \$2,983,138 with an average hospital charge of \$6,280.<sup>5</sup> Among adolescent youth aged 10-19 each year in Utah, two bicyclists are killed by motor vehicles, and over 400 bicyclists are hit by motor vehicles. Head injury is the leading cause of death in bicycle-related crashes.

### ***What are the risk factors?***

Bicyclists aged 10-19 are involved in more bicycle vs. motor vehicle crashes than any other age group in Utah. Many more bicyclists in this age group are injured without motor vehicle involvement. This same age group also has the lowest bicycle helmet use rate. Bicycle helmets are the single most effective safety device available to reduce head injury and death from bicycle crashes.<sup>6</sup> Less than 8% of Utah's secondary school-aged bicyclists wear helmets.<sup>4</sup>

The most common errors among bicyclists in this age group include:<sup>7</sup>

- riding into streets without stopping
- swerving into traffic
- running stop signs
- riding against the flow of traffic.

Other risk factors include:

- uneducated drivers in Utah on how to share roads with bicycles
- an environment not conducive to bicycling
- very little money spent on educating and training bicyclists about rules of the road
- an increase of motor vehicles on roads.

### ***What is being done?***

Reduced cost bike helmets are offered to the citizens of Utah. Annually, several thousand helmets are distributed through local health departments in Utah. Bike reflectors, t-shirts, and other miscellaneous items are also given away every year. Bicyclists are educated through bike rodeos, safety fairs, and bicycle brochures. The general public is educated through the media. May is designated as National Bike Month. Utah Department of Health Violence and Injury Prevention Program (VIPP) staff members work with the Parent Teacher Association and other organizations to implement bicycle helmet school policies. VIPP, in conjunction with the Utah Highway Safety Office, conducts a statewide bicycle helmet study to determine helmet use rates of bicyclists in Utah.

### ***Where do we go from here?***

Since bicycling is a great form of exercise and transportation, providing bicyclists with safe places to ride through striped bicycle lanes and shoulders can enhance the safety of

bicycling. Public education and amending the motor vehicle code to give precedence to bicyclists will help towards achieving this goal.

There are five key goals to significantly increase the safety of bicyclists:<sup>8</sup>

1. Motorists will share the road. Public education and amending the motor vehicle code to give precedence to bicyclists will help towards achieving this goal.
2. Bicyclists will ride safely. Increasing public education, expanding school-based and community-based programs, and motivating decision makers at all levels to adopt policies that promote safe bicycling and accomplish this goal.
3. Bicyclists will wear helmets. Target audiences that need to be addressed are elementary and secondary school age students, parents of these students, males, and rural bicyclists.
4. The legal system will support safe bicycling. The collection and quality of data concerning bicycle crashes needs to be improved. Law enforcement needs to enforce bicycle-safety traffic laws aimed at motorists and bicyclists. The court system needs to impose meaningful penalties for motorist violations.
5. Roads and paths will safely accommodate bicyclists. Professionals responsible for the planning, design, and operation of the transportation system need to be trained to better consider and accommodate bicycle travel. Hundreds of miles of roadways in Utah need to be improved to better serve everyday bicycle travel by providing striped bicycle lanes and other safe bicycling facilities.

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## ***Motor Vehicle Traffic Crashes***

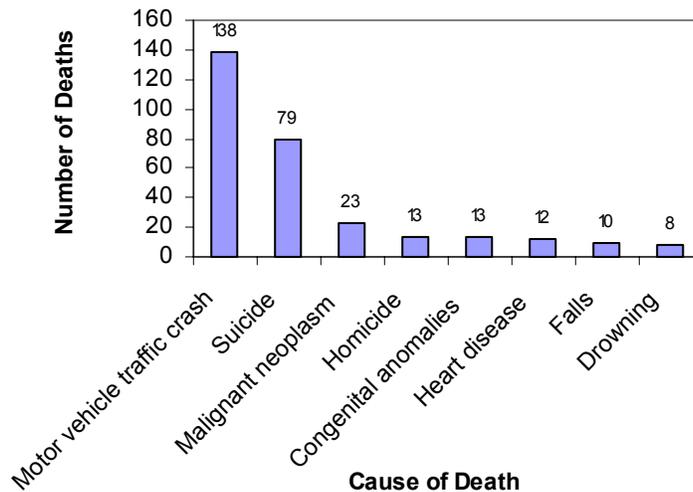
### ***Definition***

A motor vehicle traffic crash (MVTC) is a crash that involves at least one motor vehicle on a public roadway in Utah and is reported by law enforcement. Motor vehicle crashes include those involving a single vehicle, single vehicle running off of roadway, motor vehicle vs. fixed object, motor vehicle rollover, two or more motor vehicles, motor vehicle vs. pedestrian, motor vehicle vs. bicycle, motor vehicle vs. animal, or motor vehicle vs. train.

### ***How are we doing?***

According to the National Center for Health Statistics, MVTCs are the leading cause of death in Utah for adolescents aged 15-19, accounting for 78.5% of deaths in this age group.<sup>1</sup> From 1999-2001, 138 MVTC deaths involved adolescents aged 15-19 for a rate of 21.9 per 100,000 adolescents. More Utah adolescents die in MVTCs than the four leading causes of death of suicide, malignant neoplasms, homicide, and congenital anomalies combined.<sup>2</sup>

**Leading Causes of Death, Aged 15-19, Utah, 1999-2001**



Source: National Center of Health Statistics, 1996-2001. Note: The most current year for which national data are available for comparison is 1999. The change from International Classification of Disease (ICD) 9 Coding in 1998 to ICD 10 in 1999 prohibits trend analysis for Utah data beyond 1998 for this indicator.

### ***How does Utah compare with the U.S.?***

From 1980 to 1992, the death rate for MVTCs in Utah declined to below the overall U.S. rate. However, the motor vehicle death rate in Utah from 1992-1998 for all ages increased and was higher than the national rate. For Utah youth aged 15-19 years, the MVTC death

rate in 1999-2001 was 21.9 per 100,000 adolescents compared to the 1999 national rate of 284.4 per 100,000 adolescents.<sup>1,2</sup>

### ***Why is it important?***

MVTC injury is the leading cause of death among children, teens, and young adults. In Utah during 1999-2001 MVTC among those aged 15-19 accounted for approximately 138 deaths and 900 inpatient hospitalizations. The inpatient hospitalization charges amounted to over \$14.2 million, not including the cost of visits to emergency rooms, clinic and doctor's offices, or the cost of lost wages and lost productivity.<sup>3</sup>

Over 29,000 Utah adolescents aged 15-19 are involved in a MVTC every year in Utah, more than any other age group. Approximately one-third of all crashes in Utah involves a teenage driver. Nearly one-half of the pedestrians hit by motor vehicles in Utah are between the ages of 5-19. Teenage drivers are involved in almost one-fourth of the pedestrian crashes in Utah.<sup>3</sup> In Utah, from 1998-2001, only 21% of adolescents aged 15-19 who died as occupants in a MVTC wore a seat belt. Almost 8% of Utah students reported that they never or rarely wore their seatbelts when riding in a car driven by someone else.<sup>4</sup> Seatbelts are an important safety feature; occupants who were not wearing a seatbelt in Utah were 17 times more likely to sustain a fatal injury than occupants who were wearing a seatbelt.<sup>3</sup>

### ***What are the risk factors?***

The risk factors for Utah teenage drivers that result in a motor vehicle crash are divided into two categories:

#### All Adolescent Driving Crashes

- Improper lookout (27.6%)
- Failed to yield the right of way (17.1%)
- Following too closely (12.4%)
- Speed too fast (11.8%)
- Other improper driving (8.5%)

#### Fatal Teenage Driver Crashes

- Speed too fast (32.9%)
- Other improper driving (16.5%)
- Fell asleep/fatigued (13.0%)
- Improper lookout (8.2%)
- Drove left of center (8.2%)

Less than 2% of teenage driver crashes involved a contributing factor of alcohol or drugs.<sup>3</sup> However, 17% of Utah students reported that they rode in a car driven by someone who had been drinking alcohol, and 6.4% reported that they had driven a car when they had been drinking alcohol.<sup>4</sup>

### ***What is being done?***

The Utah Department of Health's Violence and Injury Prevention Program (VIPP) is working with several agencies and community partners to promote the use of safety belts. Additionally, VIPP has assisted the Coalition for Utah Traffic Safety in educating the public about Utah's graduated driver licensing law for youthful drivers and primary enforcement of seat belt laws. VIPP is currently working with high school driver education programs to improve training for young drivers.

The Graduated Driver's License Bill, which was passed in the 1999 Legislative Session, addresses the issue of teenage driving and crashes. The regulations apply to new drivers under the age of 18 years and require the following steps for teenage drivers applying for a driver's license for the first time: 1) obtaining an instruction permit, which allows driving with a certified instructor; completion of a driver education course and passing a written exam; 2) completion of 30 hours of behind-the-wheel driving (at least 10 hours after dark) with a parent, guardian, or licensed spouse (over 21 years old); and 3) completion of a driving test and obtaining a provisional "D" (passenger vehicle), or "M" (passenger vehicle plus motorcycle) license. The provisional license is labeled "under 21" with a distinctive color. Adolescents are allowed a lower threshold of points/citations before sanctioning (losing their license). Some of the restrictions for a graduated driver's license include: night-time restrictions for those under 17, prohibiting them from driving between midnight and 5:00 a.m., and for the first six months of licensure, teenage drivers can only drive with other teen passengers if there is an over-21-year-old licensed driver in the front seat of the vehicle. However, there are a few exemptions including driving themselves or family members; driving with an over-21-year-old licensed driver; for employment, or going to or from employment; going to or from a religious or school activity; in a supervised agricultural operation; or in an emergency. Teenager drivers can drive teenage occupants to or from school, school activities, church activities or agricultural work if they have a note signed by a parent or guardian.

