Oregon Injury Prevention Plan
2011-2015

Injury & Violence Prevention Program
Public Health Division
Oregon Health Authority

Oregon Injury Community Planning Group
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Introduction

Injury is the third leading cause of death in Oregon, behind only cancer and heart disease. It is also among the leading causes of hospitalization. It is typical to consider some causes of death—cancer, heart disease, stroke—as mainly affecting Oregonians in older age groups. However, everyone is affected by injury, regardless of age, sex, or race. In fact, injury is the leading cause of death among Oregonians 1 to 44 years of age. Nearly 2,500 Oregonians died in 2010 as a result of injury; more than 1,500 of these were unintentional injuries.

What is injury?

While unintentional injuries often result as a form of rapid transfer of energy from object to person (e.g. being struck by a motor vehicle), intentional injuries are the result of intentional harm imposed upon one person by another, or upon oneself (e.g. suicide). In other words, injury includes violence. Although injuries can be categorized in multiple ways—where they occur, how they occur, etc.—it is typical to categorize injuries in terms of both mechanism and intent. Mechanism (or cause) typifies how the injury occurred—for instance, by motor vehicle, firearm, struck by an object, by falling, etc. Intent is classified as unintentional or intentional (or else unknown, undetermined).

It is common to consider injuries accidents or random events. However, this implies that injuries are unpredictable and unpreventable. Actually, injuries are preventable (and at the community level are also predictable), and there is a need to make injury prevention a top public health prevention priority.
How big is the problem?

Unintentional injury is the fifth leading cause of death across all ages in Oregon, 2010. Even when unintentional injury alone is considered in comparison with the leading causes of death, injury still ranks among the 10 leading causes of deaths in 2010.

However, there are substantial differences in the number of injury deaths that occur by age group, and therefore in the ranking of leading causes of death by age group. Injury is the leading cause of death for Oregonians one 1-44 years of age. After age 44, the mortality burden shifts to causes such as cancer (malignant neoplasm), heart disease, stroke, and chronic respiratory disease. As a leading cause of death for younger age groups, injury has a substantial impact on the population of the state.

In order to fully understand the burden of injury on Oregonians, the years of potential life lost

Figure 1. Years of potential life lost (YPLL) before age 65 & crude rates/100,000 due to leading causes of death, Oregon 2010

(YPLL)—a measure of the number of the years of potential life lost due to premature death—should also be assessed alongside indicators such as rates per 100,000 people.
In 2010, the leading cause of injury mortality in Oregon was suicide, at 17.0 deaths per 100,000 (age adjusted). This was over 680 deaths in 2010. Suicide contributes to over 100,000 years of potential life lost in Oregon each year.

Drug related overdose deaths has surpassed motor vehicle related deaths with a rate of 14.8 per 100,000 (age adjusted). Unintentional falls were the third leading cause of injury mortality in 2010 with a rate of 12.1 deaths per 100,000 (age adjusted). Unintentional falls are the leading cause of hospitalization due to injury.

Unintentional injury hospitalization billed charges exceeded $495 million in 2010.

**Figure 2. Age-Adjusted Injury Mortality Rates, 2010**
The public health approach to injury

Public health is a population-based health approach by which health issues are addressed primarily at the community level, versus at the individual level. Prevention, rather than treatment, is a primary goal of this approach, and efforts to prevent adverse outcomes (whether communicable or chronic diseases, or injuries), target communities over individuals. Since the whole community is the focus of prevention, many different solutions to preventing injuries can be applied to the many different types of injury.

The public health approach to injury prevention is a process that involves:

- Identifying and defining the problem
- Identifying risk and protective factors
- Developing and testing prevention strategies
- Assuring widespread adoption of effective strategies

Rather than address injuries that occur among individuals on a one-to-one basis, broad causes and prevention solutions are the focus of injury prevention in public health. Instead of focusing on individuals and the treatment of individual injuries as they arise, it is the whole community, the community’s whole health, and community-level prevention which defines the public health approach.

Sometimes, prevention at the community level involves changing the environment in which
injuries occur—for example: installing traffic signals at intersections, or requiring certain products to be fire safe. At other times, prevention at the community level involves education—such as informing school sports programs about preventing head injuries, or providing information to guide changes in health policies or laws. Although the public health workforce may not always directly provide prevention services, public health agencies identify the important conditions and patterns that contribute to injury at the community level, and identify and leverage solutions through community partnerships to promote prevention.
Who should be involved in injury prevention?

Many organizations, institutions, agencies and individuals work toward injury and violence prevention. Many people working on similar issues in injury prevention might seem to complicate prevention efforts; however, this is actually beneficial to prevention. Here’s why: the most effective means of reducing the burden of injury relies on levels of action from the individual all the way up to the public policies we implement as a society. This is sometimes called the ecological model of prevention, which is shown below. Although individuals are at the heart of the model, the other levels of the model—relationships, community, and societal context all influence the choices made by individuals, as well as interact with other levels in the model. It takes efforts at all levels to really have an impact on the burden of injury.

The Oregon Injury Prevention Program works with an Injury Community Planning Group (ICPG) to identify areas where prevention can be effective. Partnerships made up of a diversity of organizations and individuals help to bridge communication between levels of prevention, further benefiting prevention efforts.

The state Injury Prevention Program has a unique role in injury prevention, and is designed to:

- Build a solid infrastructure for injury and violence prevention in Oregon
- Collect and analyze injury and violence data
- Design, implement, and evaluate programs
- Provide technical support and training for partners in prevention
- Affect injury prevention policy
What are the prevention priorities in Oregon?

This plan sets injury prevention priorities. These priority areas have been identified based on the overall impact of these injuries by

- Their relative rank of mortality
- Number of hospitalizations
- Years of potential life lost (YPLL)
- Trend (concerning trend of increase)
- Potential for reducing the impact through the application of evidence-based prevention efforts
- Capacity of the Injury Prevention Program to address particular injury issues

It is important that data inform injury prevention priorities, which is why public health surveillance for injuries forms the foundation of injury prevention. Without data to inform how we prioritize prevention efforts, the limited resources for injury prevention can be pulled in many directions.

Although news reports may provide dramatic details of unusual events or health threats, many injury outcomes quietly accumulate in the population with little acknowledgement. Every year in the US, over 40,000 people are killed in motor vehicle traffic, about 29,000 die from unintentional poisoning, over 22,000 (mostly older adults) die from fall-related injuries, and 32,000 die from suicide. A large number of these injuries can be prevented, but the limited resources for preventing injuries must be carefully allocated to achieve impact where it matters most.

The priorities that this plan focuses on are

- suicide
- motor vehicle traffic
- falls
- poisonings
- traumatic brain injury
- drowning
- transport injuries
- homicide and assault
The top four injury priorities are:

- suicide
- motor vehicle traffic
- falls
- poisonings

Suicides are the leading cause of mortality and YPLL; falls among the older adults lead in hospitalizations and deaths; MVT deaths are among the top five leading causes of mortality; poisonings are among the leading causes of injury death.
How is this plan structured?

This plan was developed to guide strategies for injury prevention in Oregon. Priority prevention goals were integrated into a state prevention plan that includes both process and outcome goals aimed at directing objectives and resources toward decreasing the burden of injury in Oregon. Both the vision and mission from the previous five year state prevention plan were carried over to the current plan.

