Utah Injury Prevention Strategic Plan

2008

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Introduction

In Utah, injury is a significant public health problem and a leading cause of death and disability. It is the leading cause of death for people age 1–44 years and the leading cause of years of potential life lost. On average, 1,300 Utah residents die, 10,400 are hospitalized, and 181,100 are treated in emergency departments because of injury each year.[1] These numbers do not take into account the injuries treated in clinics, doctor's offices, schools, work sites and homes. Most injuries do not directly result in death, but often are associated with disability, loss of productivity, costs to the health care system, and strains on community and family support systems, in addition to the direct pain and/or grief experienced.

The financial costs of injury at the national level are more than $224 billion (including direct medical care, rehabilitation, lost wages, and lost productivity) each year.[2] It is difficult to determine the full economic impact of injury in Utah (medical costs, lost wages, disability, etc.), however hospital and emergency department charges added up to over $318 million in Utah for the treatment of injuries in 2005.[1]

> "Injury is probably the most under recognized major public health problem facing the nation today, and the study of injury presents unparalleled opportunities for realizing significant savings in both financial and human terms—all in return for a relatively modest investment."
> —National Academy of Sciences, Injury Control[4]

Injury is consistently one of the top 10 causes of death for all age groups in the nation and in Utah. At every age, from infancy to the golden years, people are at risk for injury and the disability and death that can result. No age is a "safe" age, but the injuries and threats of violence that people face change as they age and enter different life stages. The tables on pages three and four illustrate the 10 leading causes of death for Utah with injury highlighted and the 10 leading causes of injury deaths for Utah.[3] Note the high rates of injury and death for younger age groups.

The problem of injury in Utah is complex. Many types of injury exist—both unintentional and violence-related. In the Utah Injury Prevention Strategic Plan, eight primary areas of focus are addressed: Three are specific to unintentional injury, four are specific to intentional injury, and one covers all injury intent.

Unintentional Injury Addressed in the Utah Plan

Unintentional injuries are inflicted without specific willful intent to cause harm, whether to oneself or others. The areas specific to unintentional injury addressed in the plan are:

- Pedestrian and Bicycle Safety
- Motor Vehicle Seatbelt Use
- Child Restraint Safety

Undetermined Injury Addressed in the Utah Plan

Undetermined injury includes unspecified intent or when intent cannot be determined. Poisoning is the area with the highest number of undetermined injury and is the only area addressed in the plan.

Intentional Injury Addressed in the Utah Plan

Intentional injury within public health often refers to willful violence, whether doing harm to oneself and/or harm to another. The areas specific to intentional injury addressed in the plan are:

- Sexual Violence
- Intimate Partner Violence
- Suicide
- Child Maltreatment

There are numerous additional types of injury not addressed in this plan, such as injuries and deaths from falls, fires, drownings, firearms, and at workplaces. This plan is intended as a framework for a comprehensive state injury prevention plan and could include additional injury focus areas in the future.

Organization of the Utah Injury Prevention Strategic Plan

The plan is divided into eight primary injury focus areas. Each focus area includes background information, current data, and action items. The action items are designed to be a road map for policy makers, safety specialists, educators, and community advocates to follow as they undertake efforts to prevent injuries and violence in Utah.

> "If a disease were killing our children at the rate unintentional injuries are, the public would be outraged and demand that this killer be stopped."
> —Dr. C. Everett Koop, former U.S. Surgeon General[5]

10 Leading Causes of Death for Utah, 2001-2005

Rank	\<1	1-14	15-24	25-44	45-64	65+	All Ages
			Age Groups				
1	Congenital Anomalies 356	Unintentional Injury 256	Unintentional Injury 577	Unintentional Injury 836	Malignant Neoplasms 3,122	Heart Disease 12,296	**Heart Disease 14,705**
2	Short Gestation 151	Malignant Neoplasms 58	Suicide 316	Suicide 734	Heart Disease 1,971	Malignant Neoplasms 8,286	**Malignant Neoplasms 12,098**
3	Maternal Pregnancy Comp. 76	Congenital Anomalies 55	Homicide 71	Malignant Neoplasms 562	Unintentional Injury 680	Cerebro-vascular 3,804	**Cerebro-vascular 4,233**
4	SIDS 70	Suicide 24	Malignant Neoplasms 65	Heart Disease 368	Diabetes Mellitus 486	Chronic Low. Respiratory Disease 2,451	**Unintentional Injury 3,499**
5	Placenta Cord Membranes 62	Homicide 21	Congenital Anomalies 32	Homicide 118	Suicide 468	Diabetes Mellitus 1,963	**Chronic Low. Respiratory Disease 2,884**
6	Unintentional Injury 46	Influenza & Pneumonia 18	Heart Disease 32	Diabetes Mellitus 106	Chronic Low. Respiratory Disease 403	Influenza & Pneumonia 1,765	**Diabetes Mellitus 2,569**
7	Circulatory System Disease 36	Heart Disease 12	Cerebro-vascular 10	Liver Disease 71	Cerebro-vascular 353	Alzheimer's Disease 1,659	**Influenza & Pneumonia 2,005**
8	Neonatal Hemorrhage 35	Perinatal Period 12	Diabetes Mellitus 10	Influenza & Pneumonia 67	Liver Disease 301	Unintentional Injury 1,104	**Suicide 1,722**
9	Bacterial Sepsis 26	Benign Neoplasms 9	Influenza & Pneumonia 8	Cerebro-vascular 55	Influenza & Pneumonia 140	Nephritis 841	**Alzheimer's Disease 1,693**
10	Intrauterine Hypoxia 26	Septicemia 8	Nephritis 7	HIV 47	Nephritis 99	Parkinson's Disease 806	**Nephritis 981**

Data Source: National Center for Health Statistics, National Vital Statistics System

10 Leading Causes of Injury Death for Utah, 2001-2005

Rank	<1	1-14	15-24	25-44	45-64	65+	All Ages
			Age Groups				
1	Unintentional Suffocation 25	Unintentional MV Traffic 119	Unintentional MV Traffic 393	Undetermined Poisoning 587	Undetermined Poisoning 343	Unintentional Fall 394	**Unintentional MV Traffic 1,493**
2	Unintentional MV Traffic 13	Unintentional Drowning 38	Suicide Firearm 175	Unintentional MV Traffic 423	Unintentional MV Traffic 305	Unintentional MV Traffic 240	**Undetermined Poisoning 1,082**
3	Homicide Unspecified 7	Unintentional Pedestrian, Other 19	Undetermined Poisoning 143	Suicide Firearm 335	Suicide Firearm 262	Unintentional Unspecified 234	**Suicide Firearm 910**
4	Unintentional Drowning 4	Unintentional Suffocation 18	Suicide Suffocation 97	Suicide Suffocation 188	Suicide Poisoning 121	Suicide Firearm 131	**Unintentional Fall 541**
5	Homicide Other Spec., Classifiable 4	Suicide Suffocation 15	Unintentional Poisoning 53	Suicide Poisoning 178	Unintentional Poisoning 107	Unintentional Suffocation 108	**Suicide Suffocation 378**
6	Undetermined Suffocation 3	Unintentional Fire/burn 9	Homicide Firearm 50	Unintentional Poisoning 171	Unintentional Fall 82	Adverse Effects 66	**Suicide Poisoning 359**
7	Unintentional Pedestrian, Other 2	Unintentional Other Land Transport 9	Suicide Poisoning 34	Homicide Firearm 78	Suicide Suffocation 65	Suicide Poisoning 26	**Unintentional Poisoning 357**
8	Homicide Poisoning 2	Homicide Unspecified 8	Unintentional Drowning 30	Unintentional Other Transport 39	Unintentional Other Transport 33	Unintentional Fire/burn 23	**Unintentional Unspecified 265**
9	Homicide Suffocation 2	Unintentional Fall 8	Unintentional Fall 21	Unintentional Fall 35	Adverse Effects 29	Unintentional Poisoning 21	**Unintentional Suffocation 206**
10	Adverse Effects 2	Suicide Firearm 7	Unintentional Other Land Transport 14	Unintentional Drowning 27	Unintentional Suffocation 28	Unintentional Other Spec., NEC 20	**Homicide Firearm 167**

NEC - Not elsewhere classifiable
Data Source: National Center for Health Statistics, National Vital Statistics System

Bicycle and Pedestrian Safety

Figure 1: Utah Bicyclist & Pedestrian Fatalities 1996-2005

Figure 2: Utah Bicyclist & Pedestrian Injuries 1996-2005

Background Information and Current Data

Walking and bicycling are excellent forms of transportation and exercise. Everyone should be able to safely walk or bicycle to school, to work, to the bus stop, or simply to explore a neighborhood. Unfortunately, walking and bicycling are not always safe. In Utah, over the last 10 years (1996-2005) there were 19,072 reported pedestrians and bicyclists hit by motor vehicles and 441 pedestrian and bicyclist fatalities.[1] Figures 1 and 2 show the number of injuries and fatalities by year. In Utah, 1% of federal transportation funds are spent on pedestrian and bicycle projects, even though they comprise more than 10% of all traffic deaths and more than 9% of all trips made.[2,3]