### ***Where do we go from here?***

Adolescents need to use seatbelts more often and regularly to reduce injuries and deaths associated with motor vehicle crashes. Several interventions in secondary schools have been effective to increase seatbelt use. Driver education programs in the state can also be improved to better train new drivers and give them more experience behind the wheel. Parents need to be encouraged to take a greater responsibility of training their teenage drivers.

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## Traumatic Brain and Spinal Cord Injuries

### Definition

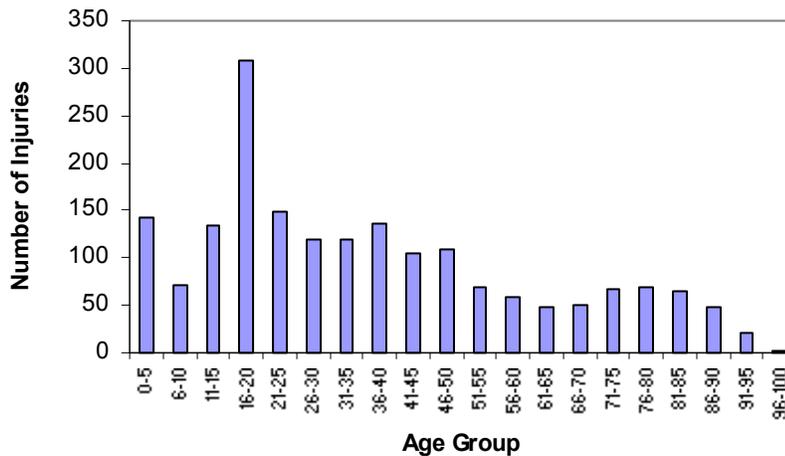
**Traumatic Brain Injury (TBI):** An occurrence of injury to the head causing decreased level of consciousness, amnesia, skull fracture, neurological or neuropsychological abnormality, diagnosed intracranial lesion.

**Spinal Cord Injury (SCI):** Occurrence of an acute injury to the spinal canal resulting in temporary or permanent disability.

### How are we doing?

Utah adolescents have the highest rate of TBI and second highest rate of SCI compared to all other ages. Adolescents aged 16-20 years have more than twice the number of TBIs than any other age group in Utah. Of those aged 16-20 in 1999 who sustained a brain injury from a car crash where belt use was known, 65% were not wearing a seat belt. Among those aged 11-20 during 1999 who sustained a spinal cord injury from a car crash in which belt use was known, 82% were not wearing a seat belt.

**Traumatic Brain Injuries by Age in Utah, 1999**



Source: Violence and Injury Prevention Program. (2001). Traumatic brain and spinal cord injury surveillance system, 1999 unpublished data. Salt Lake City, UT: Utah Department of Health.

### How does Utah compare with the U.S.?

The number one cause of TBI and SCI in Utah is motor vehicle crashes. Utah 1999 data indicated that 52% of SCIs and 36% of TBIs occurred due to a motor vehicle crash; falls accounted for 20% and 25%; and sports accounted for 6% and 5%, respectively. So few SCIs were caused by violence in Utah that this statistic was not remarkable enough to include in this report. During 1999, 26% of TBIs in Utah resulted in death compared to 22% nationwide.<sup>3</sup> According to the Centers for Disease Control (CDC), data show that

motor vehicle crashes account for 35% of SCIs, violence is associated with 30%, falls are associated with 19% and sport injuries are associated with 8% nationally.<sup>2</sup>

### ***Why is it important?***

According to the Brain Injury Association of America more people sustain a TBI in a year than are diagnosed with breast cancer, HIV/AIDS, spinal cord injury, and multiple sclerosis combined.<sup>3</sup> TBIs can result in long-term cognitive impairment and the inability to function in normal daily activities. Many of those who become impaired may have difficulty remembering, learning, controlling emotions, living alone, earning a living, and getting from place to place. These injuries often cause permanent alterations in a person's vocational aspirations, affecting social and family relationships. In Utah during 1999, there were approximately 240 TBIs severe enough to require hospitalization among those aged 16-20, nearly 43% higher than any other age group.<sup>1</sup> SCI, as with TBI, brings many life changing circumstances. These injuries can require extensive rehabilitation and time to re-learn how to care for one's self. Both TBIs and SCIs result in increased health care needs and costs over an affected individual's lifetime. "Life expectancy for people with spinal cord injuries is lower than that for the general population, although it is increasing. Cumulative survival during the first 12 years after a spinal cord injury is more than 88% of that expected in the absence of such an injury. People with spinal injuries are at much higher risk of death from septicemia, pulmonary embolism, and pneumonia."<sup>4</sup>

### ***What are the risk factors?***

Males are two times more likely to be injured than females. During 1998-1999 in Utah, 77% of SCIs occurred to males, slightly greater than a three to one male to female ratio.<sup>1</sup> The injury rate for the male population is high because of their competitive nature, love of extreme sports, and willingness to take chances without considering the consequences. The risk factors for SCI are incredibly similar to TBI. Almost 60% of SCIs nationwide occur to persons in the 16 to 30 year age group.<sup>5</sup>

Age is also a risk factor, with young adults being the most likely to be affected. The reason may be driving inexperience, inability to make accurate assessments of dangerous situations, and peer pressure. In fact, Utah teens 15-17 years old are five times more likely to have a fatal crash and 3.5 times more likely to have a crash resulting in hospitalization when traveling with passengers rather than when driving alone.<sup>5</sup> Teens are less likely to wear seat belts than other age groups thus increasing the risk of injury when involved in a crash. The combination of speeding, risk taking, inexperience, and lack of seat belt use can be a deadly effect for the teen and other drivers on the road.

### ***What is being done?***

A new initiative with a high potential for impact is Utah's Graduated Driver's License Law, which allows new adolescent drivers to learn driving skills over time and gain the experience needed to become safe drivers. Through this new law, teens receive a "limited driver's license". They are not allowed to drive at night, with friends (without first meeting specified requirements), and can be pulled over for a seatbelt violation as a primary offense.

Additionally, the Traumatic Brain Injury Project at the Utah Department of Health is creating useful teaching resources for driver education classes, physicians, and other health care providers. Program staff promote helmet use for many outdoor activities including snow skiing, biking, mountain climbing, skateboarding, and inline skating.

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## *Sexual Assault and Rape*

### *Definition*

**Rape:** "A person commits rape when the actor has sexual intercourse with another person without the victim's consent." 76-5-402<sup>1</sup>

**Rape of a child:** "A person commits rape of a child when the person has sexual intercourse with a child who is under the age of 14" at the time of the incident. 76-5-402.1<sup>1</sup>

**Sexual abuse of a minor:** sexual activity with a minor who is 14 years of age or older, but younger than 16 years of age, at the time of the incident and the person who commits sexual abuse of the minor is seven years or more older than the minor. 76-5-401<sup>2</sup>

**Unlawful sexual conduct:** sexual activity with a minor who is 17 years of age or older, but younger than 18 years of age, at the time of the incident and the person who commits unlawful sexual conduct is ten or more years older than the minor. 76-5-401.2<sup>1</sup>

For more specific information, refer to Utah Code 76-5-401 & 402.

### *How are we doing?*

In Utah, a reported rape occurs once every 10 hours.<sup>3</sup> In 2001, there were 873 rapes reported to law enforcement statewide.<sup>3</sup> In Utah, it is estimated that only 16% of rapes are reported to law enforcement. Hence, it can be estimated that over 5,400 rapes occurred in Utah. The incidence of rape among all victims has more than doubled during the past decade from 392 occurrences in 1988 to 852 occurrences in 1998.<sup>3</sup> According to the Salt Lake City Police Department, in 2000, persons aged 18 years or younger comprised 59.7% of sexual assault victims, and sexual assault suspects aged 11-19 represented 40% of perpetrators.<sup>4</sup>

### *How does Utah compare with the U.S.?*

Utah's rape rate is 15<sup>th</sup> highest in the nation, higher than the rates in New York, New Jersey, and California.<sup>5</sup> Nationally, one in five teens (male or female) will be the victim of either sexual or physical abuse in a dating relationship.<sup>6</sup> In fact, sexual assault is the second leading cause of violence-related injury in the United States for adolescents aged 10-14.<sup>7</sup> Of reported rapes, 60% involve victims under the age of 18, and the average age of initial sexual victimization occurs between ages 6-8. Nationally, it is estimated that 78% of adolescent sexual assault victims do not tell their parents about the incident.

### *Why is it important?*

According to the National Violence Against Women Survey, sexual violence is a crime committed primarily against female youth. Of the women who reported being raped at some time in their lives, 54% were under the age of 18 at the time of the rape.<sup>8</sup> Rape and sexual assault devastate and destroy victims and their families. Sexual violence impacts everyone—women, children and men of all ages, races, and socioeconomic status.

Rape and sexual assault cause serious physical as well as mental and emotional injury among men, women, and children in Utah communities. Rape victims are at an increased risk for substance abuse and 13 times more likely to make a suicide attempt. At some point

in their lives, 30% of victims experience major depression. Emotional consequences of sexual assault or rape are manifested often through sleeping and eating disorders, nervousness, anxiety, and/or an inability to accomplish daily tasks. Many of these symptoms have a considerable effect on health care costs and community resources. According to the National Institute of Justice, approximately 259,000 rape incidents were recorded nationwide in 1993. The estimated cost reached nearly \$23 billion.<sup>8</sup>

### ***What are the risk factors?***

In Salt Lake City, alcohol is a contributing factor in nearly 90% of all reported cases for sexual assault victims 16 years of age and older.<sup>4</sup> The incidence of other drug-induced rapes has increased in Utah, especially among young adults. The common “date rape drugs” or “club drugs” include Gama-hydroxybutyrate- a.k.a. “GHB”, “G”, “Grievous Bodily Harm”; Rohypnol- a.k.a. “roofies”; Ketamine- a.k.a. “K”, “Vitamin K”; “Special K”; and, Ecstasy- a.k.a. “X”, “XTC”, “Hug Drug”, “Rollin”. These drugs incapacitate the victims, making it difficult for them to defend themselves. Tracking the prevalence of drug induced rape is difficult since some drugs exit the digestive system in less than twelve hours and victims, having no memory of the event, awake unaware of how they lost consciousness. Because these drugs are odorless and colorless, victims do not suspect drug use early enough for it to be detected. Many adolescents lack basic knowledge about these drugs and their popularity among offenders, as well as how they can protect themselves from exposure to a date rape drug.