The Oregon Violence and Injury Prevention Program (VIPP) works with many partners to fulfill a vision of an injury-free Oregon. The state Injury Community Planning Group (ICPG) is made up of partners from a broad spectrum of organizations and agencies that have a stake in injury prevention. The development of this plan was carried out through a partnership of the Oregon Violence and Injury Prevention Program and the ICPG. VIPP developed the plan ‘concept’, and ICPG provided expertise in prevention strategies and guidance.

In order to provide a straightforward approach, the plan is divided into sections by injury type (e.g. suicide, motor vehicle, etc.). Each section provides four components: a description of the problem, a goal, a prevention target, and strategies for reaching the goal. The ‘targets’ for action are based on Health people 2020 objectives, where applicable. The timeline implied by this plan is that objectives can be reached by 2015 if prevention strategies are effective.

The Vision of this Plan: **Oregon is a safe and injury-free place to live and work**

The Mission of this Plan: **The Injury Prevention Program will help lead prevention efforts together with community partners committed to decreasing the burden of injury in Oregon.**
Suicide

The problem

Suicide is among the leading causes of death in Oregon, and is a major public health issue nationally. Each year, there are more than 650 suicides in Oregon, and more than 2,100 hospitalizations due to suicide attempts.

Rates of suicide increase with age, and among men, this pattern is apparent, as rates more than double between persons 55-64 years of age and those 85 years of age and older.

Figure 3. Suicide crude mortality rate/100,000 by age group and sex, 2010

Although nationally, men are four times more likely to die from suicide than women, women attempt suicide three times more often than men during their lifetime. In Oregon in 2010, there were 6 times more suicides than homicides. For Oregonians 15 to 54 years old, suicide ranks among the top five causes of death. In Oregon, women have a higher rate of hospitalization due to suicide attempt, and the highest rates occur among those 15-24 years of age.

1 Centers for Disease Control, Suicide Fact Sheet, www.cdc.gov/ncipc/factsheets/suifacts.htm
In 1999, the rate of suicide was 14.5 per 100,000 population, while in 2010 the rate was 17.0.

**Figure 4. Self Harm/Suicide Attempt Hospitalizations: Crude Rate/100,000, 2008-2010**

Risk factors include:

- Depression and other mental disorders, substance-abuse disorder
- Stressful life events in combination with other risk factors, such as depression
- Prior suicide attempt
- Family history of mental disorder or substance abuse, suicide, violence (including sexual abuse)
- Firearms in the home
- Incarceration
- Exposure to the suicidal behavior of others (e.g. family members, peers, or media)

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
- Family and community support
- Support from ongoing medical and mental health care relationships
- Skills in problem solving, conflict resolution, and nonviolent way of handling disputes
- Cultural and religious beliefs that discourage suicide and support instincts for self-preservation
While the aggregate suicide rate has remained relatively static in Oregon in recent years, suicide is increasing for some age groups such as middle-aged women, and suicide attempt hospitalizations have increased in the general population by 50%. Suicide attempts are a risk factor for suicide; suicide attempt rates must be reduced to have an impact on the total suicide rate.

**The goal**

Reduce the suicide rate.

**The target**

Reduce suicides to 10.2 per 100,000

Reduce the youth suicide attempt to 53 hospitalizations per 100,000.

**Strategies**

The Suicide Prevention Resource Center (SPRC) and the American Foundation for Suicide Prevention (AFSP) worked with the Substance Abuse and Mental Health Services Administration’s (SAMHSA) Suicide Prevention Resource Center to identify several effective evidence-based interventions to reduce suicide, suicide ideation, or risk behavior, including community-based programs, emergency room programs, primary care programs, school-based programs, and service delivery. Evidence-based programs include:

**Emergency Room Programs**

*Emergency Department Means Restriction Education:* a program that educates parents of (youth ages 6-19) suicide attempt patients on restricting access to lethal means of suicide (http://www.sprc.org/featured_resources/bpr/ebpp_PDF/emer_dept.pdf).

**Primary Care-Based Programs**

*PROSPECT Program:* a treatment and depression-management program for community dwelling elderly adults which was effective in reducing suicide ideation

**School-based Programs**

*C-Care/Cast Program:* counseling and small group skills training programs implemented in schools to reduce suicidal ideation and risk behaviors (http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=225).
Other programs are classified as ‘promising’, and in need of further evaluation; best practice programs are listed below.

Reviewed Best Practices

QPR (Question, Persuade, Refer): emergency mental health gatekeeper program that teaches community gatekeepers to recognize and respond positively to someone exhibiting the signs of suicide ideation.

RESPONSE: a high school-based program designed to raise awareness about suicide.

ASIST (Applied Suicide Intervention Skills Training): a standardized training workshop for caregivers, that teaches suicide “first aid” that can help persons at risk stay safe and seek help. ASIST is the only one of the reviewed practices that is also on the DHS Approved List of Evidenced Based Practices.²

Some of the highest suicide rates occur among older adults, especially older men. For older adults, strategies include:

- Promote awareness that suicide is a public health problem that is preventable.
- Develop broad-based support for suicide prevention.
- Develop and implement strategies to reduce the stigma associated with aging and with being a senior consumer of mental health, substance abuse and suicide prevention services.
- Develop and implement community-based suicide prevention programs for older adults.
- Promote efforts to reduce access to lethal means and methods of self-harm by older adults.
- Implement training for recognition and assessment of at-risk behavior in and delivery of effective treatment to older adults.
- Develop and promote effective clinical and professional practices for suicide prevention.
- Improve reporting and portrayals of suicidal behavior, mental illness, and substance abuse among older adults in the entertainment and news media.
- Promote and support research on late life suicide and suicide prevention.
- Improve and expand surveillance systems and evaluation of prevention programs for suicidal behavior.

If the incidence of suicide is to be reduced, an overall strategy that recognizes and considers the life course of individuals must be considered. This will mean, in part, focusing on youth—where the downstream effects of suicidal behavior can be addressed early in the life course. Strategies for preventing youth suicide include:

Communities

- Establish comprehensive prevention programs, such as RESPONSE, in schools
- Reduce harassment in schools and communities
- Enhance crisis services
- Establish and maintain crisis response teams
- Support suicide survivors
- Eliminate the stigma associated with behavioral health care
- Support efforts to reduce youth access to lethal means of self-harm
- Expand “gatekeeper” training
- Provide Spanish language suicide prevention materials in schools and through migrant education programs
- Develop and distribute a resource tree for communities that includes specific emergency, subacute, crisis, and longer term help for youth at-risk for suicide
- Explore suicide prevention strategies through the poison control hotline

Individuals

- Get involved in the local community in suicide prevention efforts
- Recognize and respond appropriately to troubled youth that vocalize plans for suicide
- Parents: increase awareness of suicide risk factors, restrict means for at-risk youth

The health care community

- Screen all youth 12-18 years of age for major depressive disorder when seen by a pediatrician, and when there are adequate resources for follow-up
- Improve follow-up care and implement outreach to suicide attempters
- Refer all attempters for follow-up care. Oregon statute requires that all youth presenting to a hospital following a suicide attempt must be referred for follow-up care
- Increase compliance with state law by providing timely, valid and reliable data to the ASADs system
- Improve access to affordable behavioral health care
- Establish screening programs in settings where youth are seen (e.g. drug and alcohol treatment, juvenile justice, mental health services)
• Reporting facilities (hospitals) should adhere to reporting protocol as detailed by DHS (http://www.oregon.gov/DHS/ph/ipe/ysp/ASADS2.shtml) to improve the validity and reliability of data. Accurate, timely, and reliable information leads to improved outcomes.