Strategies Used to Prevent Bicycle and Pedestrian Injuries

Making conditions safer for pedestrians and bicyclists involves a multi-faceted approach. The three primary strategies used to enhance pedestrian and bicycle safety are often referred to as the "Three E's" – Engineering, Enforcement, and Education. All three strategies must be implemented together to have the greatest overall effect in enhancing bicycle and pedestrian safety and to prevent the greatest number of injuries and fatalities.
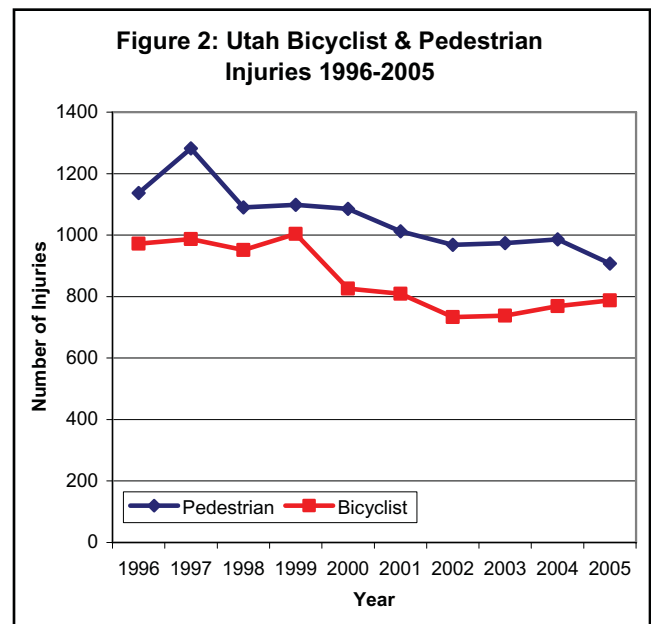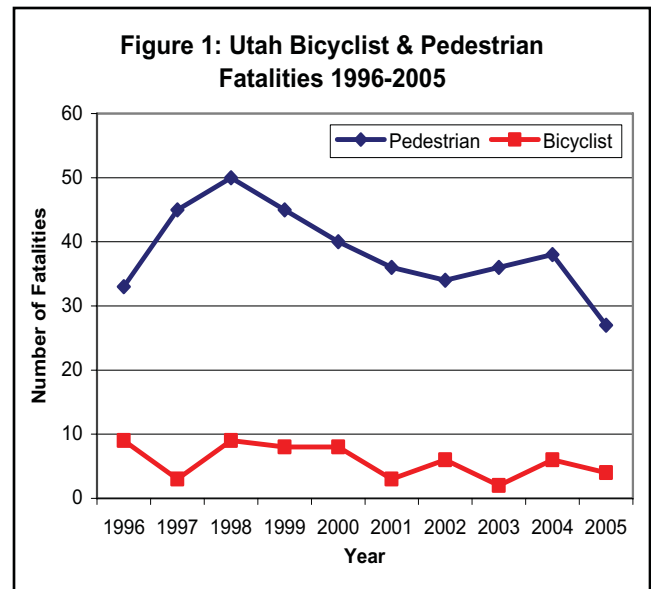
Engineering Strategies: Communities and streets have been largely designed to facilitate high-speed automobile traffic, treating pedestrian and bicycle safety as an afterthought. This type of design puts pedestrians and bicyclists at risk. When the built environment gives low priority to pedestrians and bicyclists, it becomes difficult for automobiles, pedestrians and bicyclists to safely share the road. However, roads that are designed to accommodate the needs of all users are safer. Engineering strategies are

often classified into three broad categories: separation of pedestrians/bicyclists and automobiles (for example, sidewalks, curb extensions, tree lined streets, pedestrian only traffic signal phases, and bike lanes), measures that increase visibility and awareness of pedestrians and bicyclists (roadway lighting and diagonal on street parking), and reductions in vehicle speeds (narrower lanes, roundabouts and speed humps).[4]

Enforcement Strategies: Many laws set forth to protect pedestrians and bicyclists are ignored or not known and regularly not enforced. Traffic laws set the framework for using the roads safely, but are only effective in protecting road users when obeyed. Most motor vehicle crashes involving a pedestrian or a bicyclist can be prevented if the motorist, the pedestrian or the bicyclist, obey the law. Stricter, more reliable, and consistent enforcement can limit violations and encourage safer behaviors.

Proven strategies do exist in reducing traffic violations relating to bicycle and pedestrian safety, such strategies include: Selective Enforcement - which involves targeting violators by locations, time of day, or by type of violation committed; enforcing speed limits, especially around schools, parks, and neighborhoods, and; short-term enhanced enforcement campaigns.

Education Strategies: Knowledge is power and is gained through education, whether taught or learned through experience. Education has the ability to influence attitude and change behavior. Road users, whether in an automobile, riding a bicycle, or walking need to know and understand traffic laws. If traffic laws and safety practices are not known or understood they cannot be followed. Therefore, it is essential that all road users, regardless of age, be taught traffic laws and safety rules.

Costs of Bicycle and Pedestrian Injuries

In 2005, hospital and emergency department charges for bicyclist and pedestrian injuries sustained in crashes with automobiles totaled $13 million in Utah.[5] In addition to direct medical costs there are other costs that add significantly to the overall costs associated with bicycle and pedestrian injuries, such as: rehabilitation, lost work/wages, lost productivity, etc.

Bicycle Helmets

The most serious and costly injuries for bicyclists are head injuries.[6] Studies have shown that a bicycle helmet can reduce the risk of head or brain injury by 85-88%.[7] Despite the research bicycle helmet use is low. The good news is that bicycle helmet use is on the rise. In the U.S. in 1994, 97% of bicyclists killed were not wearing helmets and in 2005 the number of U.S. bicyclists killed not wearing helmets had dropped to 86%.[6] In Utah, helmet use rates increased from 5% in 1994 to 28% in 2007.[1] Figure 3 shows the increase in helmet use rates by age in Utah, but there is still much room for improvement. Passing helmet legislation would increase helmet use for children and adolescents by an additional 18%.[8]

Figure 3: Percentage of Utah Bicycle Helmet Use By Age, 1994-2007
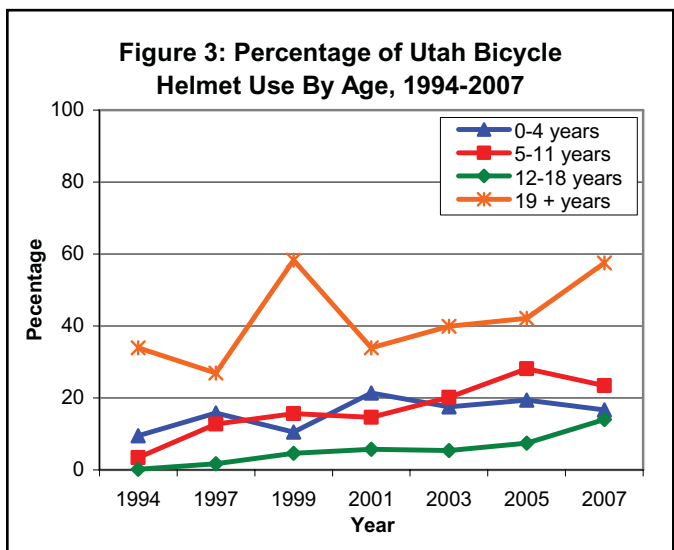
Bicycle and Pedestrian Safety Action Steps

Objectives:

1. **Reduce pedestrian deaths on public roads caused by motor vehicles from 1.5 per 100,000 population in 2000 to 1.0 per 100,000 population by 2010.**
   Current Utah Data: 2005 – 1.2 per 100,000 population (2007 Utah Crash Summary, Utah Department of Public Safety)

2. **Reduce nonfatal pedestrian injuries on public roads caused by motor vehicles from 32 per 100,000 population in 2000 to 20 per 100,000 population by 2010.**
   Current Utah Data: 2005 – 25.2 per 100,000 population (2007 Utah Crash Summary, Utah Department of Public Safety)

3. **Reduce pedestrian deaths and injuries to children under the age of 10 resulting from non-traffic (private property locations) pedestrian/motor vehicle crashes from 18 per 100,000 population in 2000 to 9 per 100,000 population by 2010.**
   Current Utah Data: 2005 – 10.9 per 100,000 population (Violence and Injury Prevention Program, Utah Department of Health)

4. **Reduce nonfatal bicyclist injuries on public roads caused by motor vehicles from 28 per 100,000 population to 20 per 100,000 population by 2010.**
   Current Utah Data: 2005 – 21.6 per 100,000 population (2007 Utah Crash Summary, Utah Department of Public Safety)

5. **Increase bicycle helmet use among bicyclists to 40% by 2010.**
   Current Utah Data: 2007 – 27.8% (Violence and Injury Prevention Program, Utah Department of Health)

6. **Implement a state law requiring bicycle helmets for bicycle riders under age 15 years by 2010.**
   Current Utah Data: No state bicycle helmet law for any ages.

Action Steps:

1. **Promote pedestrian and bicycle safety**
   a. Educate pedestrians and bicyclists on safety

   b. Educate drivers on safe driving practices to help them avoid collisions with bicyclists and pedestrians

   c. Advocate local, regional, and state government, including Safe Communities, to support efforts that promote bicyclist and pedestrian safety

   d. Educate local law enforcement on the need for enforcement of traffic laws that help to ensure safety of bicyclists and pedestrians

2. **Increase helmet use and proper fit among bicyclists**
   a. Advocate for state legislation mandating bicycle helmet use, especially for those ages 15 and under when riding a bicycle

   b. Increase proper helmet usage for all ages when using a bicycle

3. **Reduce the overall burden of injury resulting from bicyclist and pedestrian incidents**

4. **Manage community growth and development to promote increased safety for bicyclists and pedestrians**

   a. Advocate for increased use of walking and bicycling as a safe alternative mode of transportation

   b. Increase mass transit for pedestrians and bicyclists

   c. Design environments to be supportive of bicyclists and pedestrians

   d. Work with state and local transportation agencies to adopt a "Complete Streets" Policy

   e. Design urban environments oriented for pedestrians and less so for vehicles

5. **Support and improve surveillance systems needed to collect both mortality and morbidity data, and include non-traffic pedestrian-bicyclist/motor vehicle crash data in reporting**

6. **Increase support networks and social activism for bicyclists and pedestrians**
   a. Increase social activism of bicyclists and pedestrians within their communities

   b. Increase participation and outreach of local bicycling organizations and their promotion of safety

7. **Future Objective**
   a. Advocate for helmet use for in-line skates, skateboards, scooters, and other modes of travel

Motor Vehicle Seatbelt Use

Background Information and Current Data

How important are seatbelts?

Motor vehicle crashes are the leading cause of injury death and the second leading cause of hospitalization from injury for all ages in Utah.[1] Seatbelts are one of the most effective safety devices for preventing serious injuries and reducing deaths in a crash. Seatbelts reduce the chances of being killed or seriously injured in a motor vehicle crash by approximately 50%. Seatbelts prevent ejection from the vehicle, shift crash forces to the strongest parts of the body's structure, spread forces from the crash over a wide area of the body, allow the body to slow down gradually in a crash, and protect the head and spinal cord from serious injury.[2]

It is estimated seatbelts saved 15,400 lives in the U.S. in 2006. Yet, during this same year, 55% of passenger vehicle occupants killed in traffic crashes were unrestrained. If all passenger vehicle occupants (over 4 years old) wore seatbelts, more than 5,441 additional lives could have been saved in the U.S.[3]