### ***What is being done?***

Ten rape crisis programs in Utah maintain a statewide, toll free, 24-hour rape and sexual assault crisis and information line (1-888-421-1100). Trained professionals and volunteers staff the crisis line to provide confidential crisis services, information, and support for callers. Hospital response teams provide services to reporting victims in health care settings, especially during the collection of evidence. Eleven rape crisis programs in Utah provide educational and informational public awareness presentations to increase sensitivity within communities regarding the risk factors associated with sexual violence. Yearly public awareness campaigns are developed to increase the understanding of issues that surround sexual violence and to promote community awareness. Standardized training for rape crisis advocates is provided by the Utah Coalition Against Sexual Assault to ensure effective and correct training for all advocates serving survivors of rape and sexual assault. Victims of sexual assault are often referred to as “survivors” as a means to ensure victims that often he/she can overcome the incident and move forward in his/her life.

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## Homicide

### Definition

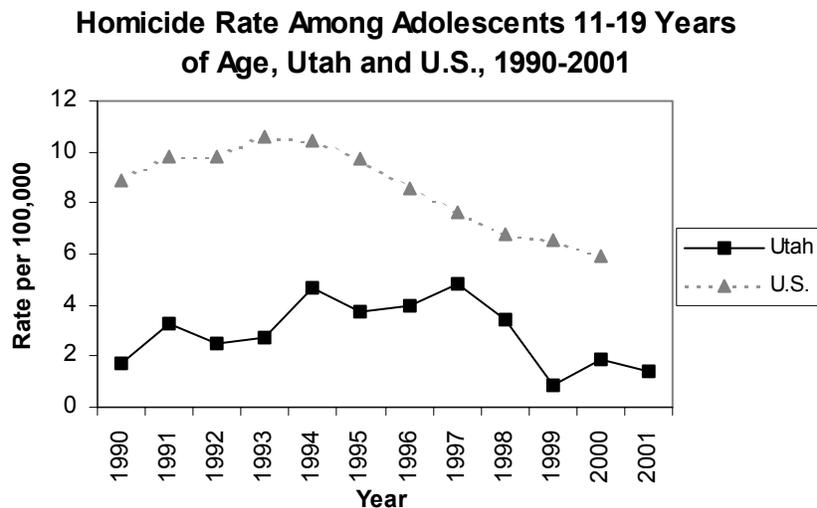
Adolescent homicide is the death of an individual between the ages of 11-19 that results from the deliberate action of another individual.

### How are we doing?

In Utah the number of adolescent homicide deaths increased over most of the 1990s until 1998 when the numbers declined. Between 1990-1998 on average there were 12.4 homicides per year among victims between the ages of 11-19, representing an average rate of 3.7 homicides per 100,000 adolescents. Homicide is currently the 5th leading cause of death among Utah's adolescents.<sup>1</sup> In 2001, 5 homicides occurred among 11-19 year old youth in Utah for a rate of 1.4 per 100,000.<sup>2</sup>

### How does Utah compare with the U.S.?

Utah's adolescent homicide rate was lower than the national rate throughout the 1990s. Nationally, homicide is the 4<sup>th</sup> leading cause of death for adolescents aged 10-14 and the second leading cause of death for adolescents aged 15-19 years of age.<sup>3</sup> According to the CDC, the national homicide rate among 15-19 year old adolescents fell significantly between 1993 and 1997.<sup>4</sup> Utah did not experience a similar substantial decline in its homicide rate during that period, however rates did start to drop in 1998.



U.S. Data Source: Centers for Disease Control, November 21, 2002

Utah Data Source: IBIS, Available: <http://health.utah.gov/ibis-ph>.

Note: The coding for external cause of injury for 1999 and later, based on the ICD-10 classification system, is notably different from coding prior to 1999, based on the ICD-9 classification system.

Numbers of deaths and death rates computed for some external causes of injury based on 1999 and later data may not be comparable to those based on data from 1998 and earlier. Consequently, trend analysis of numbers of deaths and death rates across these years may not accurately compare numbers and rates. A comparability study to assess the effects of the change from ICD-9 to ICD-10 is underway by National Center for Health Statistics.

### ***Why is it important?***

Homicide is the 3<sup>rd</sup> leading cause of death to Utah adolescents aged 11-19 years. More importantly, it is preventable. The reasons homicides occur vary--some are due to gang violence or are drug related, others are related to domestic violence, or unsupervised firearm handling. Each of these deaths greatly impacts the community and lives of those close to the homicide victim.

### ***What are the risk factors?***

A variety of both individual and social factors can increase the possibility of being involved in violence as an adolescent. Nationally, research has specified a variety of factors such as:

- beliefs supportive of violence
- social cognitive deficits
- poor monitoring and supervision of children
- exposure to violence
- parental drug/alcohol abuse
- adolescents' drug/alcohol abuse
- association with peers engaged in high-risk behavior
- poverty and low economic opportunity
- high levels of family disruption.

Similar factors have been determined to exist and influence violence in Utah's adolescents.

### ***What is being done?***

The UDOH, in conjunction with state and local agencies, conducts two fatality reviews that take an in-depth look at adolescent homicides—the Child Fatality Review Committee (CFRC) and the Domestic Violence Fatality Review Committee (DVFRC). The adolescent homicides that result from domestic violence are reviewed by both committees. The DVFRC makes recommendations to public and private agencies to work toward the prevention of future homicides. Adolescent homicides not related to domestic violence are reviewed by the CFRC. The CFRC also makes recommendations to public and private agencies to prevent future homicides. Through these recommendations, changes occur that improve prevention efforts and strengthen public systems among partnering agencies.

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# ***Suicide***

## ***Definition***

Suicide is “a death due to intentional self-inflicted injury”. It is important to note that suicide deaths may be under-reported. For example, a proportion of motor vehicle crash deaths may in fact be suicide.

## ***How are we doing?***

In 2001, approximately 316 Utahns died from suicide, including 25 deaths of adolescents 15-19 years for an adolescent rate of 11.9 per 100,000 persons. Of the 25 adolescent deaths, 24 were among males for a rate of 22.9 per 100,000 males.<sup>1</sup> Since 1980, suicide rates have decreased for all Utah females (7.1 per 100,000 females in 1980 to 4.6 in 2001); while rates have increased for all males (18.7 per 100,000 males in 1980 to 22.9 in 2001).

YRBS 2001 data indicated that 27.2% of Utah adolescents reported ever feeling sad within the previous 12 months, 19.4% reported seriously contemplating suicide, 14.5% reported having made plans for suicide, 9.2% reported having actually attempted suicide, and 3.9% reported their suicide attempt required medical treatment.<sup>2</sup>

## ***How does Utah compare with the U.S.?***

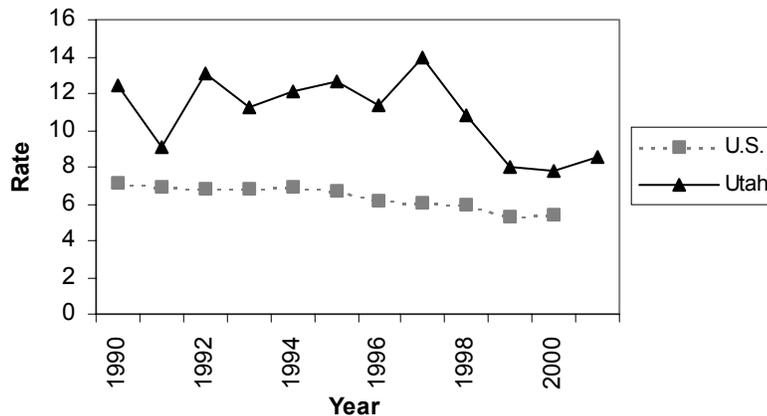
Suicide is the second leading cause of injury death in Utah, accounting for almost as many deaths as motor vehicle crashes. Utah's overall suicide rate is 10th highest in the nation. It was the leading cause of death for Utah males aged 15-19, and continues to be the leading cause of death for males through the age of 44 years. For nearly two decades, the Utah suicide death rate has been higher than that of the U.S. In 1999, the most recent year in which data were available for comparison, the rate of suicide deaths in Utah for males 15-19 years of age was 24.9 per 100,000 persons compared to the U.S. rate of 13.3 per 100,000.<sup>3</sup>

The rate of suicide in Utah for young males is one of the highest in the nation. In the United States, suicide is the 8<sup>th</sup> leading cause of death for all individuals, but more importantly, the third leading cause of death for adolescents aged 15-24. In 1998, 4153 adolescents between the ages of 15 and 24 years committed suicide in the United States, an average of 11.3 deaths per day.<sup>4</sup>

YRBS 2001 data indicate that a higher percentage of Utah adolescents reported seriously contemplating suicide, actually attempting, and suicide attempts required medical treatment compared to US adolescents. Interestingly, a higher percentage of US adolescents reported ever feeling sad and making plans for suicide than Utah adolescents reported.<sup>2</sup>

Although boys and men are more likely to complete suicide, the rate of suicide attempts requiring hospitalization is higher for girls and women. Demographically, suicide in Utah is similar to the U.S., with 88% of completers being male, and the majority of deaths by firearm. Among males, firearms accounted for the 64%, while among females, the most common cause of suicide death was poisoning (39%).

### Suicide Rate Among Adolescents 11-19 Years of Age, Utah and U.S., 1990-2001



U.S. Data Source: National Center for Injury Prevention and Control. (2003). Fatal injury reports. Web-based injury statistics query and reporting system. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from: [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars).

Utah Data Source: Center for Health Data. (2002). Indicator-based information system (IBIS) for public health. Salt Lake City, UT: Utah Department of Health. Retrieved from: <http://health.utah.gov/ibisph>.