For all age groups, providers in primary care should routinely ask about suicidal thoughts when depression or other indicators are present and appropriate referrals are made when suicidal thoughts are endorsed. In addition, providers should be aware that veterans are a group with increased risk of suicide.

Other resources

• Oregon’s Violent Death reporting System annual reports: http://www.oregon.gov/DHS/ph/ipe/nvdrs/index.shtml. These reports provide more in depth data and analysis of Oregon’s suicide burden.
• Review Oregon’s Older Adult Suicide Prevention Plan at: http://www.oregon.gov/DHS/ph/ipe/esp/index.shtml
Motor vehicle traffic injuries

The problem

Motor vehicle traffic (MVT) injuries are one of the leading causes of death and hospitalization in Oregon, and are the second leading cause of injury death. Every year, more than 300 Oregonians are killed in motor vehicle traffic incidents, and over 2,200 are hospitalized.

Figure 5. Motor vehicle traffic mortality: crude rate/100,000, 2000-2010

Motor vehicle traffic injuries include all those involving automobiles, trucks, vans, motorcycles and motorized cycles, traveling on public roadways. The major categories of motor vehicle traffic involvement include vehicle occupants, motor cyclists, pedal cyclists, and pedestrians, depending specifically on the decedent’s or patient’s involvement.

In 1999, the mortality rate from MVT was 11.9 per 100,000, and 7.7 per 100,000 in 2010. Still, much progress in reducing the rate of mortality could still be made.

The current burden of mortality is not the same across the population. The rate of motor vehicle traffic mortality is significantly higher for males overall compared to females. The death rates among teens and older adults are still higher than the general population.

Three age groups stand out for MVT injury prevention—children, teens, and older adults. Motor vehicle traffic is a leading cause of injury death for children 0-14 years of age. Between 2000 and 2010, 223 Oregon children under 15 died as a result of motor vehicle traffic injuries. This translates into a rate of nearly 3.3 per 100,000 children in 1999 to 0.2 per 100,000 children.
(age adjusted) in 2010—a decrease of 94%. Teens have the highest rate of hospitalization due to motor vehicle traffic incidents in the state, and among the highest rates of motor vehicle traffic mortality. Nationally, motor vehicle traffic mortality and hospitalization rates for teens are known to be high, and Oregon reflects similar trends.

The rate of hospitalization for teens 15-19 declined 37% between 1997 and 2010, from a high of 121.6 per 100,000 population in 2001 to 77.0 per 100,000 in 2010.

Annually, more than 29 deaths and 198 hospitalizations occur in the 15-19 year old age group due to motor vehicle traffic. The rate of mortality for adults 65 and older decreased slightly between 1999 and 2007 from 21.1 deaths per 100,000 population to 11.3 deaths per 100,000 in 2010. Motor vehicle traffic injury was the second leading cause of hospitalization among older adults and was the second leading cause of death for those 65 to 74. During 2010 there were 62 deaths in older adults due to motor vehicle traffic injury. There were over 280 hospitalizations in older adults are due to motor vehicle injuries.

Risk factors include:

- Alcohol impaired driving/substance use
- Aggressive driving
- Speeding
- Inexperienced driving
- Distracted driving
- Hazardous road conditions
- Failure to use safety equipment (i.e. seat belts)
- Dementia and other impairments
- Sleep deprivation
- Visual impairments
- Pedestrians should be especially careful at intersections, where drivers may fail to yield the right-of-way to pedestrians while turning onto another street.
- Pedestrians should increase their visibility at night by carrying a flashlight when walking and by wearing retro-reflective clothing.
- Whenever possible, pedestrians should cross the street at a designated crosswalk. It is much safer to walk on a sidewalk, but if pedestrians must walk in the street, they should walk facing traffic.
The goal

Reduce deaths caused by motor vehicle crashes.

The target

Reduce deaths to 10 deaths per 100,000 population. This would indicate a 17% decrease from the 2007 mortality rate (baseline).³

Strategies

Recommended MVT injury prevention measures include:

Promote and maintain effective measures to reduce impaired driving. The Task Force on Community Preventive Services, an independent, nonfederal panel of community health experts, has recently issued recommendations that outline effective measures to reduce impaired driving that include:

- Sobriety checkpoints,
- “Zero tolerance” laws for young drivers,
- Reducing legal blood alcohol concentration to 0.08%,
- Minimum legal drinking age laws, server intervention training programs,
- Mass media campaigns to reduce alcohol-impaired driving,
- School-based health promotion programs to promote avoiding riding with impaired drivers,
- Multifaceted community-based programs.⁴

Impaired driving contributes substantially to MVT injuries in Oregon. In 2004, 44% of MVT fatalities in Oregon involved alcohol.⁵ Each alcohol-related fatality costs an estimated $3.6 million in monetary and quality of life costs, while the estimated cost per survivor of alcohol-related crashes is $108,000.⁶ In light of the approximately 400 MVT deaths, and 2,200 hospitalizations in Oregon each year, the costs of MVT injuries are enormous.

³ Health People 2020 target (IVP-13) is 12.4 deaths per 100,000. Oregon has already surpassed this reduction target.


Other strategies include:

- Increasing taxes on alcohol reduces MVT deaths and generates cost savings to society.\(^7\)
- Placing children in age- and size-appropriate restraint systems, which reduce fatal and serious injuries by more than half.\(^9\) Child safety seats reduce the risk of death in passenger cars by 71% for infants, and by 54% for children ages 1-4 years.\(^10\)

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Falls

The problem

Fall injuries are one of the leading causes of injury hospitalization in Oregon, and among the leading causes of injury-related death for older adults. More hospitalizations are due to falls than any other single injury-related cause. Each year, nearly 530 deaths and 8,500 hospitalizations in Oregon are due to falls. Falls are a major injury issue for older adults in Oregon, as the rates of both hospitalization and death due to falls are vastly greater in the older age groups, and increase with age. Falls are also the leading cause of injury hospitalization among children.

In 2010 the rate of hospitalization due to falls in persons 65-74 years of age was 424 per 100,000. For persons 85 and older, the rate increased to 3,245 hospitalizations per 100,000—an 7.7-fold increase in risk of hospitalization between persons 65-74 and persons 85 and older. The increase in risk of fall mortality for persons 85 and older is more than 27 times higher than for those 65-74 years of age. While more than 50% of all fall deaths are among females, males actually have a significantly higher mortality rate which is especially apparent in older age groups. This is due to the higher risk older men face in more severe falls—such as falls from ladders or steps and stairs. Compared to men, older women in Oregon are more likely to fall from bed or trip/stumble on one level.

Figure 6. Fall crude mortality rate/100,000 by age group, 2010

![Bar chart showing fall mortality rate by age group](image-url)
While the aggregated rate of fall deaths is below 12 deaths per 100,000, the rate of death increases greatly with age. Persons 85 years of age and older are at increased risk of death compared to all other age groups, and demonstrate a mortality rate of 417 persons per 100,000 population during 2010. Rates of hospitalization increase with age (Figure 4.6). Females 85 and older are 2.3 times more likely to be hospitalized for a fall than women 75-84, and nearly 8 times more likely than women 65-74. For males, the increased risk associated with age is also apparent. For men 85 and older, the risk of hospitalization is 2.6 times greater than for men 75-84, and more than 7 times greater than for men 65-74. Fall risk is multifactorial, and as age increases, many risk factors associated with falls—multiple medications, postural hypotension, impaired mobility, chronic health conditions, and impaired vision—increase as well, which further amplifies fall risk.