Economic Costs of Not Wearing Seatbelts

Traffic crashes result in $231 billion in economic costs, including $33 billion in medical care and emergency services expenses, and $120 billion in lost productivity and property loss. Such costs are passed on to consumers so that every person in America shares the economic costs of motor vehicle crashes, the equivalent of over $200 in added taxes for every household in the U.S. Almost 85% of all medical costs for motor vehicle crash victims fall on society, and not on the individuals involved. Medical costs for unbelted crash victims are 50% higher than for those who are belted. Employer health care spending on motor vehicle crash injuries is $8 billion annually. Another $9 billion is spent on sick leave and life and disability insurance for crash victims.[2]
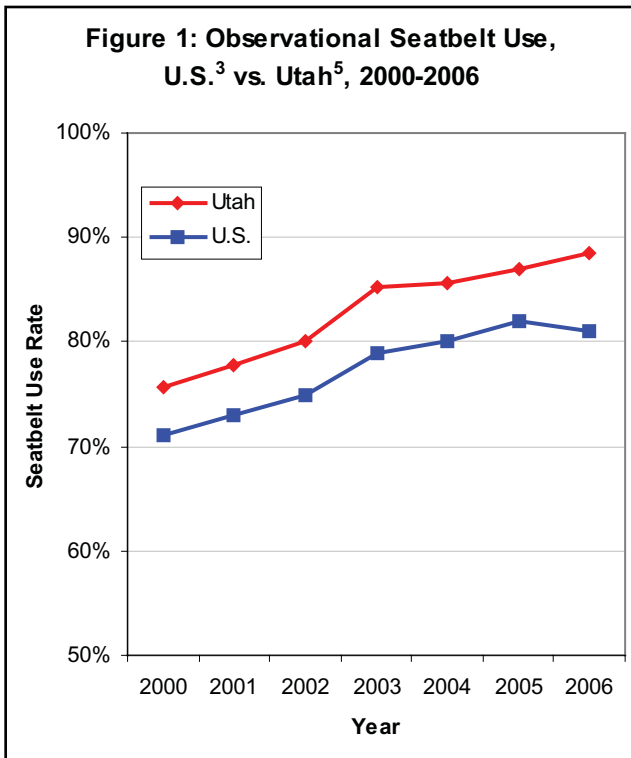
In 2003, seatbelts saved society an estimated $63 billion in medical care, lost productivity, and other injury-related costs. In this same year, the needless deaths and injuries from seatbelt nonuse caused an estimated $18 billion in economic costs to society.[4]

Injury and Fatality Trends Related to Seatbelt Use

On average, 315 Utah residents die, 2,200 are hospitalized, and 28,900 are treated in emergency departments because of motor vehicle crash injuries each year. The motor vehicle crash death rate has decreased in Utah from 16.0 per 100,000 population in 1999 to 12.3 per 100,000 in 2006. Motor vehicle crash death rates are highest in the 15-19 and 70+ age groups. Motor vehicle crash hospitalization and emergency department rates are highest in the 15-19 age group.[1]
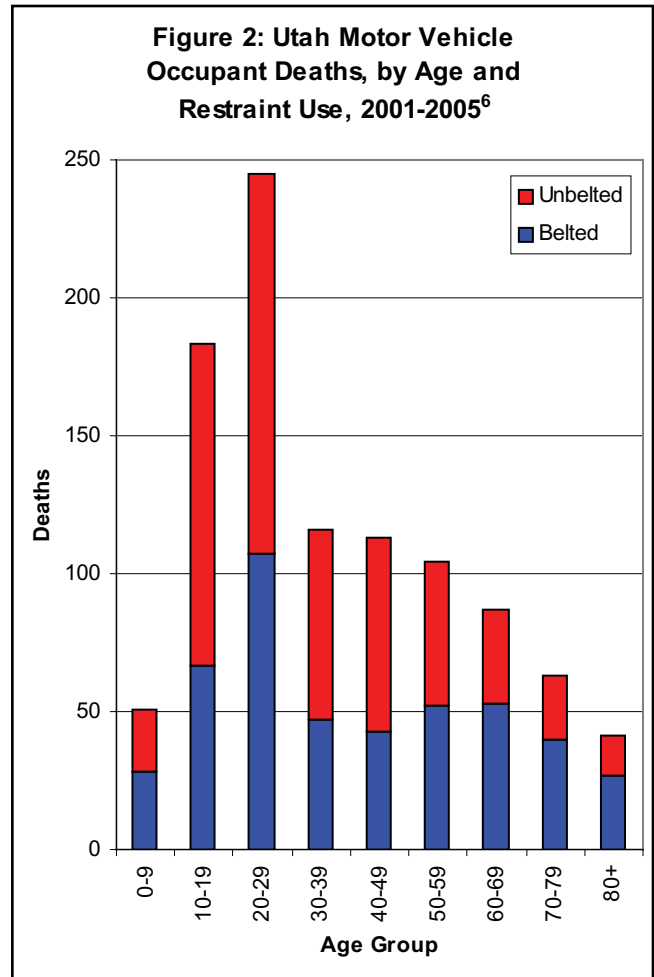
Trends in Seatbelt Use

As shown in Figure 1, overall seatbelt use has increased in Utah from 76% in 2000 to 89% in 2006.[5] Nationwide seatbelt use has increased from 71% to 81% during the same time period.[3]

Figure 1: Observational Seatbelt Use, U.S.[3] vs. Utah[5], 2000-2006

Figure 2: Utah Motor Vehicle Occupant Deaths, by Age and Restraint Use, 2001-2005[6]

Ages 10-19 have the lowest seatbelt use among crash occupants in Utah.[6] As shown in Figure 2, less than 50% of Utah occupants ages 10-49 years who died were wearing a seatbelt. Lower seatbelt use is associated with males; night driving; drivers of pickup trucks; older vehicles; rural roadways; weekend driving; drinking and driving; speeding; being a passenger; secondary roads; low level of education; short journey; unlicensed drivers; and unbelted driver.[7]

Seatbelt Laws

Utah is one of 23 states that enforces a secondary seatbelt law.[3] A secondary seatbelt law gives a police officer the right to ticket a person not wearing a seatbelt only if they are stopped for another traffic violation. Primary laws, enforced in 27 states, give the police officer the right to stop and ticket any person that is not wearing a seatbelt. Seatbelt use is higher in states that have primary seatbelt laws than in states without primary laws. It is estimated that enacting primary seatbelt laws for all states from 1995-2002 would have saved over 12,000 lives nationally and over 172 in Utah.[8]

Highly publicized primary seatbelt laws and visible increased enforcement of seatbelt laws have been shown to be the most effective in increasing seatbelt use.[2]

Motor Vehicle Seatbelt Use Action Steps

Objectives:

1. **Increase seatbelt use from 75.7% in 2000 to 92% by 2010.**
   Current Utah Data: 2007 – 86.8% (2007 Utah Safety Belt Observational Survey, Utah Department of Public Safety)
2. **Reduce deaths from motor vehicle crashes from 15.0 per 100,000 population in 2000 to 12 per 100,000 population by 2010.**
   Current Utah Data: 2007 – 10.5 per 100,000 population (Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health)
3. **Reduce hospitalizations caused by motor vehicle crashes from 93.2 per 100,000 population in 2000 to 85.0 per 100,000 population by 2010.**
   Current Utah Data: 2007 – 61.5 per 100,000 population (Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health)

Action Steps:

1. **Education and awareness**
   a. Conduct seminars and conferences to increase seatbelt awareness

   b. Target public awareness campaigns to higher-risk populations

   c. Encourage employers to increase employee awareness and use of seatbelts both on and off the job

   d. Provide specific classes or courses that include use of seatbelts

   e. Provide both printed and public announcements (via radio, television, internet and other communication mediums) to educate the public about seatbelt use

2. **Legislative support**
   a. Garner support for enforcement of secondary seatbelt law

   b. Educate the state legislature and government to support evidence based initiatives that could increase seatbelt usage such as a primary seatbelt law

   c. Increase penalties for nonusers, such as increased drivers license points and/or increased fines for nonuse

3. **Behavioral support**
   a. Require seatbelt use for employees when they are working

   b. Demonstrate the outcome of a crash when seatbelts are not used

   c. Administer programs or activities that provide positive reinforcement for seatbelt use

   d. Support enforcement of laws that penalize individuals for lack of seatbelt use

   e. Promote seatbelt use as a healthy lifestyle behavior

   f. Encourage high schools to enact policies making parking privileges contingent on seatbelt use by student drivers and their passengers

4. **Law enforcement**
   a. Enforce the secondary seatbelt law

   b. Conduct active and sustained high-visibility enforcement of seatbelt laws

5. **Surveys and assessments**
   a. Collect seatbelt use-related data

6. **Funding**
   a. Provide funding for awareness and education campaigns to increase seatbelt use

   b. Provide funding for seatbelt enforcement

7. **Future objectives**
   a. Advocate for a primary seatbelt law in Utah

   b. Support better data collection and analysis of all factors related to seatbelt use

   c. Continue support of research into and evaluation of seatbelt interventions

   d. Use social marketing principles to encourage seatbelt use

   e. Continue building a network of resources working to support proper safety restraints

Child Restraint Safety

Background Information and Current Data

The use of occupant restraints must be reinforced at an early age to make occupant protection a lifelong habit and to reduce the disproportionately high rates of death that teens and young adults experience in motor vehicle crashes.[1]

How Important are Child Restraints?

Unrestrained or improperly restrained children are more likely to be injured, to suffer more severe injuries, and to die in motor vehicle crashes than children who are restrained. Child safety seats are 71% effective in reducing deaths among infants (<1 year old) and 54% effective for toddlers (1-4 years old) in passenger cars.[1] In the U.S. in 2004, child restraints saved the lives of 451 children age 4 and under. An additional 114 lives would have been saved if all child occupants age 4 and under who died had been restrained in child safety seats.[1]

Basic Child Safety Guidelines

Child restraint devices vary by type and method of restraint depending on the age of the child. The back seat is generally the safest place in a crash. If a vehicle has a passenger air bag, it is essential for children 12 and under to ride in the back seat. To help children grow up safe, four steps should be followed in regards to occupant protection:

1- Rear-facing Seats: For the best possible protection infants should be kept in the back seat, in rear-facing child safety seats, as long as possible up to the height or weight limit of the particular seat. Infants should be kept rear-facing until a minimum of age 1 and at least 20 lbs.

2 - Forward-facing Seats: When children outgrow their rear-facing seats (at a minimum of age 1 and at least 20 lbs.) they should ride in forward-facing child safety seats, in the back seat, until they reach the upper weight or height limit of the particular seat.

3 - Booster Seats: Once children outgrow their forward-facing seats (usually around age 4 and 40 lbs.), they should ride in booster seats, in the back seat, until the vehicle seatbelts fit properly.

4 - Seatbelts: When children outgrow their booster seats, (usually at age 8 or when they are 4'9" tall) they can use the adult seatbelt in the back seat, if it fits properly (lap belt lays across the upper thighs and the shoulder belt fits across the chest).

Child Restraint Use

The majority of children aged 0-1 years (88%) were reported as being in a child safety seat at the time of the motor vehicle crash in Utah in 2005, compared to 74% of 2-4 year olds, and 19% of 5-8 year olds. As shown in Figure 1, child safety seat use has increased for children in every age group in Utah.[2] Although there is room for improvement among all ages, especially among booster seat-age children.