#### ***Why is it important?***

Suicide and suicide attempts contribute to disability and suffering for hundreds of thousands of Americans each year. Between 1952 and 1995, the incidence of suicide among adolescents and young adults nearly tripled. In fact, more teenagers and young adults died from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia and influenza, and chronic lung disease combined.<sup>3</sup>

Further research indicates that at least one in five juveniles under age 18 who has been arrested has serious mental health problems and disorders. In 1999, police arrested 2.5 million juvenile offenders. Investigations of juvenile offender facilities show that mental health services for youth are unavailable.<sup>5</sup> Even fewer mental health resources are available for juvenile offenders involved with probation officers in Utah.<sup>6</sup>

Suicide causes devastating personal and emotional suffering for friends and family of the victim, as well as serious social and economic consequences for the community.<sup>7</sup>

#### ***What are the risk factors?***

Several “psychological autopsy” studies have shown that over 90% of young suicide completers demonstrated major psychiatric disorders. Current research shows that primary risk factors for suicide include specific mental health disorders, such as major depressive and other moderate and mild mood disorders, substance abuse disorders, conduct disorders (delinquency), and anxiety disorders. One of the distinguishing features of adolescent suicide is that it may be precipitated by a psychosocial stressor such as a recent loss, rejection, or disciplinary crisis. However, these events are common in a normal adolescent’s life.<sup>4</sup>

Family dysfunction is an important predictor of juvenile conduct disorder (delinquency). Juvenile delinquency that results from family dysfunction often begins a vicious cycle in which a youth's behavior leads to negative parental reactions, thus exacerbating the child's misbehavior, introducing a cycle that is both cause and effect of delinquent behavior.<sup>8,9</sup> Parental rejection of a child has been cited as one of the strongest predictors of delinquency.<sup>10-13</sup> Effective family functioning, which includes clear expectations for behavior as well as monitoring and enforcement of those standards, presumably provides protective factors in developing a child's sense of social responsibility.<sup>9, 14, 15</sup>

### ***What is being done?***

The UDOH Violence and Injury Prevention Program (VIPP) in collaboration with the University of Utah developed the Utah Youth Suicide Study to identify opportunities for prevention among adolescents. The study revealed that 63% of Utah adolescent suicide completers had contact with Juvenile Justice.<sup>7</sup> The researchers hypothesized that the Juvenile Justice System would provide new opportunities for mental health screening and suicide prevention.

The Utah Youth Suicide Pilot Study, a collaborative effort among VIPP, Juvenile Court System, University of Utah and Utah Youth Village, will focus on efforts to prevent suicide among Utah's highest risk group, males aged 17-23 with eight or more Juvenile Court offenses. Using mental health treatment as a form of secondary prevention, the study will include male youth aged 13-16 with 4-12 juvenile offenses.

The Youth Suicide Task Force (YSTF), formed with assistance from VIPP in response to a resolution passed in the 1998 Legislative Session, developed the Youth Suicide Prevention Plan in 2000 and will release a follow-up Action Plan for Youth Suicide Prevention in 2003. Primary objectives of the YSTF are improvement in suicide prevention through the early identification, intervention, and referral of high-risk youth. The YSTF, also, strives to improve and increase levels of public awareness and professional training.

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# ***SPECIAL POPULATIONS***

## ***Minority Youth***

Racial and ethnic groups are a relatively small proportion of Utah's population, however, these groups are growing at a faster rate than the overall state population. Hispanic groups are the largest ethnic group and comprise 9.0% of the total population. Asian/Pacific Islander, American Indian, and Black populations represent 2.6%, 2.3%, and 0.8% of the Utah population respectively.<sup>1</sup> The five population groups are determined by the U.S. Census Bureau and do not include refugee and immigrant groups from Eastern Europe and the Middle East, although they face many of the same health access barriers faced by those in the five major categories.

According to the U.S. Census Bureau, the ethnic groups in Utah combined together are younger and live in even larger families than the Utah norm, which is highest in the nation. About 36.3% of the state's population is under age 20, with 18.3% between the ages of 10-19 years.<sup>2</sup> The state's median age of 27.1 years is the nation's youngest; in the United States, median age is 35.3 years. However, the median age for racial and ethnic groups in Utah is even younger than the state median age: Utah Latinos is 23 years; 21.3 years for Pacific Islanders, 23.2 years for American Indians and Alaskan natives and 24.8 years for African-Americans.

The Utah Public Health Outcome Measures Report points out the following, "Racial and ethnic diversity is growing dramatically in Utah." Our current health system was developed based on the needs of the white/Anglo-type Utah culture. As a result, Utahns of other cultures experience barriers to receiving health care."<sup>3</sup> Almost 15% of Hispanic children were without health insurance compared to 5.7% of non-Hispanic children.

It is difficult to obtain precise measures of an indicator for racial and ethnic populations because they are small. Data specific to ethnic adolescents are not available. Adolescents of ethnic and racial minorities are disproportionately represented in certain health indicators, such as motor vehicle crash fatalities and homicides. Among American Indian youth in Utah, the motor vehicle crash death rate and the death rate from other injuries were both 2.5 times greater than the overall state rate. Homicide death rates among Black, Hispanic, and American Indian young people were four to six times higher than the overall state rate.<sup>4</sup>

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## ***Migrant and Seasonal Farm Worker Youth***

In Utah, adolescent children of farm workers and adolescent farm workers encounter the same barriers to health care as their adult counterparts. These barriers include distance from migrant health centers, lack of health insurance, need for translation services and loss of income due to lost work to obtain health care. Other environmental factors that affect health include isolation, lack of sanitation facilities, long hours exposed to the elements, and exposures to chemicals/pesticides and working around heavy equipment.

The many personal challenges and demands of maintaining a mobile lifestyle and employment in manual labor lead to middle and late adolescents assuming roles as adults sooner than their cohorts. For example, it is common for 16-year-old females and 17-year-old males to wed and start their own families. At the Migrant Health Clinic in Brigham City the most common reasons for an office visit for this age group relate to pregnancy, family planning and well family assessments, followed by dental caries. This clinic received funding to provide dental treatment, in partnership with the Weber State University Hygiene Program, which includes dental cleaning and education on the proper care of teeth.

As a whole, adolescents are the healthiest age group among farm workers and their dependents. Aside from acute illness and injuries, the health interventions for this age group need to focus on lifestyle choices and prevention of substance including tobacco. Farm worker adolescents are susceptible to peer influence and modeling of what they perceive to be adult behaviors because of their interactions with and the acceptance of older adolescents as adults in farm worker communities. Healthy behaviors and lifestyle choices (i.e. abstention from drinking, smoking, unprotected sex, practicing safe work place behaviors, etc.) and associated health outcomes need to be included as an integral part of any health program geared toward this population.

### ***Refugee Youth***

In 2001, 769 refugees arrived in Utah, of which 207 (27%) were under the age of 15. More than three-quarters of the refugees were from five countries: Bosnia, Sudan, Iran, Kenya, and Cuba. Following events of September 11, 2001, the number of new refugee arrivals has drastically declined in Utah and the United States.

The Utah Department of Health Refugee Health Program works with community agencies to ensure that all refugees, both youth and adults, receive a health screening within the first 30 days of arrival and appropriate health care. Health care includes immunizations, treatment for parasites, and screenings for tuberculosis, Hepatitis B, sexually transmitted infections, HIV, anemia, diabetes, and heart disease.

Programs, such as “Young Refugees of Utah for World Peace”, promote leadership skills and crime prevention of crime through problem solving skills. Community organizations offer programs that help refugee youth deal with the new education system and other issues of adjusting to a new life in a new country.



## ***Pregnant and Parenting Teens***

Parenting is a challenging experience for anyone, but even more so for adolescents. During a time when most adolescents are still trying to achieve the usual developmental milestones of adolescence and doing things with their friends, teen parents are responsible to support, feed and care for a young child. The most pressure they face is exacerbated by the fact that adolescent parents and their children generally do not have the financial resources available to them that parents do who start their families when older and more mature.

Adolescent parents and their children represent populations at increased risk for health, psychological, developmental, and social problems.<sup>1</sup> A young teen woman who has a child before graduating from high school is less likely to complete her high school education, leaving her at much higher risk for very limited employment options and low income.<sup>2</sup> Because adolescent pregnancy is more common among disadvantaged populations, the cycle of poverty, lack of education, and other consequences continue for the teen mother and her child.

A teen who has not completed the developmental milestones of childhood lacks resources for themselves, such as proper nutrition, health care, and nurturing, that their own young children need to develop. It is no surprise, therefore, that they are unable to provide the resources to a young child who requires them to develop.

A report that was developed to give voice to pregnant and parenting teens describes four main themes that emerged from focus groups conducted with pregnant and parenting teens.<sup>3</sup> The four main themes that were heard include:

- Pregnant and parenting teens felt isolated from their peers and communities, and were desperate for accurate information and helpful supports.
- Teen pregnancy and parenting issues are of gender and poverty; poverty is pervasive to the extent that basic needs such as food, shelter and safety are often unmet for mother and children.
- Teen parents want to continue their education so they can get jobs and support their families, but the barriers, lack of childcare, transportation, academic flexibility and social-emotional support, are insurmountable.
- Pregnant and parenting teens do not fit easily into any one service system; they need services from many sectors to enable them to stay in school, and learn to be effective parents.

Adolescent parents need a great deal of support from their families, schools and communities. A coalition of organizations throughout Utah has formed to work towards improving outcomes for pregnant and parenting teens, Utahns Concerned About Adolescent Pregnancy and Parenting (UCAPP).