Risk factors include:

- A history of falls
- Impaired mobility, strength, and balance
- Delirium
- Use of multiple medications or improper dosages; recently changed medication, or use of medications that cause drowsiness;
- A history of hypotension
- Impaired vision
- A history of low or unstable blood sugar
- Other conditions such as arthritis or stroke
- Excessive use of alcohol or withdrawal from alcohol or other drugs.

The goal

Reduce deaths from falls.

The target

Reduce deaths to 7.0 per 100,000 in the general population, from the 2007 baseline of 9.6 per 100,000.\(^1\)

Reduce fall mortality among older adults (65 and older) to less than 65 per 100,000 (age 65 and older)—a 13% reduction from the 2007 baseline of 74.6 per 100,000.

Reduce fall hospitalizations among children 0-9 years of age to 60 per 100,000—a reduction of 8% from the 2007 rate of 65.5 per 100,000.

\(^1\) Health People 2020 target (IPV-23) is 7.0 per 100,000.
Strategies

Fall prevention should largely focus on the population of older adults in Oregon, due to the high rate of mortality and hospitalization and the existence of evidence-based prevention programs. Strategies include:

In the Community:

- Implement evidence-based group exercise that decreases falls, and increases strength, mobility, coordination, balance, and overall physical fitness.
- Educate older adults and their families about falls.
- Conduct environmental assessments to reduce fall hazards and improve safety in the homes of older adults and in institutions.

In the Healthcare Sector:

- Screen each senior for falls at every primary care visit.
- Promote regular eye exams for seniors.
- Conduct medication review and assess for dangerous interactions in primary care, pharmacies, and other settings.
- Conduct fall assessment in annual primary care visits for those aged 55 and older to enable prevention before a fall occurs.

In Public Health:

- Obtain resources necessary to implement community based primary prevention strategies and public health surveillance and research.

For falls among children, strategies include:

- Make sure playground equipment your child uses is properly designed and maintained and there’s a safe, soft landing surface below.
- Use home safety devices, such as guards on windows that are above ground level, stair gates, and guard rails. These devices can help keep a busy, active child from taking a dangerous tumble.
- Make sure your child wears protective gear when playing active sports, such as wrist guards, knee and elbow pads, and a helmet.
- Supervise young children at all times around fall hazards, such as stairs and playground equipment.
Poisoning

The problem

There were over 383 deaths in 2010 due to unintentional poisoning, and the absolute number increased 283% since 2000. There were over 3,600 hospitalizations in 2010. About 96% of deaths are associated with drugs and medicines, and much of the increase in poisoning mortality in Oregon is driven by deaths associated with prescription opioids—drugs meant for treatment of pain, but which are often diverted or misused.

Figure 7. Unintentional poisoning crude mortality rate/100,000, 2010

The highest rates of death are in the 45-54 year old age group, followed by those in the 35-44 year old age group as well as 55-64. For males, deaths peak at age 45-54, while for females, this peak is reached in the 35-44 year old age group. The number of unintentional poisoning deaths is nearly twice the number of deaths attributable to motor vehicle traffic.

The overall rate of unintentional poisoning hospitalization has significantly increased between 2000 and 2010 from 17/100,000 to 38/100,000. In 2000 the rate of hospitalization was 17.2 per 100,000, increasing to 38 per 100,000 in 2010—a 220% increase.

The prescription drug most often named on Oregon death certificates for unintentional poisoning is methadone. Once primarily prescribed only for narcotics abuse treatment, methadone is now widely prescribed to treat non-cancer chronic pain. In Oregon, the increase in mortality due to methadone closely parallels the increase in per capita distribution of methadone to treat pain.
Risk factors for prescription drug poisoning are not currently well understood but may include the following:

- Age: middle aged persons are at higher risk for mortality
- Sex: men are at increased risk of mortality
- History of substance abuse
- Mental health issues, especially if untreated, may put an individual at greater risk of poisoning

The goals

Reduce deaths from poisonings.

The target

Reduce unintentional poisoning deaths to 5.0 per 100,000 persons, from the 2010 baseline rate of 10.0 per 100,000.

Reduce methadone-related poisoning deaths to less than 50 per year.

Strategies

In 2010, Oregon will implement a prescription drug monitoring program (PDMP) that is designed to decrease diversion of opioid drugs. For more information, check the PDMP website: http://www.oregon.gov/DHS/ph/ipe/test_pdmp.shtml

Prescription drug monitoring alone cannot reduce the rate of drug overdose deaths in Oregon. Other strategies must also be employed. Some recommendations for prevention include:

- Properly managing opioid prescriptions may help reduce the prevalence of prescription diversion from patients to addicts.
- Screening for substance abuse can be implemented in emergency departments prior to dispensing opioid painkillers.
- Communities and safety advocates can raise awareness by participating in National Poison Prevention Week which occurs each March (third week of the month). See www.poisonprevention.org/poison.htm for further information.
- Public participation in drug-take back events sponsored by local communities can reduce the amount of prescription drugs available for misuse and diversion.
Improving clinical practices are clearly an integral part of a broader strategy for preventing poisonings.


Use screening tools such as SBIRT (http://sbirtoregon.org/) to assess patient’s risk for drug misuse.

Assess whether patients are at risk for adverse effects from painkillers. Both oxycodone and methadone have had public health advisories issued by the FDA (http://www.fda.gov/Drugs/DrugSafety/PublicHealthAdvisories/ucm124346.htm).

Educate patients regarding safe use and storage of drugs. Counsel patients on maintaining control of prescriptions to prevent diversion; including that they not be shared, borrowed, or sold under any circumstances. In a recent national survey, more than 55% of non-medical users of prescription painkillers indicated that they receive drugs from friends and family for free (http://www.oas.samhsa.gov/nsduh/2k8nsduh/2k8Results.cfm#2.16).

Educate patients to take drugs exactly as prescribed. Patients may be unaware that methadone stays in the body longer than the analgesic effects of the drug may last.

Review clinical guidelines—opioid guidelines are available from sources such as the US Veteran’s Administration, and the American Society of Interventional Pain Physicians (http://www.healthquality.va.gov/cot/cot_fulltext.pdf and http://www.painphysicianjournal.com/2008/march/2008;11;S5-S62.pdf). Good pain management assures that chronic pain patients get the help they need while reducing the risk of misuse.

Closely monitor patients who receive methadone, especially during treatment initiation and dose adjustments or where psychotropic use is involved.

In the household:

Read and follow all drug labels carefully, and never share or sell prescription drugs.

Keep all medicines in their original containers, and keep them out of reach of children. Keep opioid pain medications in a place that can only be accessed by the person taking them or dispensing them (or their caretaker), or lock-up prescription painkillers.

Keep the Oregon Poison Control phone number (1-800-222-1222) on or near the telephone; program the number into your cell phone.
Dispose of old medications or chemical products properly.


In the community:

Increase the availability of nalaxone to prevent overdoses.

Increase the number of providers that can prescribe buprenorphine.
Homicide and assault

The problem

Homicide and assault includes deaths and injuries due to intimate partner violence, child maltreatment, gang violence, and other forms of violence. Homicide and assault were responsible for 114 deaths and 535 hospitalizations in Oregon in 2010. Males have the highest rates of homicide and assault, especially those in the 15-34 year old age groups.