Correct Usage

Lack of any restraint use in the motor vehicle is the greatest risk for children getting injured in a crash. Of those children in the U.S. that are in a child safety seat 73% are installed incorrectly.[3] The most common critical

Figure 1: Percentage of Child Safety Seat Use in Utah at Time of Crash, 1998-2005[2]
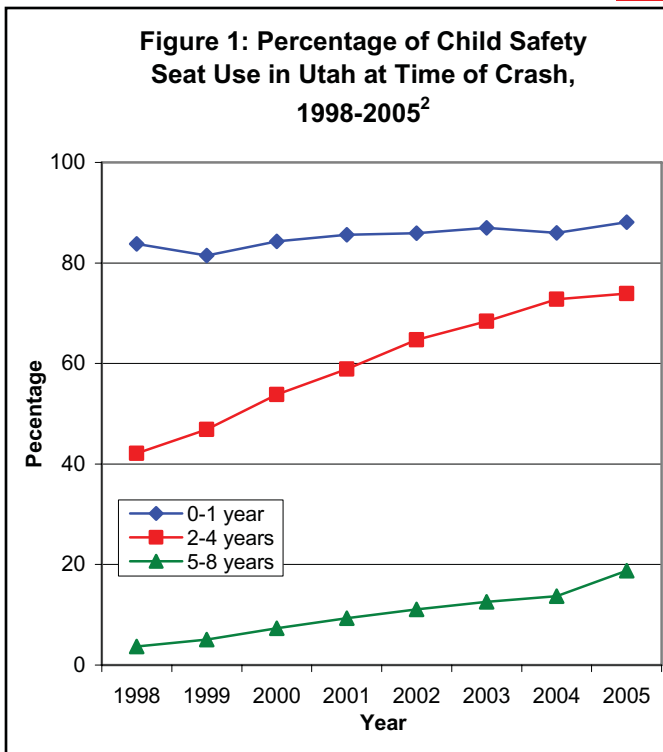
misuses, defined as forms of misuse that could reasonably be expected to raise the risk of injury to a child in the event of a crash, are**:**

- Failing to attach the seat tightly to the vehicle seat
- Failing to fasten the harness tightly around the child
- Visible damage to the child safety seat
- Age and weight appropriateness of seat
- Incorrect seat direction
- Placement of seat in relation to air bags[3]

Community Interventions

Community efforts should include basic child passenger safety messages stressing secure child safety seat attachments, keeping children in child safety seats until seatbelts fit them properly, having parents place children in the proper child safety seat for their size, and never placing children in the front seat with a front passenger air bag.[4] The following strategies are recommended:

Distribution and education programs: Through these programs, approved child safety seats are provided at low cost to parents. Programs also include educational components. These programs target parents and other caregivers who might need assistance in acquiring a safety seat because of financial hardship or poor understanding of the importance of using child safety seats. When implementing child safety seat distribution and education programs, only new, unused seats should be provided to all recipients.

Community-wide information and enhanced enforcement campaigns: These campaigns seek to promote use of safety seats through the use of mass media, mailings, child safety seat displays in public sites, and special enforcement strategies such as checkpoints, dedicated law enforcement officials, or alternative penalties. These campaigns target their activities to an entire community.

Incentive and education programs: These programs (1) provide children and parents with rewards and opportunities for rewards for the purchase and correct use of child safety seats, and (2) include educational components.[5]

Child Restraint Laws

Utah has a primary seatbelt law for drivers and passengers under age 19 years. Children age 4 years and under must ride in an approved child safety seat and those children 5-18 years must ride in an approved child safety seat or seatbelt. This primary law means a person may be issued a citation and subject to a fine if a law enforcement officer notices children are not properly restrained.[2] States with primary enforcement seatbelt laws have an average belt use 10-15% higher than those with secondary enforcement.[6] An upgrade in a state's seatbelt law to primary enforcement will significantly raise seatbelt and child safety seat use because increasing adult seatbelt use has a significant impact on whether children are appropriately restrained. Studies show that when drivers wear seatbelts, children are restrained significantly more often than when drivers are unbuckled.[3,6]

Child Restraint Action Steps

Objectives:

1. **Increase child restraint use by motor vehicle occupants under the age of 5 from 88.4% in 2003 to 100% by 2010.**
Current Utah Data: 2006 – 94.8% (2007 Utah Safety Belt Observational Survey, Utah Department of Public Safety)

2. **Reduce deaths from motor vehicle crashes to children under the age of 5 from 4.6 per 100,000 population in 1999 to 3.0 per 100,000 population by 2010.**
Current Utah Data: 2007 – 4.2 per 100,000 population (Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health)

3. **Reduce hospitalizations caused by motor vehicle crashes to children under the age of 5 from 23.6 per 100,000 population in 2000 to 16.9 per 100,000 population by 2010.**
Current Utah Data: 2007 – 15.3 per 100,000 population (Utah Inpatient Hospital Discharge Data, Office of Health Care Statistics, Utah Department of Health)

Action Steps:

1. **Education and awareness**
    a. Seminars and conferences to increase child restraint awareness

    b. Public awareness campaigns to increase child restraint awareness, especially for targeted or higher-risk populations

    c. Provide specific classes or courses that include use of child restraints

    d. Provide printed and other mediums of public announcements and information (via radio, television, internet) to educate the public on proper child restraint use

2. **Legislative support**
    a. Seek legislative support for resources that promote proper child restraint use

    b. Require children 12-years-old and younger to be secured by an age-appropriate restraint system in the rear seat of the vehicle, and eliminate exemptions related to exceeding the number of available belts or restraints in the vehicle

    c. Require all children who have outgrown child safety seats to be restrained in booster seats until they are at least 8-years-old, unless they are 4 feet 9 inches tall

    d. Increase fines for noncompliance and earmark a portion of the revenues to help support State child passenger safety programs

e. Educate the state legislature and government to support evidence based initiatives that could increase seatbelt usage such as a primary seatbelt law

f. Ban passengers from the cargo area of pickups and other light trucks

3. Behavioral support
a. Provide car seat programs for the community that includes restraint installation and education to increase proper placement and use of child restraints

b. Provide to the public a visual representation of vehicle crash outcomes when child restraints aren't used

c. Provide programs or activities that encourage use of child restraints

d. Inspection and checkpoint services to assess proper placement of child restraints

4. Law Enforcement
a. Enforce child restraint laws

5. Surveys and assessments of child restraint use and proper placement
a. Support the gathering of child restraint information for data collection and assessment

6. Provide funding
a. Seek and provide funding for awareness and education

7. Future objective
a. Support data collection and analysis for child restraints

b. Use social marketing principles to encourage proper use of child restraints

c. Continue building a network of resources working to support proper child restraint use

Poisoning

Background Information and Current Data

Poisoning is one of the few injury deaths that are on the rise in Utah. Poisoning is defined as the ingesting, breathing, injecting, or absorbing a substance that is injurious to health or could cause death. Even substances deemed benign can be poisonous if enough is taken (for example, poisoning death or injury from drinking too much water).

Most people think of children when they think of poisoning. However, while children are more often exposed to poisons, adults suffer more serious poisoning injuries and deaths.[1]

Poisonings can be either intentional or unintentional. Intentional poisoning is the result of a person taking or giving a substance with the intention of causing harm. Suicide and assault by poisoning fall into this category.

Unintentional poisoning includes the use of drugs or chemicals for recreational purposes in excessive amounts, such as an "overdose." It also includes the excessive use of drugs or chemicals for nonrecreational purposes, such as by a toddler. When the distinction between intentional and unintentional is unclear, poisonings are usually labeled "undetermined" in intent.[2]

National Poisoning Data

- The rate of unintentional and undetermined poisoning deaths in the U.S. has increased in recent years (from 5.3 per 100,000 in 1999 to 8.3 per 100,000 in 2004).[2]
- In 2005, 23,618 (72%) of the 32,691 poisoning deaths in the U.S. were unintentional, 5,744 (18%) were suicide, 89 (0%) were homicide, and 3,240 (10%) were of undetermined intent.[2]
- Unintentional poisoning was second only to motor vehicle crashes as a cause of injury death that same year.[2]
- In 2006, unintentional poisoning caused about 703,702 emergency department (ED) visits.[2]
- Almost 25% of these unintentional ED visits resulted in hospitalization or transfer to another facility.[2]
- Every year in the U.S., nearly 2.5 million poison exposures are reported.[1]
- Children and youth under the age of 19 suffer the majority of poison exposures (66%). However, they only account for 19% of serious injuries and only 9% of deaths.[1]
- Adults over the age of 19 suffer only 34% of exposures but are responsible for 81% of serious injuries and 91% of deaths due to poisoning.[1]

**Figure 1: Utah vs. U.S. Poisoning Death Rates, 2000-2005[3]**
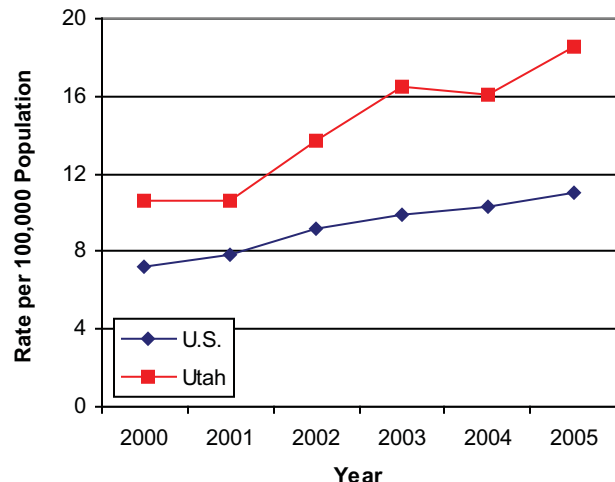
Utah Poisoning Data

- Utah has a higher rate of poisoning deaths overall and for every age group than the U.S. (see Figures 1 and 2).[3]
- From 1991-2003, the number of Utah residents dying from all drug poisoning increased nearly fivefold, from 79 deaths in 1991 (4.4 per 100,000) to 391 deaths in 2003 (16.6 per 100,000). This increase was largely the result of the tripling of the rate in poisoning deaths of unintentional or undetermined intent caused by prescription medications.[4]
- The rate of unintentional and undetermined poisoning deaths (13.9 per 100,000) surpassed the rate of motor vehicle crash deaths (13.2 per 100,000) in 2003. Until this time, motor vehicle crashes had been responsible for more lives lost than any other cause of injury.[5]
- For Utahans ages 25-44, undetermined poisoning is the overall leading cause of death. For people in this age group, more people die from poisoning than from motor vehicle crashes, cancer, or heart disease.[5]
- In 2006, 80 (17%) of the 473 poisoning deaths in Utah were unintentional, 79 (17%) were suicide, 0 were homicide, and 314 (66%) were of undetermined intent.[5]
- The Utah Poison Control Center received 42,734 poison exposure calls in 2006.[6]

Most Common Poisons

- In 2003, drugs caused 94.3% of the unintentional and undetermined poisoning deaths.[7] Opioid pain medications (such as codeine, fentanyl, methadone, and oxycodone) were most commonly involved, followed by cocaine and heroin.[8]
- Among those treated in emergency departments for nonfatal poisonings involving intentional, nonmedical use (such as misuse or abuse) of prescription or over-the-counter drugs in 2004, benzodiazepines (such as Ativan, Valium,