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## *Youth in Foster Care*

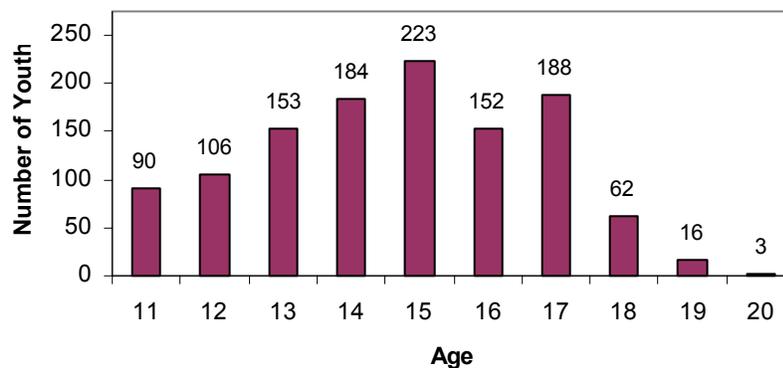
### *Definition*

Foster care is the temporary placement of a child in out-of-home care due to child abuse, neglect or dependency (lack of family support). Information provided is a snapshot of youth ages 12-18 years old who were in the Utah Foster Care system during 2001. Health care includes medical, mental health and dental services. By Utah law, youth placed in foster care must receive timely and appropriate health care.

### *How are we doing?*

Most youth in foster care are in the state system temporarily and return home as soon as their family situation stabilizes. However, some youth remain in foster care until they are emancipated, or reach age 18. The figure illustrates the age distribution of the youth in foster care. On December 31, 2001 among the 1,177 youth in foster care in Utah, more than 1,100 medical and dental conditions were identified as well as more than 1,100 mental health Axis I diagnoses identified in these youth.<sup>1</sup> (Axis I diagnosis include mood and anxiety disorders, substance abuse, psychosis, cognitive disorders and impulse control disorders among others.)

**Youth in Foster Care on December 31, 2001,  
Utah**



Source: Division of Child and Family Services. (2002). SAFE database, 2001. Salt Lake City, UT: Department of Human Services.

### *How does Utah compare with the U.S.?*

Utah has modeled its health care requirements after the Child Welfare League of America standards, which were developed in collaboration with the American Academy of Pediatrics.<sup>2</sup> Each state collects data on children in foster care differently, so it is difficult to compare Utah data to other states. However, Utah has developed a Health Status Outcome Measure tool to track the health status of each child in foster care to see how the children's health changes over time.<sup>3</sup>

### ***Why is it important?***

Youth in the foster care system are a very high-risk population with many unmet health care needs. If health care needs are not met in this critical time before adulthood, many conditions can become chronic and costly to the community and society. When medically needy youth get appropriate health care treatment, they are more likely to become productive, contributing members of society. Treating adolescent health conditions greatly enhances the quality of life for them and their family members and will prevent or reduce the severity of chronic adult conditions. Untreated psychiatric conditions of youth put an increased burden on the family and the community. (Refer to the Mental Health section of the report.)

### ***What are the risk factors?***

Youth enter the foster care system with unmet needs for health, dental or mental health care. Although Utah's Foster Care System tries to keep the children with their family health care provider, many enter the system with no regular health care provider, no health insurance and a history of poor health care. Many are sexually active and are at risk for unplanned pregnancies or sexually transmitted infections, or have substance abuse issues.

### ***What is being done?***

The Department of Human Services, Division of Child and Family Services (DCFS), in collaboration with the Department of Health, has developed the Fostering Healthy Children Program. Through this program, health care professionals work with caseworkers to ensure that the youth in foster care receive timely, consistent and appropriate health care. The recently revised Health Status Outcome Measures will help to track the health care of these youth. DCFS and the Department of Health are working together to improve and develop the health treatment resources for Utah youth in foster care throughout the state. The Utah Foster Care Citizen Review Board provides oversight to the care foster children receive.

### ***Where do we go from here?***

Continued evaluation of the Fostering Healthy Children Program is planned using the Health Status Outcome Measures and foster parent surveys to determine if the program is meeting the needs of the youth in foster care. Program staff will continue to monitor national trends for this population and adapt the program as necessary to improve the health services. With the Fostering Healthy Children Program, Utah is seen as a leader in providing health care oversight for children in foster care and other western states request consultation from Utah staff as they strive to improve the services they provide.

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## ***School Dropout***

### ***Definition***

A student in grades 7-12 enrolled during the school year shall be reported as a dropout for that school year if the student does not complete the school year, unless the student:

- 1) is enrolled on October 1 of the following school year;
- 2) is not in attendance due to suspension, illness, or other extenuating circumstances beyond the control of the student, provided that the school is officially notified and services are provided consistent with this rule;
- 3) transfers to another public school, a state or district approved program, or a regularly organized private school, as evidenced by an official request for the student's records by the receiving school by October 1 of the following year;
- 4) transfers to a home school, if the student receives a release annually from the public school district of residence, and the student provides verification to the school district's satisfaction that the student is being taught consistent with Seciton 53A-11-102;
- 5) graduates early; or
- 6) dies.<sup>1</sup>

The school dropout rate is the number of dropouts in grades 7 - 12 divided by the total number of students enrolled in those grades.

### ***How are we doing in Utah?***

Since the 1997-98 school year, the dropout rate in Utah has been on a slow but steady decline. In the 1997-98 school year, the state dropout rate was 4.1 %, declining in the 2000-2001 school year to 2.7%.<sup>2</sup>

Dropout data vary by school district, with rural districts showing lower than state average dropout rates on the whole, and the larger urban suburban districts showing a higher than state average dropout rate. The range among the 40 school districts in Utah is from 0% to 7.1%. More male students (55%) drop out than females (45%).<sup>2</sup>

### ***How does Utah compare to the U.S.?***

Fewer Utah students reported that they had mostly Ds and Fs during the previous 12 months compared to students nationally (4.1% vs. 6.3%) according to 2001 YRBS data.<sup>3</sup> Utah dropout rates have always been below the national average. Utah has long prided itself as a state where education its primary goals. Even though class sizes in Utah are the largest in the country and less is spent per student on education than many states, Utah dropout rates are much lower than the national average. The national dropout rate for 1998-99 was 11.2 %, more than three times the Utah average for the same period.<sup>4</sup> Utah follows closely the national distribution of male dropouts (53%) and female dropouts (47%).

### ***Why is this important?***

Dropout rates are one of the key statistics in determining the success of an educational

system. The main objective of educational systems is to keep students in school as long as possible, or until graduation. By staying in school, chances are greatly improved for a student to succeed in the workforce, higher education, etc. Individuals who dropout have a large impact on the welfare system, employment rates and the criminal justice system.

### ***What is being done?***

Most school districts in the state have excellent counseling services at secondary schools that parents and students can use. Computer tracking and electronic attendance systems used by school districts have made possible better monitoring of all students including those at risk of dropping out or failing in school. These systems allow schools to work more closely with parents and families in providing alternative programs and options for students at risk of dropping out. Districts offer alternative programs for those who do not seem to fit in regular school programs. Adult high schools are available to those who would benefit from this option. Some students who wish to accelerate their high school education and avoid becoming bored with the regular program use concurrent enrollment classes with colleges. If a youth has dropped out, and wishes to attend a college or university, high school counselors provide advice about taking the G.E.D. examination. A good score on this post high school examination allows students to enroll in college or university and waive the A.C.T. and other requirements

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## ***Delinquent Youth***

### ***Definition***

Delinquent youth are defined as youth who have committed a violation of law before their 18<sup>th</sup> birthday. Violations of law may include criminal acts as well as "status" offenses, which are offenses for which only persons under the age of 18 may be charged, such as curfew, truancy, or ungovernable behavior.

### ***How are we doing?***

Over one-third of all youth will be referred to the Juvenile Court prior to their 18<sup>th</sup> birthday for one or more delinquent acts. The number of offenses referred to the Juvenile Court has declined over the past several years. In 1995 62,517 offenses were referred to the Juvenile Court compared to 50,795 offenses in 2001, a reduction of 19%.<sup>1</sup>

### ***How does Utah compare with the U.S.?***

Utah's decline in delinquency rates reflects the decline that has occurred nationally. The overall juvenile court delinquency caseload was less in 1999 than in 1998. The rate of decline from 1995 to 1999 was 5%, less than the decline noted in Utah juvenile offenses.<sup>2</sup> Between 1994 and 2000, the national juvenile arrest rate for violent crime index offenses dropped 41% to a level of 309 arrests for every 100,000 persons ages 10–17.<sup>3</sup>

### ***Why is it important?***

In 2000, over 42,000 youth appeared before the Juvenile Court, of which 25,268 appeared for criminal code matters, including 996 youth that appeared for felony life endangering offenses.<sup>1</sup> Youth are responsible for 23% of all crime and for 34% of Part I crimes, including felonious acts against persons and felony thefts.<sup>3</sup> The cost of juvenile crime in terms of damaged and lost lives, as well as societal and financial impact, is enormous.

### ***What are the risk factors?***

The risk factors for juvenile delinquency include:

- In the community: exposure to violence, drugs, guns, street gangs and concentrated poverty
- In school: early academic failure, weak attachment to school, and poor school environment
- With peers: connection to gangs or other deviant or antisocial peer groups
- In the family: parental abuse or neglect, family history of substance abuse or criminality, frequent family conflict, and neglectful or overly harsh parenting
- Within the individual: conduct problems, abuse of drugs or alcohol, mental health problems, rebelliousness, impulsiveness, and poor social problem-solving skills

### ***What is being done?***

Utah infused significant resources in the juvenile justice system in 1997 with the creation of the Sentencing Guidelines and State Supervision Probation, increased probation officer staffing and funding for development of increased treatment and supervision services both

in the juvenile court as well as with the Division of Youth Corrections. The result of these actions is that youth are placed on probation earlier in their delinquency careers, and they are placed under closer supervision and with additional services. The juvenile justice system has adopted the Functional Family Probation Resource Services (FFPRS) model of working with delinquent youth and their families, and is implementing the Graduated Assessment Process, a risk and needs assessment instrument to better identify needs and system responses. The juvenile justice community also works closely with allied agencies and community resources in an effort to be responsive to the needs and issues of delinquent youth and their families.