The age-adjusted rate of homicide in Oregon (2.9 per 100,000 population in 2010) has consistently been below the national rate (5.3 per 100,000 population in 2010). The Oregon crude rate in 2000 was 2.7 per 100,000 population and 3 per 100,000 in 2010. The rate of homicide among males is statistically higher than females. In 2007, the rate among males was 3.4 per 100,000; among females the rate was 2.5 per 100,000.

Figure 8. Homicide crude mortality rate/100,000, 2010

Most homicides during 2010 occurred among males 25-34 years of age, and 45-54 for females.

Most homicides (52%) in 2010 involved a firearm. Just over 14% involved cutting (e.g. knife/sharp object). 19% involved other means that were either not specified on death certificates, or not specifiable into major categories.

Although the homicide rate decreased between 2000 and 2010, the rate of hospitalization due to assault generally increased during the same period. The rate in 1997 was 14.7 per 100,000, increasing to 16.9 per 100,000 in 2006—an increase of 15%.
Violence is highest among youth, so one key component attaining to a less violent society is preventing violence among youth. Risk factors are extensive, but include the following:

- History of violent victimization
- Involvement with drugs, alcohol or tobacco
- Among families:
  - Exposure to violence and conflict in the family
  - Authoritarian childrearing attitudes
  - Harsh, lax or inconsistent disciplinary practices
  - Low parental involvement
  - Low emotional attachment to parents or caregivers
  - Low parental education and income
  - Parental substance abuse or criminality
  - Poor family functioning
  - Poor monitoring and supervision of children
- In communities:
  - Diminished economic opportunities
  - High concentrations of poor residents
  - High level of transiency
  - High level of family disruption
  - Low levels of community participation
  - Socially disorganized neighborhoods

**The goal**

Reduce homicide and assault.

**The target**

Reduce assault hospitalizations to 10 per 100,000, from the 2007 baseline of 16.9 per 100,000.

**Strategies**

Violence, including sexual violence can be prevented by:

Use and support of programs that have been developed to reduce child maltreatment and abuse. Sources include evidence-based programs such as the national Nurse-Family Partnership: www.nursefamilypartnership.org/index.cfm?fuseaction=home, and parenting intervention programs www.cdc.gov/ncipc/pub-res/parenting/ChildMalT-Briefing.pdf
Youth violence can be prevented through implementing and supporting best practices programs including parent and family based strategies, home visit strategies, social-cognitive strategies, and school-based mentoring strategies.\textsuperscript{12}

Helping parents identify and address social and cultural influences that may promote attitudes and violent behaviors in their kids.

Creating policies at work, at school, and in other places that address sexual harassment.

Developing mass media (e.g., radio, TV, magazines, newspapers) messages that promote norms, or shared beliefs, about healthy sexual relationships.

For further information on violence prevention, and Oregon’s violence prevention actions, see:

The Oregon Violent Death Reporting System:

Oregon Violence Against Women Prevention Plan:

Report on the costs of intimate partner violence (IPV):

Recommendations to Prevent Sexual Violence in Oregon:

Other transport

The problem

The most frequent cause of mortality due to non-traffic transport injuries involves watercraft, followed by off-road vehicles. On average there has been a decrease with, 23 deaths occurring annually due to injuries sustained through watercraft involvement, while during 2010 5 deaths on average occur annually due to non-traffic off-road vehicle involvement.

Mortality due to transport injuries generally increases with age, and there are two distinct peaks in incidence occurring in older age groups. This pattern is observed even when land transport injuries and other non-traffic transport (e.g. water transport) injuries are analyzed separately. Since the number of non-traffic transport injuries is relatively small, some age groups contain counts of less than 20 deaths, requiring that the rates are interpreted with caution. Although the highest mortality rates occur in the 65-74 year old age group, the most frequently involved age group (by count) is the 55-44 year old age group.

Risk factors can vary by type of transport, but include alcohol impairment/substance use, lack of training, failure of use safety equipment, hazardous conditions and youth operating vehicles designed for adults.

The goal

Reduce the rate of transport deaths.

The target

Reduce the general rate of transport death to less than 1 per 100,000.

Among children, reduce the rate of hospitalization due to all-terrain vehicle injuries 10% from the 2007 rate.

Strategies

Injuries involving watercraft, off-road vehicles, and other forms of transport can be prevented. Recommendations include:

- Avoid alcohol or other intoxicants when operating any form of transport.
- Follow all safety laws when operating transport.
• Use personal safety equipment. Children especially should use safety equipment, including helmets. Children should never operate transport intended for adults.
• Oregon statute requires boats to carry U.S. Coast Guard readily-accessible personal floatation devices (PFDs) for each person on board. PFDs are required to be appropriately sized for each person for which they are intended. For children 12 and under, a PFD must be worn at all times on a deck or open cockpit of a vessel while underway.
• Persons under 18 riding on public lands while operating a Class I or III ATV must wear a helmet.
• Safety training is required for all users of ATVs or off-road motorcycles used on public lands (http://www.rideatvoregon.org/).
• Children should not operate recreational vehicles designed for adults.

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13 Oregon Revised Statutes, Chapter 830.
14 This includes both motorized and non-motorized vessels; few exceptions under Oregon law, see summary of state boating laws on Oregon State Marine Board website for further details. Oregon State Marine Board: www.boatoregon.com/Safety/Lifejacket.html
Drowning

The problem

Between 2000 and 2010 there were 636 unintentional drowning deaths in Oregon. Although not occurring at the magnitude for causes such as motor vehicle traffic injuries, suicide, falls, poisoning, or homicide, drowning is a frequent and preventable injury problem, especially for children. Most drowning deaths occur in the summer months, and what makes Oregon somewhat unique is the frequent occurrence of drowning deaths in water bodies fed by snow melt—mostly cold-running rivers found throughout the state.

The age-adjusted rate of drowning remained relatively unchanged during the 2000-2010 period, remaining below 1.7 deaths per 100,000 in 2010. In 2010, 19% of drowning deaths occurred among 15-24 year olds; 41% occurred among 45-64 year olds; more than 16% of drowning deaths occurred among persons 65 and older, and just under 16% occurred among children 14 and younger.

Males overall have a higher drowning mortality rate than females; the male rate in 2010—3 per 100,000—was significantly higher than the rate for females—0.5 per 100,000.

A recent study by the Oregon Violence and Injury Prevention Program found that 34% of drowning deaths in Oregon children 15 years of age and younger occurred in swimming pools (the remaining sites included rivers and streams, lakes, canals, ocean, tubs, and not specified).¹⁵ For drowning fatalities in this age group, the type of water body was 6 times more likely to have been a swimming pool for children under 3 years of age. Active supervision of children in and around water bodies is an extremely important factor in preventing drowning fatalities in children.

Risk factors include impairment (alcohol/substances), lack of direct adult supervision, lack of use of safety equipment, and (especially in Oregon) not knowing the dangers of attempting to swim in cold water bodies.

The goal

Reduce the number of drownings.