Figure 2: Utah vs. U.S. Poisoning Death Rates, by Age, 2001-2005[3]
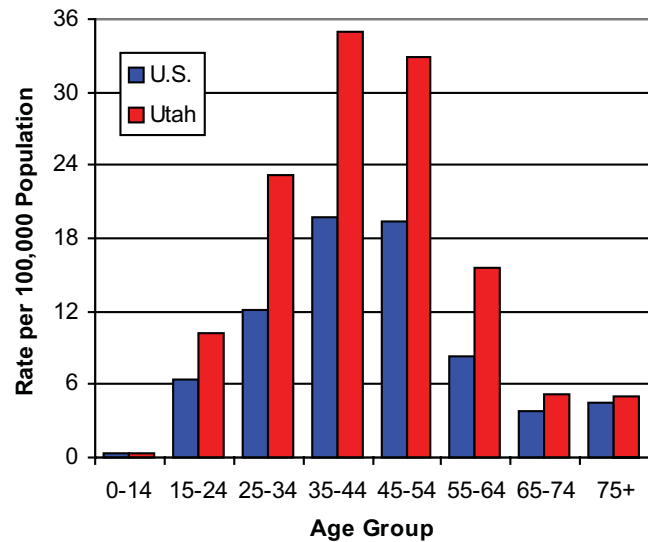
and Xanax) and opioid pain medications were used most frequently.[9]
- In Utah, prescription medications accounted for 64.4% of undetermined deaths and street and recreational drugs accounted for 25.8% of the deaths.[10]
- Methadone (12.3%) was the most common drug used in undetermined deaths, closely followed by cocaine (10.4%) and oxycodone (10.0%).[10]

Costs of Unintentional and Undetermined Poisonings[11]

- In 2000, poisonings led to $26 billion in medical expenses and made up 6% of the economic costs of all injuries in the U.S.
- Males accounted for 75% of the total costs of poisoning injuries ($19 billion).
- Females accounted for 25% of the total costs of poisoning injuries (almost $7 billion).

Poisoning Prevention Action Steps

Objectives:

1. Reduce unintentional and undetermined poisoning deaths from 16.3 deaths per 100,000 in 2006 to 0.8 per 100,000 deaths by 2010.
Current Utah Data: 2007, 20.2 per 100,000 population (age-adjusted)
2. Reduce Non-illicit, Opioid Drug Poisoning Deaths by 15% from 2006 (from 276 deaths to 235) by 2009.
Current Utah Data: 2008, 227 Non-illicit opiod durg poisoning deaths

Action Steps:

1. **Education and awareness**
    a. Provide education to patients who may overuse prescription medications out of ignorance.

    b. Target public awareness campaigns to increase awareness of the dangers of misusing prescription drugs.

    c. Increase education to prescribing doctors on the incidence and dangers of prescription drug deaths.

    d. Provide printed and other mediums of public announcements and information (via radio, television, internet) to educate the public on proper use of prescription drugs and the dangers associated with misuse.

2. **Legislative support**
    a. Seek legislative support for resources that establish programs to reduce deaths and other harms associated with prescription drug misuse.

    b. Support legislation requiring practicing physicians to complete training on pain management and opioid prescribing.

    c. Require identified prescription drug abusers to obtain treatment.

    d. Seek legislative support to conduct further research on prescription drug misuse and its causes.

3.   Behavioral support

    a.   Provide to the public anecdotal evidence of the dangers of misusing prescription drugs.

    b.   Provide programs or activities that encourage the proper use and prescribing of prescription drugs.

    c.   Inspection and review of medical doctors prescribing habits to ensure responsible prescribing practices

4.   Law Enforcement

    a.   Increase training to law enforcement on current drug trends and laws

    b.   Enforce drug laws

5.   Surveys and assessments of Prescribing Practices

    a.   Support the gathering of data collection and assessment through toxicological assays and interviews

    b.   Conduct research to isolate causes and craft interventions to stop abuse and overdose

6.   Provide funding

    a.   Seek and provide funding for awareness, enforcement, treatment and education

Sexual Violence

Background Information and Current Data

Definition of Sexual Violence

Sexual violence is a sex act completed or attempted against a victim's will or when a victim is unable to consent due to age, illness, disability, or the influence of alcohol or other drugs. Sexual violence also includes intentional touching of the genitals, anus, groin, or breast against a victim's will or when a victim is unable to consent; and voyeurism, exposure to exhibitionism, or undesired exposure to pornography. [1]

Occurrence of Sexual Violence

- The National Violence Against Women Survey found that 1 in 6 women and 1 in 33 men in the United States have experienced an attempted or completed rape at some time in their lives. [5]

- Fewer than half (48%) of all rapes and sexual assaults are reported to the police. [6]

- According to the 2003 Youth Risk Behavior Surveillance System, a national survey of high school students, 7.7% of students had been forced to have sexual intercourse when they did not want to. [4]

Groups at Risk of Sexual Violence

- A recent National Crime Victimization Survey found that women were 16 times more likely than men to experience rape or sexual assault. [6]

- Females ages 12 to 24 are at the greatest risk of experiencing rape or sexual assault. [6]

- Most perpetrators know their victims. According to the 2000 National Crime Victimization Survey, 62% of rape and sexual assault victims knew the perpetrator. More than 40% of female rapes and sexual assaults were perpetrated by a person the female victim called a friend or acquaintance. [6]

Healthy People 2010 Objectives

The Healthy People 2010 objectives promote reductions in attempted and completed sexual violence. The numbers of attempted and completed instances are reported as 1,000 people per year.

Table 1 compares Healthy People 2010 objectives with incidents reported in Utah. [2] Concerted efforts by states and private organizations will be needed to meet these goals.

Table 1.

Objective Baseline Year (1998)	2001	2010	Goal
Rape or attempted rape (per 1,000 population, aged 12 years and over) National	0.8*‡	0.7*‡	0.7
Rape (per 1,000 population) Utah	0.41†	0.39†	0.7
Sexual assault other than rape (per 1,000 population, aged 12 years and over) National	0.6*	0.5*	0.4

National figures are based on a household survey. The survey includes incidents that may or may not have been reported to police.
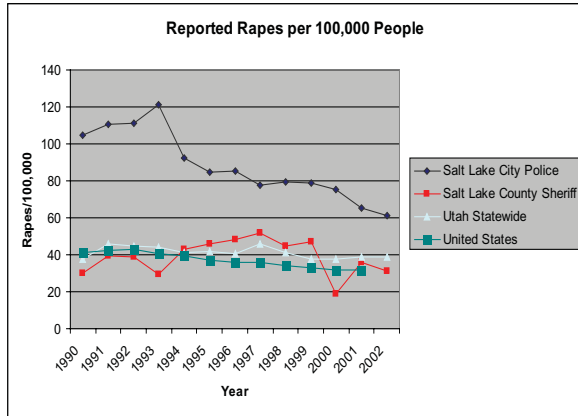*† Utah figures are based on reports to police and most likely underestimate true rates of sexual violence in Utah.*
‡ Reported rates per 1,000

Reported Sexual Violence Trends in Utah

Figure 1 represents yearly reported rates (reported to and substantiated by law enforcement) of rape in Utah from 1990 to 2002.[3]

Figure 1.

Reported Rapes per 100,000 People

Dating Violence

An often-overlooked topic directly relating to sexual violence is dating violence. Utah, having a large younger population, may demonstrate a potential for a significant frequency of dating violence. The following definition and facts regarding dating violence are provided by the Centers for Disease Control and Prevention (CDC).

Occurrence of Dating Violence

Violent behavior that takes place in a context of dating or courtship is not a rare event. Estimates vary because studies and surveys use different methods and definitions of the problem.

Data from a study of 8th and 9th grade male and female students indicated that 25% had been victims of nonsexual dating violence and 8% had been victims of sexual dating violence.

Sexual Violence Prevention, Action, and Services

Objectives:

1. Reduce incidences of rape in Utah from 91.2 per 100,000 women ages 15 years and older in 2006 to 90.8 per 100,000 women ages 15 years and older by 2010.
Current Utah Data: 2006 – 91.2 per 100,000 women ages 15 years and older (2006 Crime in Utah Report, Utah Department of Public Safety)

2. Reduce the annual rate of rape or attempted rape from 37.3 per 100,000 persons aged 12 years and older in 2005 to 35 per 100,000 persons aged 12 years and older by 2010.
Current Utah Data: 2005 – 37.3 per 100,000 persons aged 12 years and older (Utah Department of Health, IBIS-PH)

Action Steps:

1. Sexual violence prevention and intervention
   a. Implement proactive policies and interventions targeting the community in relation to sexual violence

2. Education and training about sexual violence
   a. Educate to prevent, recognize and intervene in relation to sexual violence issues (in a targeted community, such as schools or the community at large.

   b. Provide conferences to educate about sexual violence for those serving the community

   c. Provide training for the fellow peers, agencies and/or professions serving the community about sexual violence, i.e. residence assistants at colleges and universities, medical students, sexual assault nurse examiners, emergency medical services personnel, etc

3. Sexual violence interventions.
   a. Serve as a resource for prevention information, referrals, and/or treatment for sexual violence

   b. Serve as a resource for crisis information, referrals, and/or treatment for sexual violence

   c. Provide educational materials (print, internet, video, audio) relating to sexual violence

   d. Support programs that provide additional interventions (not directly related to sexual violence prevention) that impacts sexual violence such as substance abuse/alcohol treatment, Safe and Drug Free Schools, etc

   e. Support existing and develop future programs that assess and address groups with higher rates or potential risk for sexual violence

    f.   Provide and/or support crisis phone lines for victims

    g.   Provide case management for sexual violence victims

    h.   Provide individual and/or group counseling for the victims and/or family

    i.   Provide medical assessment, treatment and/or management to sexual violence victims

4. **Sexual violence legislation, law, law enforcement, and government related support**
   a. Provide education about sexual violence to the state legislature

   b. Initiate and/or support investigation, including interviewing, of possible sexual violence cases

   c. Provide training to law enforcement using Peace Officer Standards of Training (POST) and sex crime investigation training

   d. Support multi-disciplinary meetings and management of sexual violence cases

   e. Aid with general legal representation for victims

   f. Aid with legal representation for children

   g. Provide reparation for victims of crime

   h. Aid with prosecution of offenders

   i. Support Victim Identification and Notification Everyday (VINE) service. The Utah VINE Program allows crime victims, as well as other members of the community, access to inmate information.

   j. Support and enforce a Sex Offender Registry

5. **Sexual violence and social capitol (i.e. organizations working collaboratively to accomplish goals of mutual social benefit)**
   a. Collaborate and coordinate resources for sexual violence intervention and prevention

   b. Create collations that improve community outreach and trust such as neighborhood and organizational coalitions that address sexual violence

   c. Disseminate information to the public and those invested in sexual violence interventions