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# Youth in Gangs

## ***Definition***

The term "gang," as used here, refers to an association of youth who, to varying degrees, have a name, recognizable symbols (colors, dress, appearance), a geographic territory, and are engaged in frequent criminal activity which constitutes shared values. They often engage in delinquent or criminal activity as a function of their identity and purpose.<sup>1</sup>

## ***How are we doing?***

In 2001 in Utah, there were 7 homicides, 8 rapes, 323 assaults, 239 drug violations, and 100 weapons offenses committed by identified gang members.<sup>3</sup> The reported number of crimes committed by gangs in Utah has steadily declined over the past few years. In 2000, the number of crimes attributable to gang activity declined to 3,329, a drop of nearly 47% from the previous year.<sup>2</sup> However, in 2001, crimes related to gang activity totaled 7,271, a significant increase from the previous year, mainly attributable to graffiti which comprised more than 70% of the reported gang activity.<sup>3</sup> More than 40% of the gang members arrested for criminal activity in 2001 were age 21 or under.<sup>3</sup>

## **Crimes and Gang Membership, Salt Lake City, UT, 1993-2001**

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Crimes	5478	8516	8496	6611	4993	5893	1639	1360	5691
Gang Members	1978	2458	3104	3547	4436	4446	4169	4226	3658

Source: Bureau of Criminal Identification. (2002). 2001 Crime in Utah. Salt Lake City, UT: Utah Department of Public Safety. Retrieved from: <http://bci.utah.gov/Stats/2001.pdf>

## ***How does Utah compare with the U.S.?***

While reported gang membership has declined in Utah, gang membership has increased nationally.<sup>4</sup> Reports suggest that the youth gang problem continues to be widespread and of serious concern across the United States.<sup>4</sup> Nationally, gang members historically have been mainly young adult males from homogeneous lower-class, inner-city, ghetto or barrio neighborhoods.<sup>4</sup> Gangs usually have been racially/ethnically segregated and have been actively involved in a variety of criminal activities, including drug trafficking.<sup>5</sup>

## ***Why is it important?***

The cost of gang activity is significant in terms of damaged and lost lives and individuals failing to achieve their potential. In a four-year national study, it was found that gang members who had been active in a gang for four or more years had roughly a 25% chance of dying. They received an average of two nonfatal injuries (mostly from gunshots) and experienced at least five arrests.<sup>6</sup> The short and long-term impact on society, on community safety, and the drain on public resources in education, human services, public safety, and corrections are enormous. Entrenched gang membership becomes intergenerational as the values, counterculture, and antisocial life style are passed from generation to generation.

### ***What are the risk factors?***

The risk factors for gang involvement include:

- in the community: exposure to high crime, violence, drugs, guns, street gangs, concentrated poverty, and lack of economic opportunity
- in school: early academic failure, weak attachment to school, poor school environment, and negative labeling
- with peers: high commitment to delinquent peers, street socialization, and connection to gangs or other deviant or antisocial peer groups
- in the family: parental abuse or neglect, family history of substance abuse or criminality, frequent family conflict, and neglectful or overly harsh parenting, economic deprivation, and lack of parental role models
- within the individual: prior delinquency, deviant attitudes, street smartness, defiance, aggressiveness, fatalism, lack of connection to social norms, abuse of drugs or alcohol, impulsiveness, and poor social problem-solving skills.<sup>4</sup>

### ***What is being done?***

Considerable effort and resources have been dedicated by law enforcement in Utah to address the issues associated with gang violence. Many of the law enforcement departments in urban Utah has a designated gang unit. In some areas, these units cross jurisdictional lines in order to coordinate information, surveillance and enforcement efforts. The SHOCAP (Serious Habitual Offender Comprehensive Action Program) focuses an interagency coordinated effort, marshaling resources and surveillance on high-risk offenders including gang members. Prevention efforts are also conducted by law enforcement through the DARE Program. Schools, Boys and Girls Clubs, and other agencies and institutions have also dedicated resources to address the issue of gang prevention.

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# ***HEALTH CARE ACCESS AND UTILIZATION***

## ***Insurance***

More than 9% of Utah youth between the ages of 11 and 21 years (9.3%) were uninsured in 2001.<sup>1</sup> Compared to other age groups in the Utah population, adolescents and young adults have the highest proportion of uninsured.

Several public programs offer health insurance coverage for individuals between the ages of 11 and 21 years who meet specific program eligibility criteria. The programs include Medicaid, CHIP (Children's Health Insurance Program) and the Primary Care Network (PCN).

In 2001, 123,679 children were enrolled in Medicaid, of which, 30,066 were adolescents (ages 10-18).<sup>2</sup> In 2001, 27,324 children in Utah were enrolled in CHIP, of which 12,455 were adolescents (ages 10-19).<sup>3</sup> Enrollment of adolescents in Utah's Primary Care Network is available only for ages 19-25 year olds. More than 2,000 individuals between the ages of 19 and 25 were enrolled in PCN during the first seven months of the program.<sup>4</sup>

Information from the 2000 Utah Child Health Survey indicates that there are slightly more than 20,000 Utah children who would be income-eligible for CHIP, but are not enrolled.<sup>5</sup> With the current enrollment cap and periodic open enrollment periods, some of these children will be enrolled, but the CHIP budget is not large enough to enroll all eligible children at this time.

## ***Medicaid***

Medicaid pays for health related services for eligible individuals who qualify for benefits because they fall into a specific eligibility category and meet income and asset requirements. Children meet the categorical requirement simply by being under age 18. For an adolescent in Utah to qualify, he or she must live in a household with an income at or below 100% of the federal poverty level. There is "no asset" test for this population (parents may own assets). Children may also meet the categorical requirement because they are disabled or are in a family receiving Temporary Assistance for Needy Families (TANF) benefits. Medicaid acts as a payer of services for individuals who meet income eligibility and have no other payer.

Medicaid is a state and federal partnership. Many of the Medicaid rules for children regarding eligibility categories and covered benefits are the same from state to state although rules on assets and income levels may vary. The income level for Utah Medicaid is 100% of the federal poverty level for adolescents, the minimum level for states. Other states have higher income limits for Medicaid eligibility than Utah does.

Medicaid offers a rich benefit covering a wide range of health services, including dental and mental health benefits, for children. Medicaid emphasizes preventive health care for

children and adolescents. Medicaid health care services are available through managed care arrangements or direct payment to providers. Mental health services are provided through pre-paid mental health plans.

### ***Utah CHIP***

The Child Health Insurance Program (CHIP) provides health coverage for children who do not qualify for Medicaid and who live in households between 101% and 200% of the federal poverty level. CHIP is a public and private partnership that provides coverage through several private managed care health plans. Families are offered a choice of several private managed care plans from which to receive services.

The Utah CHIP benefits include a standard health care coverage package designed around the Public Employee's Health Program (PEHP), which includes routine physical examinations, immunizations, vision and hearing screening, and basic dental services. Other benefits include hospital services, physician services, laboratory services, prescription drugs, mental health services, and preventive care. CHIP has worked with community groups to promote the availability of CHIP, and have been successful in increasing enrollment, hence access to health services. However, increasing enrollment and limited state dollars for the required match for federal dollars have resulted in program changes, such as capped enrollment, premiums, co-payments, and reduced benefits to maintain a balanced budget. CHIP offers periodic open enrollment periods as the budget allows.

### ***Primary Care Network (PCN)***

The Primary Care Network (PCN) offers health coverage for eligible individuals over age 18 whose income is 150% of the federal poverty level who cannot afford other insurance. PCN offers general preventive services for enrollees, including provider visits, emergency care, laboratory, x-ray and pharmacy services, as well as dental and vision services.

### ***Related Issues***

The first step to obtaining health care, for most, is the ability to pay for services. Unfortunately, being enrolled in Medicaid, or the other publicly funded health programs, does not assure that adolescents will receive or seek services. Other factors, such as the lack of providers in specific geographic areas or an individual's unwillingness or embarrassment to use public assistance, prevent some families from getting care through the state's publicly funded health insurance programs.

The Utah Department of Health assigned eligibility workers to both Medicaid and CHIP eligibility determinations, which streamlines the application process for the two programs. If the child is not eligible for Medicaid, then the eligibility worker reviews the family income for CHIP eligibility. The Department has also been working to simplify administrative processes that serve as barriers to families applying for benefits. The Department of Health operates several hotlines that provide information about these programs and do outreach to populations where enrollment is not as high as anticipated. The Department has also developed various media efforts to reach individuals who might be eligible for the publicly funded programs, such as CHIP. Robert Wood Johnson

Foundation grants to states have provided significant support for outreach to families that may qualify for Medicaid or CHIP. Currently, Utah Children, the statewide children's advocacy organization, is the recipient of the second round of funding for CHIP and Medicaid outreach and retention efforts in Utah.

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## *Use of Health Care Services*

Adolescents in Utah generally receive regular preventive health care visits on time, with almost 67% reporting they had a regular medical checkup, compared to almost 71% overall for children in the state.<sup>1</sup> However, a little more than 16% of adolescents' parents reported that they could not afford medical, dental, eye care mental health care or other services, compared to 14% overall for Utah children. Medical care was reported most often as the service that parents could not afford, followed by dental care.

Only 29.9% of Utah adolescents age 12 through 21 years enrolled in commercial HMOs had at least one comprehensive well-care visit with a primary care practitioner or an OB/GYN practitioner during the measurement year.<sup>2</sup>

One of the perceived barriers to adolescents seeking health care is their experience with the health care system. In a recent study, fewer than 22% of adolescents indicated that their health care provider did the following: made it easy for them to be open; listened carefully; made it easy to ask questions; made it easy to share feelings; gave them a chance to talk; made sure that they understood risks to their health; or made them want to return.<sup>3</sup> For teens with depressive symptoms or who engaged in one or more risky behavior, fewer reported that they felt they could be open with their provider than teens who did not have depressive symptoms or engage in risky behaviors. About half of teens reported that their health care providers did not spend enough time with them.

