Unintentional injuries and violence are the leading causes of death, hospitalization, and disability for children ages 1-18. This fact sheet provides a state snapshot of data on the injury-related Maternal and Child Health Block Grant National Performance Measures and Health Status Indicators, with a special focus on disparities based on race, gender, and rural/urban residence. The fact sheet is intended to be a helpful and easy-to-use tool for needs assessments, planning, program development, and presentations.

The Children’s Safety Network (CSN) National Injury and Violence Prevention Resource Center, funded by the Maternal and Child Health (MCH) Bureau, works with states to utilize a science-based, public health approach for injury and violence prevention (IVP). CSN is available to provide information and technical assistance on injury surveillance and data; needs assessments; best practices; and the design, implementation, and evaluation of programs to prevent child and adolescent injuries.

**Major Causes of Injury Death**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Age Groups</th>
<th>Total 5-Year Incidence of Deaths by Age Group, Missouri, 2006-2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;1</td>
<td>1-4</td>
</tr>
<tr>
<td>1</td>
<td>Congenital Anomalies 603</td>
<td>Unintentional Injury 171</td>
</tr>
<tr>
<td>2</td>
<td>Short Gestation 556</td>
<td>Homicide 58</td>
</tr>
<tr>
<td>3</td>
<td>Unintentional Injury 285</td>
<td>Congenital Anomalies 49</td>
</tr>
<tr>
<td>4</td>
<td>SIDS 199</td>
<td>Malignant Neoplasms 37</td>
</tr>
<tr>
<td>5</td>
<td>Maternal Pregnancy Comp. 156</td>
<td>Heart Disease 17</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: **** = indicates that the cell values range from 1-9 and are suppressed for data confidentiality purposes.
### Major Causes of Hospital-Admitted Injuries

#### Table 2: Leading Causes and Total 5-Year Incidence of Injury Deaths by Age Group, Missouri, 2006-2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1</th>
<th>1 - 4</th>
<th>5 - 9</th>
<th>10 - 14</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Suffocation 249</td>
<td>Homicide 58</td>
<td>MV Traffic 52</td>
<td>MV Traffic 58</td>
<td>MV Traffic 581</td>
<td>MV Traffic 592</td>
</tr>
<tr>
<td>2</td>
<td>Homicide 50</td>
<td>MV Traffic 45</td>
<td>Fire/Burn 20</td>
<td>Suicide 38</td>
<td>Homicide 302</td>
<td>Homicide 356</td>
</tr>
<tr>
<td>3</td>
<td>Undetermined Suffocation 11</td>
<td>MV Traffic 11</td>
<td>Fire/Burn 38</td>
<td>Drowning 15</td>
<td>Homicide 26</td>
<td>Suicide 187</td>
</tr>
<tr>
<td>4</td>
<td>Fire/Burn ****</td>
<td>Drowning 32</td>
<td>Homicide 13</td>
<td>Fire/Burn 13</td>
<td>Poisoning 109</td>
<td>Suicide 314</td>
</tr>
<tr>
<td>5</td>
<td>Natural/environmental ****</td>
<td>Drowning 16</td>
<td>Other land transport ****</td>
<td>Drowning ****</td>
<td>Drowning 46</td>
<td>Drowning 29</td>
</tr>
</tbody>
</table>

Note: All mechanisms of suicide and homicide were combined according to intent. Each listed mechanism is unintentional except those otherwise noted. **** = indicates that the cell values range from 1-9 and are suppressed for data confidentiality purposes.

#### Table 3: Leading Causes and Annual Incidence of Hospital-Admitted Injuries by Age Group, Missouri Residents, 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1</th>
<th>1 - 4</th>
<th>5 - 9</th>
<th>10 - 14</th>
<th>15-19</th>
<th>20-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Other Specified, NEC 74</td>
<td>Fall 137</td>
<td>Fall 158</td>
<td>Self-Inflicted 188</td>
<td>Self-Inflicted 763</td>
<td>Self-Inflicted 801</td>
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<tr>
<td>2</td>
<td>Fall 61</td>
<td>Poisoning 106</td>
<td>MV Traffic 77</td>
<td>Fall 167</td>
<td>MV Traffic 514</td>
<td>MV Traffic 670</td>
</tr>
<tr>
<td>3</td>
<td>Assault 60</td>
<td>Fire/Burn 69</td>
<td>Other Specified, NEC 73</td>
<td>Struck By/Against 117</td>
<td>Fall 205</td>
<td>Assault 296</td>
</tr>
<tr>
<td>4</td>
<td>Fire/Burn 16</td>
<td>Other Specified, NEC 67</td>
<td>Bites &amp; Stings 59</td>
<td>Other Specified, NEC 113</td>
<td>Assault 197</td>
<td>Fall 262</td>
</tr>
<tr>
<td>5</td>
<td>Suffocation 15</td>
<td>Bites &amp; Stings 66</td>
<td>Struck By/Against 43</td>
<td>MV Traffic 80</td>
<td>Other Specified, NEC 186</td>
<td>Poisoning 199</td>
</tr>
</tbody>
</table>

Note: MV = Motor Vehicle, NEC = Not Elsewhere Classifiable. Source: Children’s Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at the Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013. Incidence based on 2010 data obtained from the Missouri Hospital Industry Data Institute. State Inpatient Data (SID) from the Healthcare Cost and Utilization Project (HCUP) developed by the Agency for Healthcare Research and Quality (AHRQ). These injuries exclude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or long-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients’ state of residence.
National Performance Measures

The Federal Maternal and Child Health Bureau Block Grant program requires State MCH programs to report on 18 National Performance Measures (NPM), two of which directly address injuries. NPM #10 addresses the rate of deaths to children aged 14 years and younger caused by motor vehicle crashes per 100,000 children. NPM #16 addresses the rate (per 100,000) of suicide deaths among youths aged 15 through 19.