The target

Reduce the drowning mortality rate to less than 1 per 100,000, from the 2007 baseline of 1.6 deaths per 100,000.\(^{16}\)

Strategies

Drowning can be prevented in many ways including:

- Particularly for young children around pools, active supervision by caretakers is essential. In addition, ensuring appropriate barriers around pools can also reduce risk. While swimming skills can help prevent drowning, teaching young children to swim is not a substitute for active supervision.
- Personal floatation devices (a.k.a. life vests) should be worn in both motorized and non-motorized water craft, as well as for non-boating recreation in rivers and lakes. Oregon statute requires boats to carry U.S. Coast Guard readily-accessible PFDs for each person on board.\(^{17}\) PFDs are required to be appropriately sized for each person for which they are intended. For children 12 and under, a PFD must be worn at all times on a deck or open cockpit of a vessel while underway.\(^{18}\)
- As of 2005, Oregon building code requires that all residential outdoor swimming pools, including in-ground, aboveground on on-ground pools, hot tubs or spas shall be provided with a barrier. Pools require four-sided fencing and locking access gates.\(^{19}\) Where the wall of a dwelling serves as part of the barrier, the pools shall be equipped with a powered safety cover or other means of protection, such as self-closing doors. Spas or hot tubs with a locking safety cover are exempt from the 4-sided fencing rule (Appendix G, 2005 Oregon Residential Specialty Code).
- Extra caution should be used when swimming in cold bodies of water. Cold water can cause an immediate effect of gasping and lack of control, known as swim failure. Cold water can cause drowning even before hypothermia sets in. Don’t swim in water colder than 60° F.

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\(^{16}\) Health People 2020 target is 1.1 deaths per 100,000

\(^{17}\) Oregon Revised Statutes, Chapter 830.

\(^{18}\) This includes both motorized and non-motorized vessels; few exceptions under Oregon law, see summary of state boating laws on Oregon State Marine Board website for further details. Oregon State Marine Board: www.boatoregon.com/Safety/Lifejacket.html

\(^{19}\) Oregon Residential Specialty Code, 2005.
• Alcohol and water sports do not mix. Avoid alcohol or other intoxicants when engaged in water sports.
Traumatic brain injuries

The problem

Traumatic brain injury (TBI) is defined as any jolt or blow to the head, or a head penetrating injury, disrupting brain functioning. The CDC estimates that nationally 50,000 people die in the US each year as a result of TBI, 235,000 are hospitalized, and 1.1 million are treated and released from emergency departments.\(^\text{20}\) Nationally, the leading causes of TBI are falls, motor vehicle traffic crashes, struck by/against objects or persons, and assault.

TBI is a considerable injury problem in public health because of the individual and social impacts resulting from TBI. It is estimated that 5.3 million persons in the US require either life-long or long-term assistance in performing activities in daily living due to TBI, and the direct and indirect medical costs of TBI were estimated at $60 billion in 2000.\(^\text{21}\)

Figure 9. Traumatic brain injury crude mortality rate/100,000 by age group & sex, 2010

Generally, TBIs are considered a contributing cause of death where injury deaths are concerned, and therefore TBI deaths are associated with some of the leading causes of injury death in Oregon (i.e. MVT, Falls). In terms of hospitalizations, TBI is determined through assessing all diagnostic codes listed in hospital discharge data. As a result of these two conditions, TBI is not represented in this report as an independent cause of death or

\(^{20}\) Centers for Disease Control, TBI Fact Sheet, www.cdc.gov/ncipc/tbi/FactSheets/TBI_Fact_Sheets.htm

\(^{21}\) Ibid.
hospitalization, but rather, is associated with the particular mechanism (i.e. MVT, fall, drowning/submersion, etc.) or intent (i.e. unintentional, suicide, homicide) that led to the injury. Therefore, some deaths and hospitalizations reported in this section are also reported in other sections of this report, except as different causes of death and hospitalization.

Deaths associated with TBI have significantly declined in recent years, at the same time that hospitalizations have significantly increased. It is not entirely clear why this pattern has emerged, but due to the nature of TBI (associated with numerous types of injury events), there may likely be multiple factors contributing to the change in incidence—among them, improvements in safety, policies, and medical care. The rate in 1999 was 20.0 per 100,000 matching the 2010 rate was 20 per 100,000. In total, there were over 770 deaths in Oregon associated with TBI during 2010.

The rate of TBI is higher in males than females, typically three times the female rate from year to year. In 2010, the male rate was 30.8 per 100,000 compared to the female rate of 9.6 per 100,000.

The age distribution during 2010 of TBI rates shows that rates generally increase with age, and that the highest rates are among males 85 and older. The rate for males in this age group is 210.5 per 100,000 population, while the rate for females in the same age group is 82.1 per 100,000. The high rate among older men generally reflects the higher risk and mortality due to falls, motor vehicle traffic deaths, and firearms, all of which demonstrate higher rates among older men compared to older women.

The leading causes of TBI indicate that firearms were involved in 47% of all TBI deaths in 2010. 17% of TBI deaths were the result of MVT injury, 26% were due to falls and 44% were due to suicides. Risk increased from age 15 up with highest rates for age 85+.

The goal

Reduce TBI deaths.

The target

Reduce TBI deaths to less than 15 per 100,000, from the 2010 baseline of 18.5 per 100,000.
Strategies

There are many ways in which the chances of sustaining a traumatic brain injury can be reduced. These include:

- Always wearing a seatbelt while riding or driving in a motor vehicle.
- Never drive under the influence of alcohol.
- Use the correct safety seat, booster, or seatbelt for children. Oregon’s laws require that infants ride in rear-facing seats until one year of age and 20 lbs. Children over one year and between 20 and 40 lbs must be secured with a forward-facing child safety seat up to a minimum of 40 lbs, or the weight limit of the seat. Children weighing over 40 lbs must be secured in a booster seat until they are 8 years of age or 4’ 9” in height. Children 8 years of age and older, or taller than 4’ 9” must ride properly secured with the vehicle safety belt system.
- Everyone should wear helmets when engaged in riding bicycles, scooters, motorcycles, all-terrain vehicles, snowmobiles, skateboards, or when using inline skates. Helmets should also be worn when engaged in contact sports (football, ice hockey, boxing), and sports such as baseball and softball when running or batting. Other outdoor activities also require helmets for safety, including skiing and snowboarding, and horseback riding.
- Make living and play spaces safer for children. This includes installing window guards and safety gates that can prevent falls down stairs or through open windows.
- Seniors should undergo clinical assessments for falls at every primary health care visit.
- Seniors should participate in community-sponsored programs such as Tai Chi which are designed to reduce falls through improving gait and balance.
- Conduct environmental fall assessment for all seniors. Make living spaces safer for seniors by removing tripping or stumbling hazards such as throw rugs or clutter in walkways; installing non-slip mats in tubs and showers and grab bars next to toilets, tubs, and showers; installing handrails on both sides of stairways; improving lighting in the household.

Community level:

Raising community awareness by participating in Brain Injury Awareness Month, in March.