Intimate Partner Violence

Background Information and Current Data

Intimate partner violence—or IPV—is defined as actual or threatened physical or sexual violence or psychological and emotional abuse directed toward a spouse, ex-spouse, current or former boyfriend or girlfriend, or current or former dating partner. Intimate partners may be heterosexual or of the same sex. Some of the common terms used to describe intimate partner violence are domestic abuse, spouse abuse, domestic violence, courtship violence, battering, marital rape, and date rape.[1]

National Estimates

• Approximately 1.5 million women and 834,700 men are raped and/or physically assaulted by an intimate partner each year.[18]

• As many as 324,000 women each year experience IPV during their pregnancy.[11]

• An estimated 5.3 million IPV victimizations occur each year among women ages 18 years and older.[11]

• IPV victims lose approximately 8 million days of work.[3]

• One-third of female homicide victims were killed by an intimate partner.[3]

• The health care costs of intimate partner rape, physical assault, and stalking exceed $5.8

billion each year, nearly $4.1 billion of which is for direct medical and/or mental health care services.[8]

Utah Estimates

• A Utah-based study reported a one-year IPV prevalence rate of 9.7 percent of women seen in a local hospital emergency department.[4]

• This same study reported a lifetime IPV prevalence of 36% for women seen in the hospital emergency department.[4]

Healthy People 2010 Objectives

The Healthy People 2010 objectives promote reductions in physical assault by intimate partners. Physical assault percentages are based on incidents per 1,000 people per year. Table 1 compares Healthy People 2010 objectives with physical assault rates in Utah for the year 1998 and 2001.[5,6] Concerted efforts by states and private organizations will be needed to meet these goals.

Table 1. Objective	1998	2001	2010 Goal
Physical assault by intimate partners ages 12 and over /1,000 population (National)	4.4%†	2.6%	3.3%
Physical assault by intimate partners ages 12 and over /1,000 population (Utah)	3.3%*	2.5%*	3.3%

Utah data are drawn from the question: "When asked if a spouse, significant other, partner, or other family member injured you with an object or weapon, or hit, slapped, pushed, or kicked you," contained in the Utah Crime Victimization Surveys for 2000 and 2002.
† Reported rates per 1,000

Trends of IPV in Utah

The Utah Crime Victimization Survey, which captures IPV events through a telephone survey asks: "In the last year, did your spouse, significant other, partner or other family member injure you with an object or weapon, or hit, slap, push or kick you?" Figure 1 represents respondent's answers.

Figure 1.

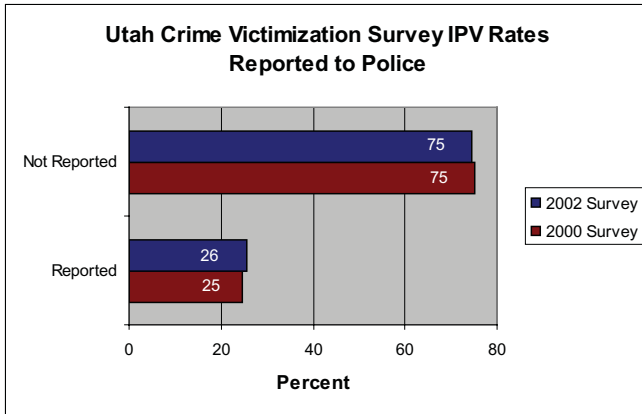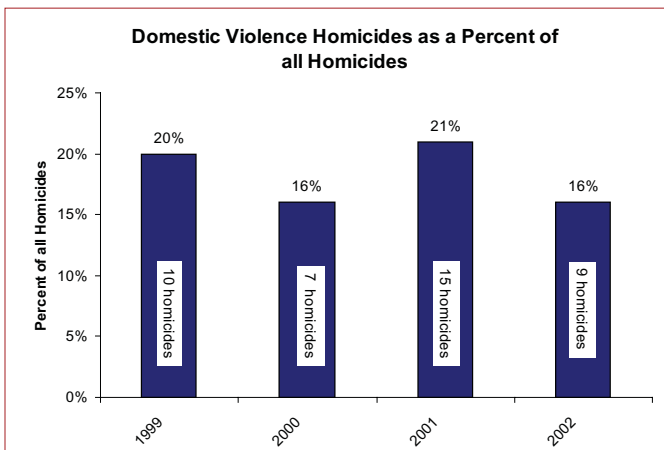Utah Crime Victimization Survey IPV Rates
Reported to Police

Figure 2 compares homicides as a whole to those associated with domestic violence (DV). Note, data include IPV and deaths of children.[6] A significant percentage of all homicides in Utah are a result of domestic violence.

Figure 2.

Table 2. Relation of Victim to Perpetrator	Total Offenses	% of Total
Boy/Girlfriend	3,685	28.7%
Spouse	3,015	23.5%
Child	1,923	15.0%
Sibling	1,222	9.5%
Parent	1,097	8.5%
Ex-Spouse	408	3.2%
In-Law	269	2.1%
Child of Boy/Girlfriend	154	1.2%
Homosexual Relationship	64	0.5%
Other Family	1,010	7.9%
Total	**12,847**	**100%**

Table 2 shows the criminal offenses committed against family members in Utah during 2006.[10]

How does IPV affect health?

IPV can affect health in many ways. The longer the abuse goes on, the more serious the effects on the victim. Many victims suffer physical injuries. Some are minor like cuts, scratches, bruises, and welts. Others are more serious and can cause lasting disabilities. These include broken bones, internal bleeding, and head trauma. Not all injuries are physical. IPV can also cause emotional harm. Victims often have low self-esteem. They may have a hard time trusting others and being in relationships. The anger and stress that victims feel may lead to eating disorders and depression. Some victims even think about or commit suicide. IPV is linked to harmful health behaviors as well. Victims are more likely to smoke, abuse alcohol, use drugs, and engage in risky sexual activity. [15]

How can we prevent IPV?

The goal is to stop IPV before it begins. Strategies that promote healthy dating relationships are important. These strategies should focus on young people when they are learning skills for dating. This approach can help those at risk from becoming victims or offenders of IPV. Traditionally, women's groups have addressed IPV by setting up crisis hotlines and shelters for battered women. But, both men and women can work with young people to prevent IPV. Adults can help change social norms, be role models, mentor youth, and work with others to end this violence. For example, by modeling nonviolent relationships, men and women can send the message to young boys and girls that violence is not okay.[15]

Intimate Partner Violence Prevention, Action, and Services

Objectives:

1. Reduce domestic violence homicides and suicides among Utah residents from 4 per 100,000 population in 2007 to 2.8 per 100,000 population by 2010.
Current Utah Data: Year – 3.57 per 100,000 population (Utah Department of Health, IBIS-PH)

2. Reduce the rate of physical assault by current or former intimate partners to 220 per 100,000 persons aged 12 years and older by 2010.
Current Utah Data: Year – 263 per 100,000 persons aged 12 years and older (Utah Department of Health, IBIS-PH)

Action Steps:

1. **Intimate Partner Violence (IPV) education and prevention**

   a. Support, implement, and evaluate violence prevention interventions

   b. Provide IPV related trainings for health care providers

   c. Provide IPV related education and training for professionals

   d. Provide IPV victim and community needed information and services to help victims and prevent re-victimization

   e. Create and disseminate to the public and IPV resource organizations an annual IPV report on the current status for the state of Utah

2. **IPV interventions**

   a. Provide crisis and information hotlines for IPV victims to access

   b. Provide emergency housing for IPV victims and their families

   c. Provide transitional housing for IPV victims and their families

   d. Provide local caseworkers for IPV victims

   e. Provide group and individual counseling or resource information to find counseling for IPV victims and/or perpetrators

   f. Provide specific assistance for children that have witnessed IPV

   g. Serve as a resource for information and services for IPV victims

   h. Serve as a resource for information and services for IPV adult and juvenile perpetrators

   i. Provide reparation for victims of crime

3. **IPV legislation, law, courts, and criminal justice**

    a. Provide victim advocacy within the judicial and criminal justice system

    b. Provide and aid in the process of obtaining protective and restraining orders, custody issues, counseling, and divorce (if needed or wanted) for IPV victims

    c. Provide education on IPV to the public and state legislature

    d. Train law enforcement personnel on responding to and addressing IPV incidents

    e. Provide victim advocacy support to accompany responding law enforcement personnel to an IPV situation

    f. Provide the V.I.N.E. (Victim Identification and Notification Everyday) service to the public. The Utah V.I.N.E. Program allows crime victims, as well as other members of the community, access to inmate information.

4. **IPV social capitol (i.e. organizations working collaboratively to accomplish goals of mutual social benefit)**

    a. Provide general community outreach, media relations, and education programs about IPV

    b. Pursue outreach programs that address minority or targeted/defined populations. Some examples could include women of color, immigrants, refugees, disabled, lesbian/gay/bisexual/transgender populations, and HIV positive individuals

    c. Collaborate and coordinate efforts with community organizations, law enforcement, judicial system, and resources associated with IPV

    d. Support existing and create future coalitions (such as local and neighborhood coalitions) that address IPV issues by various means such as providing funds, serve as a liaison for additional community resources, etc

    e. Support the "Week without Violence" program

5. **IPV surveillance and research**

    a. Review all IPV homicides to provide information relating to prevention, possible interventions and evaluation of existing services and policies

    b. Assess statewide IPV data needs (victims, perpetrators, associated family members, communities trying to address IPV, specific population/minorities)

    c. Evaluate short term and long term effects of transitional housing

6. **Caregiver abuse**

    a. Investigate reports of caregiver abuse

Suicide

Background Information and Current Data

Suicide is defined as a fatal self-inflicted destructive act with explicit or inferred intent to die.[1] It was the 11th leading cause of death in the U.S. and the 8th leading cause of death in Utah for the years 2000-2004.[2] Suicide is a complex behavior usually caused by a combination of factors. Research shows that almost all people who kill themselves have a diagnosable mental or substance abuse disorder or both, and that the majority have depressive illness. Studies indicate that the most promising way to prevent suicide and suicidal behavior is through the early recognition and treatment of depression and other psychiatric illnesses.[3]

Suicide deaths are only part of the problem. More people survive suicide attempts than actually die. They are often seriously injured and need medical care. Most people feel uncomfortable talking about suicide. Often, victims are blamed. Their friends, families, and communities are left devastated.[4]