Related to these findings is the manner in which preventive care is provided. For example, only 28% of teens reported that they had a private, confidential visit with their health care provider, which entailed time alone with the provider, confidential discussion that will not be shared with parents or others.<sup>3</sup> Teens who reported private confidential visits with their provider were more likely to report that they could talk openly; in addition, providers were more likely to talk with teens who smoke, drink, or use drugs when they met privately with the teen.

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## ***Immunizations***

### ***Definition***

Number or percentage of adolescents 11-19 years of age who are adequately immunized with the recommended adolescent vaccines such as measles, tetanus, chickenpox and hepatitis B.

### ***How are we doing?***

Data for adolescent immunization coverage levels are not routinely available. However, 2001-2002 preliminary school data for adolescents in Utah indicate a coverage level of 98.3% for the second dose measles vaccine.<sup>1</sup> Coverage in local health districts ranges from 97.5% to 99%.

### ***How does Utah compare with the U.S.?***

- ***Hepatitis B:*** In the U.S., over 70% of the 100,000-140,000 new cases of hepatitis B each year struck adolescents and young adults. Hepatitis B cases among Utah adolescents increased from 3% in 1996 to 21% in 1999.
- ***Measles:*** Of the 575 measles cases in the United States during 1996 for whom age was known, one-third were ages 10-19. From 1996 to 1999, measles cases among adolescents in Utah decreased from 60% to 0%.
- ***Chicken Pox (Varicella):*** In the United States, approximately 20% of adolescents ages 11-12 have not had chickenpox. Utah coverage levels for the chickenpox vaccine in adolescents are estimated to be 20%.

### ***Why is it important?***

Immunization programs have dramatically decreased the occurrence of many vaccine-preventable diseases. However, diseases such as hepatitis B, rubella, and measles remain problematic within the adolescent population. Adolescents are ten times more likely than children to develop severe complications when infected with chickenpox. Vaccines are one of the most effective methods for preventing disease outbreaks that occur in high-risk adolescent populations.

### ***What are the risk factors?***

#### ***Vaccine preventable diseases***

- Adolescents with diabetes and chronic heart, liver, kidney or lung conditions (including asthma) need protection from vaccine preventable diseases
- Lack of education concerning adolescent health needs
- Health care providers not following up on recommended adolescent immunizations

#### ***Hepatitis A***

- Geographic location – the western states are at particular increased risk for contracting hepatitis A (Utah ranks fifth in the nation in hepatitis A cases)

### ***Hepatitis B***

- Intravenous drug use
- Multiple sexual partners
- Men who have sex with men

### ***What are we doing?***

The Department of Health supports the promotion of adolescent immunization through the Utah Immunization Program. Activities include:

- Statewide adolescent immunization awareness campaigns
- School-based adolescent immunization initiatives
- Legislation requiring all students (including junior high and high school) receive two doses of the measles vaccine prior to school entry
- Reduced vaccine costs for the refugee population
- Collaboration with STI clinics to screen and vaccinate high-risk individuals
- Recommendations for immunization providers to implement routine immunization screenings at the adolescent health care visit and establishment of the Utah Vaccines For Children (VFC) Program.

The Vaccine for Children (VFC) Program, a federally funded program, provides vaccines at significant cost savings for children from birth to 18 years of age who are on Medicaid, have no insurance or are Alaskan Native or American Indian.

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## ***Dental Care***

### ***Definition***

Dental care access and utilization is defined as having a dental visit within the past year and having dental insurance.

### ***How are we doing?***

During 2001, the percent of children on Medicaid receiving any dental treatment was<sup>1</sup>:

- 11-14 year olds      43%
- 15-16 year olds      39%
- 17-19 year olds      29%

Approximately 14% (13.6%) of the general population of Utah children up to age 17 years had difficulty in accessing dental care. Almost 9% of parents reported that they could not afford services, with almost 8% reporting that the services were not covered by insurance.<sup>2</sup> Other reasons for not accessing dental care included providers not taking insurance, inability to get a timely appointment, inability to find services in the area, and inability to get referral for care.<sup>2</sup>

For Utah children with special health care needs, the problem of access to dental care is even more marked. More than 15% had difficulty in accessing dental care, with common reasons reported as inability to afford services (9.7%) and services not covered by insurance (9.5%).<sup>3</sup>

### ***How does Utah compare with the U.S.?***

In 1998, \$53.8 billion was spent on dental care in the United States, with 48% paid by dental insurance, 4% by government programs and 48% paid out of pocket. More than 108 million Americans do not have dental insurance. For every child without medical insurance, there are 2.6 children without dental insurance.<sup>4</sup>

Only 20% of children and adolescents at or below 200% of the federal poverty level had received any preventive dental service during the year.<sup>5</sup> Approximately 32% of adolescents nationally indicated that they had not had a physical or dental exam within the past year. Nearly 12% had no health insurance, which was associated with twice the likelihood of not having had a dental visit during the previous year compared with those with insurance. Black and Hispanic adolescents were more than twice as likely to have never seen a dentist as a white adolescent.<sup>6</sup>

### ***Why is it important?***

Access to and utilization of dental care are major factors in oral health and overall health since oral health is integral to general health. Inability to obtain timely dental care can result in oral health problems, which can lead to needless pain and infection, causing potentially devastating complications. Persons with easy access to dental care, on the other hand, have better oral health and thereby better overall health.

### ***What are the risk factors?***

Risk factors include a lack of dental insurance, lack of access to dental services, low socioeconomic level, racial and ethnic minority status, and rural residence.

### ***What is being done?***

The Oral Health Program in the Utah Department of Health has sponsored several annual Utah oral health summits and participated in the National Governors Association Policy Academy for Children. As a result of the summits and the National Governors Association Policy Academy for Children, the Utah Oral Health Coalition Steering Committee was formed. In addition to ongoing dental health measures in prevention, education and access, the Oral Health Improvement Act has been developed. The Act consists of three main goals of

- Increasing dentist participation in Medicaid
- Increasing utilization and access
- Improving oral health status

For the Act to be successful, early intervention, education and prevention will be emphasized. This effort involves the public, advocates, dental and medical professionals, and other health care providers.

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# ***Hospitalizations***

## ***Definition***

Hospitalization is the completion of any continuous period of stay of one night or more in a hospital as an inpatient.

## ***How are we doing?***

During 1992-2000 in Utah, 117,405 adolescents ages 10-19 were hospitalized, resulting in over \$781 million in hospital charges with an average charge of \$6,693.<sup>1</sup> During this period of time, hospitalizations decreased each year with the rate dropping from 386.3 adolescents per 10,000 to 293.3 per 10,000. In 2001, 11,682 adolescents between the ages of 10-19 were hospitalized with an average length of stay of 4.4 days for a total cost of nearly \$92 million. For adolescents aged 10-19, the top three discharge conditions were: pregnancy and childbearing-related (108.9 incidents per 10,000 adolescents); mental diseases and disorders (36.6 incidents per 10,000), and digestive system problems (28.1 incidents per 10,000).<sup>1</sup>

## ***How does Utah compare with the U.S.?***

According to the latest available national and state hospital discharge data, Utah adolescents 15-19 years were hospitalized at a lower rate than their national counterparts (467 vs. 600 per 10,000) in 1999. U.S. adolescent males aged 15-19 years were more likely to be hospitalized (312 per 10,000) than Utah males (249 per 10,000). In 1999, the hospitalization rate for U.S. females aged 15-19 (902 per 10,000) was more than 30% higher than for Utah females the same age (681 per 10,000). However, the average length of stay for the U.S. was lower (3.6 days) than the average stay for Utah (4.4 days) in 1999.<sup>2</sup>

Between 1996-2000, Utah females aged 10-19 were more likely to be hospitalized than males primarily due to pregnancy and childbirth-related conditions. However, excluding pregnancy and childbirth-related conditions, females were hospitalized at a similar rate (197.9 per 10,000) as males (203.2 per 10,000). Females in the 18-19 age group were most likely to be hospitalized for pregnancy/childbirth (628.4 hospitalizations per 10,000 in 2000). The second most frequent diagnosis, mental diseases and disorders, resulted in 67.9 hospitalizations per 10,000 in 1999.

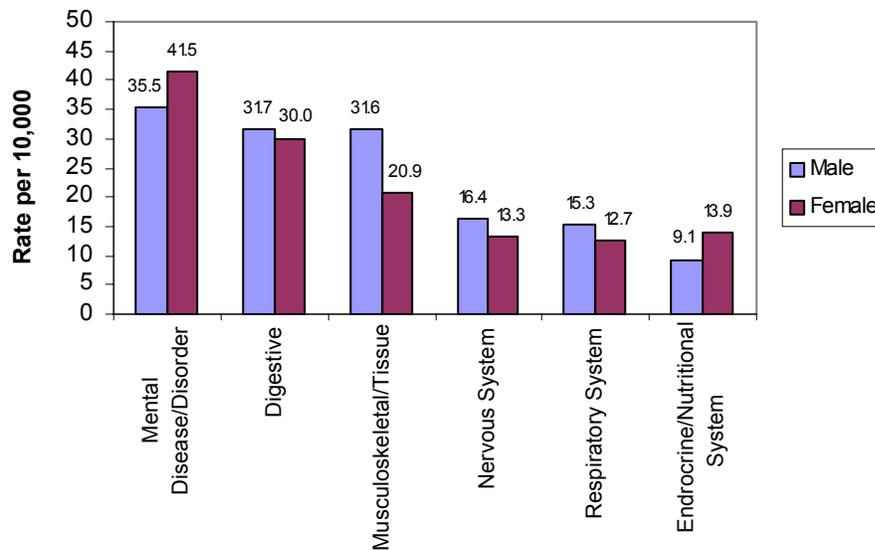
## ***Why is it important?***

Adolescent hospitalization places a significant burden on the public health system. Public costs from teenage childbearing nationally totaled \$120 billion from 1985–1990, of which \$48 billion could have been saved if each birth had been postponed until the mother was at least 20 years old.<sup>3</sup> In the United States, current costs of treating adolescents aged 12-17 for mental illness are estimated at \$2.6 billion yearly.<sup>4</sup> Although the actual medical cost is difficult to determine, digestive disorders result in an annual average of 16.9 million days lost from school.<sup>5</sup> Most of these conditions are not only influenced by behavioral and psychosocial factors, but also are largely preventable through proactive educational initiatives.