Adapted from CDC prevention recommendations: www.cdc.gov/ncipc/tbi/Prevention.htm
For further information on TBI prevention, see:

The Brain Injury Recovery Kit: www.daytimer.com/birk/


Period of Purple Crying, preventing shaken baby Syndrome and other Infant Abuse: www.dontshake.com/Subject.aspx?CategoryID=13


CDC has published guidelines on evidence-based programs that reduce falls called Preventing Falls: What Works A CDC Compendium of Effective Community-based Interventions from Around the World http://www.cdc.gov/ncipc/preventingfalls/
Implementation Plan for 2011-2012

The goals presented in the previous section are geared to achieving specific outcomes (e.g. reducing suicide). These goals cannot be effectively achieved without partnership and collaboration. Injury & Violence Prevention Program will work with the Injury Community Planning Group and other partners to achieve the outcome goals through the following process Goals and Objectives. Everyone can participate in injury prevention, and the strategies outlined in the above plan will help facilitate a reduction in the burden of injury.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance the Injury &amp; Violence Prevention and Program infrastructure</td>
<td></td>
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<tr>
<td>Acquire key staff with appropriate experience and training to coordinate and integrate activities.</td>
<td>8/2011</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Build membership in the ICPG and establish a Terms of Reference document</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Update State Injury Plan to reflect 2010 data</td>
<td>7/12</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Develop logic model and evaluation plan for State Injury Plan</td>
<td>4/12-7/13</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Improve skills of IVPP staff through workforce development activities</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Use media and communication strategies to disseminate information related to injury &amp; violence prevention</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
<tr>
<td>Annually generate support and resources to support state injury and violence prevention activities</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>ICPG MCH ECHV OCBCA OTR CDC PDMP</td>
</tr>
<tr>
<td>Annually participate in CDC activities including webinars,</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>PDES</td>
</tr>
<tr>
<td>Goal</td>
<td>Time Frame</td>
<td>Lead</td>
<td>Other Partners &amp; Funding</td>
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<tr>
<td>Regional Network, annual join CDC/Safe States meeting, phone calls, technical assistance.</td>
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</tbody>
</table>

**Collect and analyze data**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify 5 priority efforts from Plan: Suicide, Senior Falls, Drug Overdose, Child Maltreatment, Motor vehicle-Pedestrian</td>
<td>2012</td>
<td>IVPP &amp; ICPG</td>
<td>ICPG</td>
</tr>
<tr>
<td>Create State Injury Indicators data, 2010 data report, TBI-incidators data, Special Emphasis TBI report, Special Emphasis Child Report</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td>ICPG</td>
</tr>
<tr>
<td>Annually use data to evaluate and core goals and objectives</td>
<td>2012</td>
<td>IVPP</td>
<td>ICPG &amp; PDES</td>
</tr>
</tbody>
</table>

**Support and evaluate program and policy interventions**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select 5 strategies that are evidence-based and align with Plan priorities:</td>
<td>2011-2015</td>
<td>IVPP</td>
<td>ICPG</td>
</tr>
<tr>
<td>Suicide (Policy): Create a white paper to establish a theoretical foundation to support three or more primary prevention practices for implementation in the Public Health Division’s Strategic Plan</td>
<td>5/11-7/12</td>
<td>IVPP</td>
<td>PHD Director’s Office, Adolescent Health Program</td>
</tr>
<tr>
<td>Suicide (Program): Implement primary prevention evidence based practice strategy, the Good Behavior Game, in first grade classrooms in Oregon.</td>
<td>2012</td>
<td>IVPP, ICPG Adolescent Health</td>
<td>Dennis Embry, PhD, Tony Biglan, PhD, Portland State University, elementary schools, AMHD</td>
</tr>
<tr>
<td>Falls (Program): Implement STEADI to primary care and geriatric healthcare providers in the Rural Health Clinic network in 2013</td>
<td>2012</td>
<td>IVPP, OGEC @ OHSU, ICPG</td>
<td>Providence Health Systems in 8 counties</td>
</tr>
<tr>
<td>Falls (Program): Implement STEADI to primary care and</td>
<td>2012</td>
<td>IVPP</td>
<td>Providence Health Systems</td>
</tr>
<tr>
<td>Goal</td>
<td>Time Frame</td>
<td>Lead</td>
<td>Other Partners &amp; Funding</td>
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<tr>
<td>geriatric healthcare providers in Multnomah County</td>
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<td></td>
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<tr>
<td>Overdose (Program): Educate prescribing providers and dispensing pharmacists on Oregon PDMP program for improved clinical practice.</td>
<td>2012</td>
<td>IVPP</td>
<td>Prescribers</td>
</tr>
<tr>
<td>Child Maltreatment (Program): Collaborate with MCH Home Visiting program to collect benchmark data on Nurse Family Partnership implementation in 4 counties beginning in 2012</td>
<td>2012</td>
<td>IVPP &amp; MCH</td>
<td>MCIECHVP federal funds for NFP MMIS data</td>
</tr>
<tr>
<td>MV/Pedestrian (Policy): Develop a statewide strategic policy plan in 2012 for pedestrian safety.</td>
<td>2012</td>
<td>IVPP &amp; ICPG</td>
<td>Policy Planning participant agencies</td>
</tr>
<tr>
<td>Develop implementation plan for above program interventions and policy strategies</td>
<td>2012</td>
<td>IVPP</td>
<td>ICPG</td>
</tr>
<tr>
<td>Develop evaluation plan for Plan priorities</td>
<td>2012</td>
<td>IVPP</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Affect policy**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
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</thead>
<tbody>
<tr>
<td>Maintain existing partnerships, and establish new partnerships</td>
<td>2011-2012</td>
<td>IVPP</td>
<td>ICPG Community Partners</td>
</tr>
<tr>
<td>Produce State Strategic Policy Plan for pedestrian safety with implementation plan for 2013-15</td>
<td>2013</td>
<td>IVPP</td>
<td>ICPG Community Partners</td>
</tr>
<tr>
<td>Annually use communication science to affect policy in the two priority areas (suicide, pedestrian)</td>
<td>2012</td>
<td>IVPP</td>
<td></td>
</tr>
</tbody>
</table>

**Program Evaluation**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create logic model for IVPP</td>
<td>8/11-7/12</td>
<td>IVPP</td>
<td></td>
</tr>
<tr>
<td>Use evaluation findings to make programmatic changes and continuous improvements</td>
<td>2012</td>
<td>IVPP ICPG</td>
<td></td>
</tr>
<tr>
<td>Goal</td>
<td>Time Frame</td>
<td>Lead</td>
<td>Other Partners &amp; Funding</td>
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<tr>
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</tr>
<tr>
<td>Add annual progress report data section to State Injury Plan that includes evaluation findings.</td>
<td>2012</td>
<td>IVPP</td>
<td>ICPG</td>
</tr>
<tr>
<td>Report on SMART Objective measures</td>
<td>2012</td>
<td>IVPP</td>
<td></td>
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</tbody>
</table>