National Suicide Data

In 2004, there were 32,439 suicide deaths in the U.S.[2] There are an estimated 16 attempted suicides for each completed suicide. The ratio is lower in women and youth and higher in men and the elderly. Suicide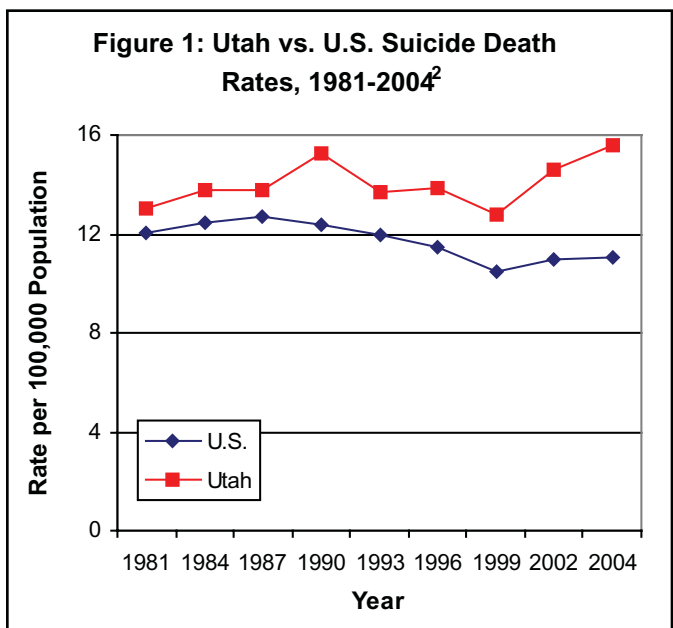 rates are generally higher in the western mountain states and lower in the eastern and Midwestern states.[3] The top 10 states for suicide rates are all in the Western U.S.[2]
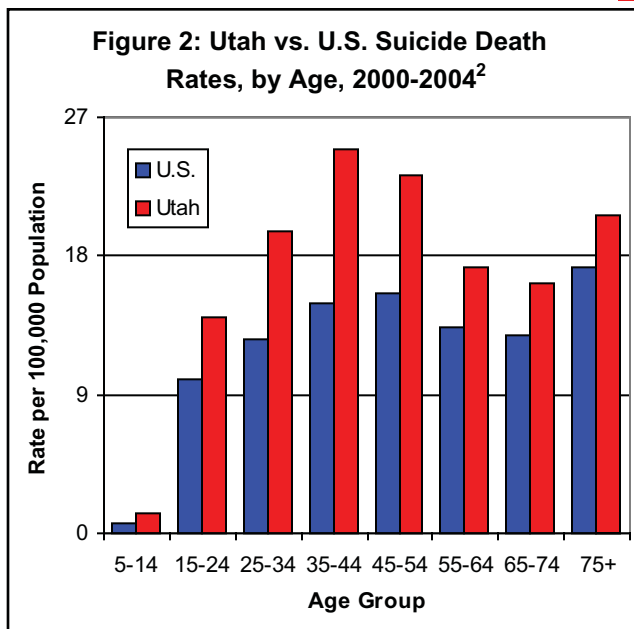
Utah Suicide Data

On average, 340 Utah residents die, 1,040 are hospitalized, and 2,650 are treated in emergency departments because of suicide and self-inflicted injuries suicide each year. Four times as many males as females commit suicide. However, more females attempt suicide than males. Suicide rates are highest in the 35-44 year age group. Rural Utah has a higher rate of suicide and attempted suicide than Urban Utah. The most common methods for suicide for the years 2002-2006 were firearm (52%), hanging/suffocation (23%), and poisoning (21%).[5]

Comparing Utah and U.S. Suicide Rates

Utah had the 7th highest suicide rate in the nation for the years 2000-2004.[2] As shown in Figure 1, the Utah suicide rate has remained higher than the U.S. rate for more than two decades. Figure 2 illustrates suicide rates by age groups for Utah and the U.S. Suicide rates in Utah are higher than the U.S. rate in every age group.[2]

Figure 1: Utah vs. U.S. Suicide Death Rates, 1981-2004[2]

Figure 2: Utah vs. U.S. Suicide Death Rates, by Age, 2000-2004[2]

Costs of Suicide and Attempted Suicide

Those who attempt suicide and survive may have serious injuries like broken bones, brain damage, or organ failure. Also, people who survive often have depression and other mental health problems. Suicide also affects the health of the community. Family and friends of people who commit suicide may feel shock, anger, guilt, and depression.[4] In 2005, $16.9 million was spent in Utah on hospital and emergency department charges for the treatment of self-inflicted injuries.[5]

Risk Factors for Suicide

Understanding risk factors can help dispel the myths that suicide is a random act or results from stress alone. Some persons are particularly vulnerable to suicide because they have more than one mental disorder present, such as depression with alcohol abuse. The impact of some risk factors can be reduced by interventions. Those risk factors that cannot be changed (such as a previous suicide attempt) can alert others to the heightened risk of suicide during periods of the recurrence of a mental or substance abuse disorder, or following a significant stressful life event. Several factors can put a person at risk for

attempting or committing suicide. But, having these risk factors does not always mean that suicide will occur. Risk factors for suicide include:
•Previous suicide attempt
•Mental disorders—particularly depression
•Substance abuse
•Feelings of hopelessness
•Impulsive and/or aggressive tendencies
•Relational, social, work, or financial loss
•Easy access to firearms
•Unwillingness to seek help because of stigma attached to mental and substance abuse disorders and/or suicidal thoughts
•Influence of significant people (family, celebrities, peers) who have died by suicide
•Social isolation.[3]

Efforts must be made to avoid normalizing, glorifying, or dramatizing suicidal behavior, reporting how-to methods, or describing suicide as an understandable solution to a traumatic or stressful life event.[3]

Protective Factors for Suicide

Protective factors can include an individual's genetic makeup, attitudinal and behavioral characteristics, and environment. Measures that enhance resilience or protective factors are as essential as risk reduction in preventing suicide. Positive resistance to suicide is not permanent, so programs that support and maintain protection against suicide should be ongoing. Protective factors include:
•Effective clinical care for mental, physical, and substance abuse disorders
•Easy access to a variety of clinical interventions and support for help seeking
•Restricted access to firearms
•Family and community support
•Support from ongoing medical and mental health care relationships
•Skills in problem solving, conflict resolution, and nonviolent handling of disputes
•Cultural and religious beliefs that discourage suicide.[3]

Suicide Prevention, Action, and Services

Objectives:

1. **Reduce the suicide rate from 13.1 suicides per 100,000 population in 2000 to 10.0 suicides per 100,000 population by 2010.**
   Current Utah Data: 2007 – 14.7 per 100,000 population (Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health)

2. **Reduce suicides among Utah residents 15-19 years of age from 12.6 per 100,000 population in 2000 to 9.6 per 100,000 population by 2010.**
   Current Utah Data: 2007 – 10.6 per 100,000 Utah residents 15-19 years of age (Utah Death Certificate Database, Office of Vital Records and Statistics, Utah Department of Health)

3. **Reduce the rate of suicide attempts by adolescents in grades 9 through 12 from 6.9% in 1999 to 4.9% by 2010.**
   Current Utah Data: 2007 – 9.6% (Youth Risk Behavior Survey, Centers for Disease Control and Prevention)

Action Steps:

1. **Awareness that suicide is a preventable public health problem**
   a. Educate the general population and school population (teachers, parents, students) about risk and protective factors for suicide
   b. Provide educational materials (print, web, video, audio) relating to suicide and/or mental health
   c. Provide state and local conferences to educate the general public and health professionals about risk and protective factors for suicide, especially for those individuals who serve members of their community
   d. Provide education and advocacy on suicide to the state legislature
   e. Reduce the stigma associated with being a consumer of mental health, substance abuse, and suicide prevention services

2. **Suicide prevention interventions**
   a. Continue statewide collaboration to implement the activities and recommendations of the Utah Suicide Prevention Plan[6]
   b. Support treatment interventions that adhere to evidence-based practice guidelines in related areas such as substance abuse interventions
   c. Implement evidence-based prevention strategies for suicide in schools and universities
   d. Increase the proportion of juvenile offenders statewide who receive evidence-based suicide prevention services through Juvenile Justice Services
   e. Implement evidence-based suicide prevention programs in community service organizations
   f. Develop a Utah Suicide Crisis Services Center in order to coordinate all training and provide technical assistance
   g. Promote efforts to reduce access to lethal means and methods of self-harm (including firearms, drugs, and poisons)

3. **Implement training for reporting on suicide and recognition of at risk behavior and delivery of effective treatment**
   a. Define minimum course objectives for providers of health care and counseling graduate programs in suicide risk and protective factors
   b. Train clergy, educational staff, and law enforcement officers on identifying and responding to persons in mental health crisis and/or risk for suicide
   c. Train local media representatives to promote the accurate and responsible representation of suicidal behaviors, mental illness, and related issues in compliance with national reporting guidelines available at www.sprc.org

4. **Effective clinical and professional practices**
   a. Implement guidelines for assessment of suicidal risk among persons receiving care in health care settings and treatment centers
   b. Continue support services to all suicide survivors to address their exposure to suicide and the unique needs of suicide survivors
   c. Provide suicide prevention education to persons receiving care for the treatment of mental health and substance abuse disorders and to their family members and significant others

5. **Improve access to and community linkages with mental health and substance abuse services**
   a. Assist suicidal persons with underlying disorders in receiving appropriate mental health treatment
   b. Increase access to mental health care for uninsured and non-Medicaid population in Utah
   c. Encourage national and state legislation requiring health insurance plans to cover mental health and substance abuse care on par with coverage for physical health.
   d. Implement guidelines for mental health (including substance abuse) screening and referral of students in universities
   e. Implement guidelines for mental health assessment and treatment of suicidal individuals from adult and juvenile incarcerated populations

6. **Suicide Surveillance**
   a. Review all deaths of children under age 21 ruled suicide by the Office of the Medical Examiner
   b. Support and use the National Violent Death Reporting System to track suicide patterns in Utah
   c. Develop, evaluate and/or implement questionnaire to screen youth for distress and dysfunction associated with mental illness
   d. Improve and expand surveillance systems to gather more complete information about specialty populations at risk for suicide

7. **Suicide research and reporting**
   a. Develop, support, and/or disseminate lessons learned from the Utah Youth Suicide Study
   b. Establish and maintain a volunteer registry of self-identified survivors of suicide
   c. Evaluate new and existing suicide prevention interventions
   d. Concentrate future research on suicide attempters in addition to completers

Child Maltreatment

Background Information and Current Data

Child maltreatment, or child abuse and neglect, is defined as "at a minimum, any recent act or failure to act on the part of a parent or caregiver that results in death, serious physical or emotional harm, or sexual abuse or exploitation; or an act or failure to act that presents an imminent risk of serious harm."[1]

There are four major types of maltreatment: physical abuse, child neglect, sexual abuse, and emotional abuse.[2]

Occurrence of Child Maltreatment

In 2005, an estimated 899,000 children in the U.S. experienced child abuse and/or neglect. An estimated 1,465 children died from such maltreatment.[3] In that same year in Utah, there were 13,152 victims of child maltreatment. Seven of these children died.[4]