### ***What are the risk factors?***

During 2000, the overall hospitalization rate was highest for females (826.9 per 10,000) and males (225.8 per 10,000) in the 18-19 age group. Further analysis reveals female and male adolescents are subject to different patterns of morbidity. Males had higher rates of hospitalization for musculoskeletal system and connective tissue problems (31.6 vs. 20.9 per 10,000), nervous system disorders (16.4 vs. 13.3 per 10,000) and respiratory system ailments (15.3 vs. 12.7 per 10,000) than females. Females, on the other hand, had higher rates of hospitalization for mental diseases and disorders (41.5 vs. 35.5 per 10,000), disorders associated with the endocrine, nutritional, and metabolic system (13.9 vs. 9.1 per 10,000), and kidney/urinary tract problems (7.5 vs. 4.3 per 10,000) than males.<sup>1</sup>

**Leading Causes of Hospitalization (non-pregnancy related), Ages 10-19, Utah 1996-2000**



Source: Center for Health Data. (2001). Office of Public Health Assessment. Utah Hospital Discharge Database, 2000.

### ***What is being done?***

Various Utah Department of Health programs work to address the environmental and behavioral factors leading to adolescent hospitalization. Examples include: the Child Adolescent and School Health Program, Violence and Injury Prevention Program, the Utah Diabetes Control Program, Baby Your Baby, Pregnancy RiskLine, Reproductive Health Program, Abstinence-Only Program, Immunization Program, and Women Infants and Children Program (WIC).

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## ***WHERE DO WE GO FROM HERE?***

Adolescence is a period of marked physical and social changes for youth as they transition to young adulthood. The physical changes in body appearance and swings in emotions accompany social changes in responsibilities such as beginning employment, learning to drive, and relationships. Adolescent youth are branching out on their own, feeling their way in a world that often presents conflicting messages about their new roles and responsibilities. They are faced with decisions about their future, whether to pursue college or employment opportunities, what type of relationships they want to engage in and what type of living arrangements will best meet their needs. Adolescents, some more than others, experience a variety of situations in which the choices they make can mean life or death. Health behaviors during the teen years may impact future health and well-being in adulthood.

Policy makers, program planners, agencies and individuals that work with adolescents are challenged in dealing with adolescent health needs which include six areas: physical activity, nutrition, substance use, sexually-related behaviors, injuries, and emotional well being. This report, by highlighting these six areas of need for adolescents in Utah, brings us to the need to foster additional activities to promote optimal adolescent health.

- Youth development concepts need to be fostered to maximize the protective factors and minimize the risk factors for Utah youth. We need to ensure that we provide settings that are conducive to youth engaging in positive factors that lead to healthy behaviors and decisions.
- We need to ensure that the health care system is teen friendly, especially for those teens that are hard to reach. Access to health care during the teen years is vital in ensuring that health problems and unhealthy behaviors are evaluated so that the teen has the information needed to make healthy lifestyle choices, promoting a healthier future. Gaps in the health care system for adolescents, such as limited mental and oral health services, and challenges in accessing the system need to be addressed.
- We need to establish strong linkages and partnerships among the key players in adolescence, such as the schools, health organizations, community groups, parents, legislators, law enforcement, and employers to develop strategies that will promote health during the teen years. Youth need to be involved in the process of determining the best ways to address the health needs of teens in the state. Interventions that youth have helped identify will be more effective than interventions developed without youth input.
- Needs of special populations, such as adolescents with special health needs, ethnic and sexual minority populations, adolescents in foster care, etc. should be included in any health care planning for adolescent populations.

This report is a start in addressing the needs of Utah adolescents by identifying some areas that are problematic for Utah teens. The more challenging part will be finding solutions to the problem areas that are effective in maximizing protective factors and minimizing risk factors among the teen population in our state.

## ***DATA SOURCES***

A variety of data sources is available to monitor the health of adolescents. Some special surveys target adolescents exclusively, while other surveys and sources are population-based, with age categories that can provide information on adolescents. The following is a brief description of data sources that were used in preparing this report. Throughout the report, adolescent data were reported, as available for ages 11-21 years. Data not applying to this definition of adolescence were reported with the available age grouping. In addition, due to state laws restricting information obtained from minors, some data for Utah adolescents is not available for comparison with national figures.

**Census** – Planning and programming for adolescent health depend on knowledge of the size and composition of the population. Census data have been used in this report to describe the health status of the adolescent population. These data are the principal source of denominator data for calculating disease and death rates. In the U.S., the census of population has been conducted every 10 years since 1790. The Census Bureau oversees this project. The census collects demographic information (name, age, sex, race, marital status, education, employment, income), housing characteristics, nativity, and migration.

**Vital Statistics** – Vital statistics are useful for examining the overall rates of health indicators of the population. The primary sources of data used in this report include birth and death data and in most cases, these are the main source of numerator data for calculating rates.

Although each state determines the format and content of its own certificates, federal government encourages states to adopt standard certificates similar to the model certificate developed by the National Center for Health Statistics. Birth and death data have important detailed characteristics that help public health decision making. Each certificate has an individual identifier, geographical location, date of event, and certain important demographic characteristics. Birth certificates also contain data on length of pregnancy, maternal risk factors, and newborn characteristics. These data can be summarized to determine population-based information such as the rate of low birth weight, inadequate prenatal care, birth defects apparent at birth, and other health conditions. Death certificates generally report age, race, occupation, manner and cause of death. For all questionable and non-natural deaths among children age 0-18, the Utah Department of Health Child Fatality Review Committee conducts a detailed review of the circumstances of the death using information from the death certificate, and a wide range of inter-agency resources to piece together and document the events that led to the death. This information is useful to identify measures that could prevent the circumstances that lead to the death in the future.

**Surveys** – Another source of data on adolescent health comes from surveys. Following are a brief description of surveys that were used in this report.

***Child Health Survey*** – This survey is conducted by telephone among households with children aged 0-17. The survey is designed to address the important health

issues among Utah children, including health insurance coverage, special health care needs, and patterns of health care delivery and utilization.

***Utah Health Status Survey*** – This survey is conducted by household where one adult (age 18 or older) is randomly selected to respond to survey questions about themselves, about the household as a unit, and with regard to each household member. Data is collected by telephone every 5 years. The survey provides information on a variety of topics related to health status and health care access at statewide and health district levels.

***Monitoring the Future (MTF)*** – MTF is an ongoing study of the behaviors, attitudes, and values of American secondary school students, college students, and young adults. This study is conducted by University of Michigan and sponsored by U.S. Department of Health and Human Services. Each year, a total of approximately 50,000 8th, 10th and 12th grade students are surveyed (12th graders since 1975, and 8th and 10th graders since 1991).

***National Household Survey on Drug Abuse (NHSDA)*** – The NHSDA is administered annually by the U.S. Department of Health and Human Services. This survey provides annual estimates of the prevalence of illicit drug, alcohol and tobacco use in the U. S. and monitors the trends in use over time. It is based on a representative sample of the U.S. population aged 12 and older, including persons living in households and in some group quarters, such as dormitories and homeless shelters.

***School Survey*** – The School Survey has been conducted in Utah since 1989. This study is funded by the Department of Human Services, Division of Substance Abuse and conducted by Brigham Young University. This survey is also referred to as the Bahr Survey based on the name of the study investigator. It is usually repeated every five years. A sample of students in grades 7 – 12 are asked about their health behaviors, including smoking, alcohol use, and illicit drug use.

***Youth Household Survey*** – This survey is a Utah-specific statewide phone survey to assess the prevalence of alcohol, tobacco and other drug use among youth aged 12 – 17 to measure the risk factors associated with substance abuse. This study is conducted by Dan Jones & Associates and funded by the Department of Human Services.

***Youth Risk Behavior Surveillance System (YRBS)*** – The YRBS is a national survey designed in 1990 by the Division of Adolescent and School Health, Centers for Disease Control and Prevention (CDC) in partnership with 71 state and local departments of education and 19 federal agencies. The survey is an element of a larger national effort to assess priority health risk behaviors that contribute to the leading causes of mortality, morbidity and social problems among youth and adults in the United States. The Youth Risk Behavior Surveillance System includes

national and state probability samples of high school students in grades 9-12. The survey is administered as a questionnaire in schools every other year.

***Youth Tobacco Survey (YTS)*** – The YTS, a school-based survey, was developed in a collaborative effort of states and administered on a national level by the Centers for Disease Control and Prevention (CDC). Between 1998 and 2000, 34 states conducted the survey among 6 – 12<sup>th</sup> graders.

**Health Monitoring Systems** – In addition to surveys and vital records, a number of ongoing surveillance systems and studies track health trends across a variety of age groups. Following is a brief description of some of the surveillance systems.

***The Drug Abuse Warning Network (DAWN)*** – conducted by Substance Abuse and Mental Health Services Administration (SAMHSA), provides information on the impact of drug use on hospital emergency departments in the U.S. It reports the number of episodes in which visits to the emergency department were directly related to the use of an illegal drug or non-medical use of a legal drug. DAWN is not a measure of prevalence of use, but offers complementary information to the prevalence data from the National Household Survey.

***Hospital Discharge Data (HDD)*** – Hospital discharge data include the billing, medical and patient information. The data provide information about the diagnoses, procedures conducted, the length of stay, and charges incurred. Hospital discharge data are the main source for injury information and ambulatory care issues such as asthma. Although many diseases have registries, such as cancer, and the reportable disease registries, HDD is the only source for other conditions not routinely reported elsewhere. The limitation of HDD is that it is very difficult to obtain collective information on an individual over time. Discharge occurrences, rather than individuals, are counted making it impossible to ascertain the true incidence and prevalence of a problem.