**Smart Objectives:**

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Time Frame</th>
<th>Lead</th>
<th>Other Partners &amp; Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Suicide Distal Measure 1:</strong> Decrease the rate of referrals to mental health services, special education, and nurses offices by students in first grade classrooms receiving Good Behavior Game (from baseline at time/place of implementation) in 2013 by 5% in 2016.</td>
<td>2013</td>
<td>IVPP</td>
<td></td>
</tr>
<tr>
<td><strong>Suicide Proximal Measure 1:</strong> Increase the number of first grade classrooms in public grade schools statewide implementing the Good Behavior Game from (TBD, baseline) in 2013 by 20% in 2016.</td>
<td>2013</td>
<td>IVPP</td>
<td></td>
</tr>
<tr>
<td><strong>Suicide Proximal Measure 2:</strong> Increase strategies for primary prevention of suicide in the Public Health Division’s Strategic Plan from 0 in 2012 to 3 by 2016.</td>
<td>2012-2016</td>
<td>IVPP</td>
<td></td>
</tr>
<tr>
<td><strong>Falls Distal Measure 1:</strong> Decrease the rate of hospitalizations due to falls among Multnomah County residents aged 65+ and older from 1662/100,000 in 2010 by 10% to 1496/100,000 by 2016.</td>
<td>2012-2016</td>
<td>IVPP</td>
<td>Multnomah Co Health Dept, Providence Health Systems,</td>
</tr>
<tr>
<td><strong>Falls Distal Measure 2:</strong> Decrease the rate of hospitalizations due to falls among Oregonians aged 65+ and above living in the Rural</td>
<td>2012-2016</td>
<td>IVPP</td>
<td>OGEC, Providence Health Systems,</td>
</tr>
<tr>
<td>Measure</td>
<td>Description</td>
<td>Start Year</td>
<td>End Year</td>
</tr>
<tr>
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</tr>
<tr>
<td><strong>Health Provider Network</strong></td>
<td>Counties from (TBD) in 2012 by 10% to (TBD) by 2016 (pending county selection)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Falls Proximal Measure 1:</strong></td>
<td>Decrease the number of times a senior reports he/she has fallen in the past 3 months on the statewide BRFSS survey from (TBD when 2012 data are available) in 2012 by 5% to (TBD) in 2016.</td>
<td>2012-2016</td>
<td>IVPP</td>
</tr>
<tr>
<td><strong>Overdose Proximal Measure 1:</strong></td>
<td>Increase the percent of prescribing providers and pharmacists utilizing PDMP access in Oregon from 20% in 2011 to 50% by 2016</td>
<td>2011-2016</td>
<td>IVPP</td>
</tr>
<tr>
<td><strong>Overdose Proximal Measure 2:</strong></td>
<td>Increase the rate of PDMP Patient reports requested by PDMP system users from 71 per individual per year in 2012 to 120 per individual per year by 2016</td>
<td>2012-2016</td>
<td>IVPP</td>
</tr>
<tr>
<td><strong>Overdose Distal Measure 1:</strong></td>
<td>Decrease the rate of acute drug poisonings associated with the effects of opioid analgesics among Oregonians from 13.5/1000,000 in 2010 by 10% to 12.2/100,000 by 2016</td>
<td>2011-2016</td>
<td>IVPP</td>
</tr>
<tr>
<td><strong>Overdose Distal Measure 2:</strong></td>
<td>Decrease the rate of acute or chronic drug poisonings associated with the effects of opium, heroin, and/or opioid analgesics among Oregonians from 23.3/100,000 in 2010 by 10% to 21.0/100,000 by 2016.</td>
<td>2011-2016</td>
<td>IVPP</td>
</tr>
<tr>
<td>Measure</td>
<td>Description</td>
<td>Timeframe</td>
<td>Responsible Parties</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>-----------</td>
<td>---------------------</td>
</tr>
<tr>
<td><strong>Child Maltreatment Distal Measure</strong>: Decrease the number of injury-related emergency department visits of children of families enrolled in NFP in 4 counties from (TBD) in 2012 by 10% to (TBD) by 2016.</td>
<td>2012-2016</td>
<td>IVPP</td>
<td>NFP, MMIS</td>
</tr>
<tr>
<td><strong>Child Maltreatment Proximal Measure</strong>: Increase the number of referrals to services for families enrolled in NFP in 4 counties from (TBD) in 2012 by 10% to (TBD) in 2016.</td>
<td>2012-2016</td>
<td>IVPP</td>
<td>NFP</td>
</tr>
<tr>
<td><strong>MV/Pedestrian Distal Measure</strong>: Decrease the rate of pedestrian/mv injuries statewide from 5.6/100,000 in 2010 by 5% to 5.3/100,000 by 2016.</td>
<td>2011-2016</td>
<td>IVPP</td>
<td></td>
</tr>
<tr>
<td><strong>MV/Pedestrian Proximal Measure</strong>: Increase the use of state data, research findings, and policy recommendations in presentations, briefings, and data requests to decision makers and stakeholders related to improving pedestrian safety in state from 1 to 2 times a month by 2014.</td>
<td>2012-2014</td>
<td>IVPP</td>
<td>ICPG Policy Subcommittee</td>
</tr>
</tbody>
</table>
Appendix

Resources

- Centers for Disease Control and Prevention, National center for Injury Prevention and Control: www.cdc.gov/ncipc/
- National SafeKids: www.safekids.org
- American Academy of Pediatrics: www.aap.org/default.htm
- State and Territorial Injury Prevention Directors Association: www.stipda.org/
- Partnership Against Violence Network: www.pavnet.org/
- Suicide Prevention Resource Center: www.sprc.org
- Society for the Advancement of Violence and Injury Research: www.savirweb.org
- Brain Injury Association of Oregon: www.biaoregon.org
- Attorney General’s Task Force on Sexual Assault: www.oregonsatf.org
Data sources

**State data sources:** The primary sources of data are mortality data, which are obtained from the Oregon Center for Health Statistics, and hospitalization data, which are obtained from all non-federal Oregon acute-care inpatient facilities. Hospitalization data do not contain personal identifiers that would facilitate identification of multiple admissions, and may include re-admissions, transfers, and deaths.

Hospitalization data do not contain information about persons treated in emergency departments and released. Hospitalization data relies on the International Classification of Diseases version 9 (ICD-9). In 1999, a change occurred in the way the causes of death are coded, from the International Classification for Diseases (ICD) version 9 to ICD version 10. The change in coding means that mortality data prior to 1999 are not directly comparable to data from 1999 and thereafter, although these data can give an idea of general trends in types of injuries over time.

Unless otherwise noted, all rates presented in this document are age-adjusted. Age-adjusted rates are weighted by a standard population so that the rate in question can be compared to rates from other locations or groups (the Oregon rate of suicide compared to the national rate of suicide, for instance). Although the value of an adjusted rate is not in itself a useful measure, adjusted rates help determine whether two or more rates differ and allow comparisons across groups or time periods. All age-adjusted rates are calculated using the National Center for Health Statistics (NCHS) age distribution #1 age group-specific weights.

Crude rates show the actual number of events in the population in question (i.e. population of Oregon), although crude rates do not account for differences in population structures between populations that might explain differences between the rates. For example, the differences in higher crude rates comparing males to females might be explained by the fact that there are fewer older males than older females. As a result of different population structures, differences in crude rates might very well be the result of the demographic differences in two or more populations.

Since all measures are prone to some random error, confidence limits are used for some rates to show the possible variability in those measures. Confidence limits form an interval which contains the range of possible values for an estimate. Confidence intervals are sometimes helpful for determining whether two rates are truly different, in the statistical sense.

**Population data:** Between census years, population estimates are used as denominators for rates. Denominators for this report are based on Portland State University Population Research.
Center estimates. PRC updates population estimates every year, which means that estimates for previous years change yearly. In this report, population denominators for 2000-2010 are based on 2010 estimates.

**Behavioral Risk Factor Surveillance System (BRFSS):** The BRFSS, administered and supported by the Behavioral Surveillance Branch (BSB) of the CDC, is an on-going data collection program designed to measure behavioral risk factors in the adult population 18 years of age or over living in households.

www.dhs.state.or.us/dhs/ph/chs/brfss/index.shtml

**Oregon Healthy Teens Survey:** OHT monitors risk behaviors and other factors that influence the health and well-being of Oregon’s children and adolescents

www.dhs.state.or.us/dhs/ph/chs/youthsurvey/index.shtml

**Web-based Injury Statistics Query and Reporting System (WISQARS):** Available online from the centers for Disease Control and Prevention, WISQARS is an interactive database system that provides customized reports of injury data at the national and state level:

www.cdc.gov/ncipc/wisqars/
Oregon Injury Prevention Program resources

*Fall Injuries among Older Adults in Oregon.* State data report on falls among older adults.

*Oregon Youth Suicide Prevention Plan*

*Oregon Older Adult Suicide Prevention Plan*