Consequences of Child Maltreatment

- Both males and females who have experienced maltreatment are at increased risk for experiencing intimate partner violence as adults.[5]
- Shaken-baby syndrome. An estimated 20-25% of infant victims with shaken-baby syndrome die from their injuries. Nonfatal consequences of shaken-baby syndrome include blindness, cerebral palsy, and cognitive impairment.[6]
- Abused and neglected children are more likely to suffer from depression, alcoholism, drug abuse, and severe obesity. They are also more likely to require special education in school, become juvenile delinquents, and become adult criminals.[7]

Economic Costs of Child Maltreatment

There is no means available to assess the overall economic costs of child maltreatment. Numerous studies have documented the link between the maltreatment of children and a wide range of medical, emotional, psychological, and behavioral disorders. These problems follow abused children throughout their lives. Regardless of the economic costs associated with child maltreatment, it is impossible to overstate the tragic consequences endured by the children themselves. The costs of such human suffering are incalculable. Estimates of indirect and direct economic costs of child maltreatment total at least $94 billion, which includes:

- Direct costs of child maltreatment which include hospitalizations, chronic health problems, mental health care, child welfare response, law enforcement, and judicial system costs are estimated at over $24 billion.
- Indirect costs such as special education, mental health and health care, juvenile delinquency costs, lost productivity to society, and adult criminality total over $69 billion.[7]

Groups at Risk for Maltreatment

Infants are at greatest risk for dying from homicide during the first week of infancy, with the risk being highest on the first day of life.[8]

Children younger than 12 months account for 44% of child maltreatment deaths.[9] Male and female children experience similar rates for all types of maltreatment, except child sexual abuse, which is four times higher among females than males.[9]

Comparing Utah and U.S. Victim Characteristics

In the U.S., child protective service agencies received 3.6 million reports of possible maltreatment in 2005. Of these, 899,000 were substantiated and most involved neglect.[9] The U.S. Department of Health and Human Services reports the rate of child neglect and abuse in 2005 was 12.1 out of every 1,000 children.[3] Figure 1 illustrates the type of abuse linked to reported U.S. child maltreatment deaths in 2005. Neglect was most often associated with child death.[3]

Figure 1: % of U.S. Child Maltreatment Deaths by Type, 2005[3]
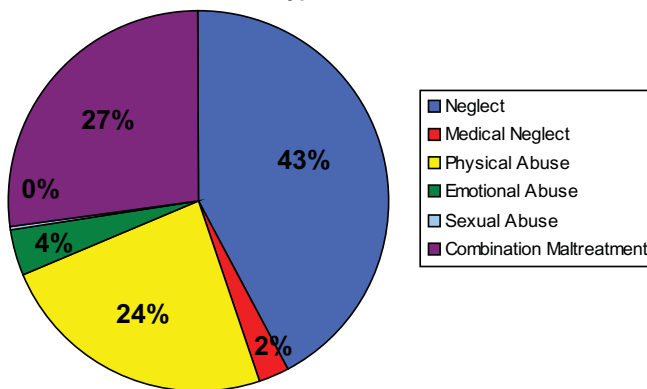
In Utah, 20,340 referrals were investigated by the Division of Child and Family Services in 2007. 8,386 (41%) of those referrals were supported. 29% of supported abuse or neglect cases had alcohol or drug abuse as a contributing factor as reported by caseworkers. Figure 2 shows the percent of supported allegations by type. Domestic violence, sexual abuse, and physical abuse were the most common supported allegation types. Figure 3 shows the relationship of the perpetrator to the abused or neglected child. Two-thirds of perpetrators were parents.[10]

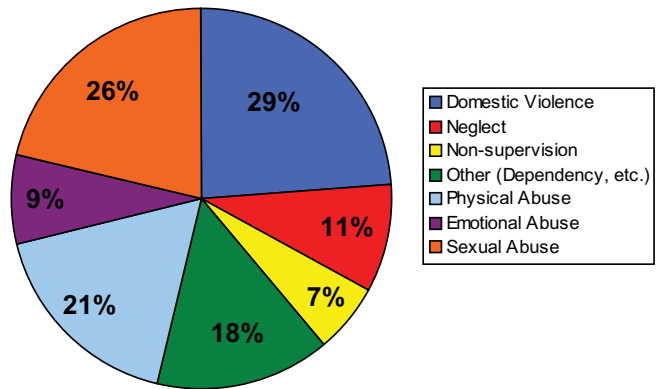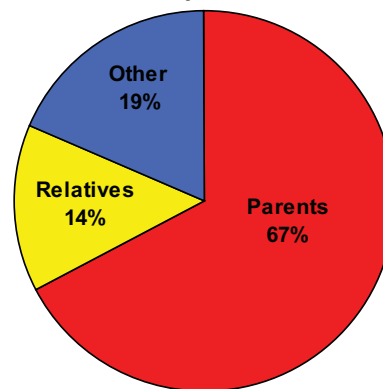**Figure 2: % of Supported Allegations by Type, Utah, 2007[10]**

Figure 3: % of Supported Perpetrators by Relation to Primary Victim, Utah, 2007[10]

Best Practices for Preventing Child Maltreatment[11]

Child maltreatment is a serious problem that can have lasting harmful effects on victims. As child abuse is cyclical, stopping child abuse and neglect from happening in the first place is the only way to eliminate the problem. Developing healthy, supportive family relationships is the only sure way of stopping child maltreatment.

Prevention efforts should ultimately reduce risk factors and promote protective factors. In addition, prevention should address all levels that influence child maltreatment: individual, relationship, community, and society. Effective prevention strategies are necessary to promote awareness about child maltreatment and to foster commitment to social change.

Child Maltreatment Prevention, Action, and Services

Objectives:

1. **Reduce maltreatment of children from 1204 child victims per 100,000 children under age 18 years in 2007 to 1,030 child victims per 100,000 children under age 18 years by 2010.**
   Current Utah Data: Year – 966 per 100,000 children under age 18 years (Source: Utah Department of Child and Family Services)

2. **Reduce maltreatment fatalities of children from .82 per 100,000 children under age 18 years in 2008 to 1.4 per 100,000 children under age 18 years by 2010.**
   Current Utah Data: Year – .82 per 100,000 children under age 18 years (Source)

Action Steps:

1. **Education and training regarding child maltreatment**
   a. Educate to recognize and intervene when child maltreatment is suspected (from a targeted community, such as a school or the community at large)

   b. Provide conferences to educate those servicing the community about child maltreatment

   c. Provide training for the health agencies and/or professionals serving the community about child maltreatment (i.e. medical students, medical services personnel, etc.)

2. **Child maltreatment prevention and interventions.**
   a. Serve as a resource for prevention information, referrals, and/or treatment for child maltreatment

   b. Provide educational materials (print, internet, video, audio) relating to child maltreatment

   c. Support programs that provide additional interventions (not directly related to child maltreatment prevention) that impacts child maltreatment such as substance abuse and alcohol treatment, mental health treatment, Safe and Drug Free Schools, education programs for children with developmental delays, funding for homes with limited financial resources, alternative schools, etc.

   d. Support existing and develop future programs that assess and address potential at-risk populations with higher child maltreatment incidence or potential for child maltreatment

   e. Provide emergency shelter for domestic violence and child maltreatment cases

   f. Provide case management for child maltreatment victims

   g. Provide specific programs for family support relating to child maltreatment

   h. Provide counseling for victims and/or family

    i.   Provide medical treatment and/or management to child maltreatment victims

    j.   Support a medical assessment team (for outpatient, inpatient, and case consultation)

    k.   Support Children's Justice Centers statewide

3. **Child maltreatment legislation, law, law enforcement, and government related support**
   a. Develop and support proactive policies regarding child maltreatment

   b. Provide education about child maltreatment to the state legislature

   c. Initiate and/or support investigation of possible child maltreatment cases

   d. Assist with court or court orders to protect victims and potential victims

   e. Aid in criminal prosecution

4. **Child maltreatment and social capitol (i.e. organizations working collaboratively to accomplish goals of mutual social benefit)**
   a. Collaborate and coordinate efforts and resources for child maltreatment prevention

   b. Create collations that improve community outreach and trust such as neighborhood and organizational coalitions that address child maltreatment

   c. Disseminate information to the public and those invested in child maltreatment interventions

5. **Child maltreatment surveillance**
   a. Continue efforts of the Child Fatality Review Committee

6. **Child maltreatment research, grant management/outreach and reporting**
   a. Support future research relating to child maltreatment

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Definitions

Adverse Effects – includes misadventures to patients during surgical and medical care, abnormal reaction of patient or later complication from medical procedures, and adverse effects from drugs and substances in therapeutic use

Child Maltreatment – any recent act or failure to act on the part of a parent or caregiver that results in death, serious physical or emotional harm, or sexual abuse or exploitation; or an act or failure to act that presents an imminent risk of serious harm

Drowning – includes suffocation by submersion in water with and without involvement of watercraft

Fall – includes falls from stairs, ladder, bed, building, playground equipment, cliff, trees, slipping, tripping, stumbling, and tackles in sports

Firearm – includes injuries from handgun, shotgun, rifle, and other firearms

Fire/Burn – includes injuries from fire, flames, hot objects, and hot substances

Homicide – includes injuries purposely inflected by other persons

Intimate Partner Violence – actual or threatened physical or sexual violence or psychological and emotional abuse directed toward a spouse, ex-spouse, current or former boyfriend or girlfriend, or current or former dating partner

Motor Vehicle Traffic – includes injuries resulting from motor vehicles traveling on public roads to occupants, pedestrians, and bicyclists

Other Land Transport – includes injuries from railway, and off-road and other motor vehicles not in traffic

Other Specified and Classifiable – includes injuries from foreign body entering orifice, caught in or between objects, explosions, electric current, and late effects of injuries

Other Specified, Not Elsewhere Classifiable – includes injuries that have been reported but for which no specified external injury codes exist

Other Transport – includes injuries from water transport, aircraft transport, and unspecified transport

Pedestrian, Other – includes injuries to pedestrians hit by a train, a motor vehicle where the collision did not occur in traffic, or another means of transportation

Poisoning – includes poisoning by drugs, solid and liquid substances, gases, and vapors

Sexual Violence – a sex act completed or attempted against a victim's will or when a victim is unable to consent due to age, illness, disability, or the influence of alcohol or other drugs

Suffocation – includes the inhalation or ingestion of food or other objects that block respiration and by other mechanical means that hinder breathing

Suicide – a fatal self-inflicted destructive act with explicit or inferred intent to die

Undetermined – includes unspecified intent or when intent cannot be determined

Unintentional – means an unexpected or unplanned injury or event

Unspecified – includes injuries where the mechanisms are not reported

Years of Potential Life Lost – premature death, the loss of years of productive life due to death before age 75, this is an indication of how many productive years are lost to society due to untimely deaths

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