The following figures provide information related to NPMs #10 and #16.

NPM 10: Reducing Unintentional Motor Vehicle Deaths to Children Ages 0-14

Motor vehicle-related deaths remain a major cause of death for children 14 and under. Figure 1 shows the change in the rate of state motor vehicle-related deaths compared to the US rate from 2006-2010. Overall, the rate of death per 100,000 population declined steadily across the US during this period. Figure 2 provides a breakout of the fatalities by type distinguishing motor vehicle occupant deaths (of any vehicle type) from pedestrian and pedal cyclist fatalities. This information allows states to understand which types are responsible for most of the fatalities.

Figure 3 breaks out the fatalities by race and age group. There are considerable differences between races suggesting variations in social norms, safety practices, and the presence of risk factors, including child restraint system (CRS) or safety belt usage, alcohol involved crashes, and the use of helmets. Many factors may affect this variation. Figure 4 provides a breakdown of fatalities by gender and, although there is little variability between males and females for the 10-14 age group, there is an increasing difference in the 15-24 age group. Figure 4 suggests that the female rate decreased for 20-24 year olds compared with the 15-19 year olds while male fatalities increased for 20-24 year olds.
52% of children ages 0 through 14 involved in a motor vehicle fatality were occupants of the vehicle.
One way of understanding disparities is to look at the rate of injuries by place of occurrence. To show this, CSN has provided the rates for the 0–14, 15-19 and 20-24 age groups using the urban-rural classification system developed by the National Center for Health Statistics (NCHS). To show how injury rates vary by level of urbanization, a **table based on the classification system can be found here** and defines six levels of urbanization: large central metro, large fringe metro, medium metro, small metro, micropolitan, and noncore. Figure 5 shows how the rate varies by age group by place of occurrence/urban-rural setting. This information allows the state to better understand any disparity that may occur between the different settings. Data are provided only for those areas in which 20 or more deaths occurred.

Many of these motor vehicle related deaths can be prevented through the implementation of a broad range of evidence-informed interventions and programs. These data are intended to provide a broad overview of the magnitude of the problem and to highlight possible disparities which may exist by race, gender, and urbanicity.

### NPM 16: Reducing Suicide Deaths Among Teens Ages 15-19

Suicide is the 4th leading cause of death and the 3rd leading cause of injury-related death among US youth 10-24 years of age. According to the 2011 Youth Risk Behavior Surveillance Survey (YRBSS), 15.8% of students seriously considered attempting suicide and 7.8% of students attempted suicide one or more times in the 12 months prior to the survey. Although progress has been made over the past decade in reducing the rate of completed suicides nationally, this reduction has leveled off in the last few years. The following figures provide state-specific data related to suicide. Figure 6 shows the state rate from 2006-2010 for 15-19 year olds in comparison to the US rate for the same age group and time period. Figure 7 provides information on the means used by the 15-19 year olds for completed suicides. It is important to note that the actual number of suicides is often quite small thus resulting in considerable variation when looking at year to year rates.
51% of youth ages 15 through 19 completed suicide by using a firearm.
The YRBSS provides information about behaviors that contribute to unintentional and intentional violence among youth. Figures 8 and 9 provide information on the percentage of high school students with suicide ideation and the percentage who reported being medically treated for a suicide attempt from 2003-2011, respectively. This information and other information available in the YRBSS can help states understand how behaviors are changing within this age group.

Figure 10 shows how the rate differs by race for 15-19 and 20-24 year olds from 2006-2010. Figure 11 shows the difference by gender for the same age group and time period with the male rate for both age groups exceeding the female rate. Figure 12 looks at the variation in rate by urbanicity for 15-24 year olds with the rate increasing as rurality increases (see definition of urbanicity in Motor Vehicle section). This information provides a better understanding of the magnitude of the problem in different parts of the state, helping the state to identify environmental risk factors and facilitate decision making on where to target its suicide prevention efforts.
IVP Health Status Indicators

The Maternal and Child Health Bureau requires every state to report on 12 Health Status Indicators. Six of the indicators are related to IVP. The two figures below reflect the data reported for the IVP Health Status Indicators by the state in their Maternal and Child Health Block Grant Application Form 17, 2012.

State Specific Performance Measures and Priority Needs

Each state develops up to 7 – 10 State Performance Measures and priority needs. The following provides information about the states’ selected 2013 injury-related performance measures and priority needs.

Missouri has the following injury-related State Performance Measure:

• Reduce the percentage of women with a recent live birth who reported frequent postpartum depressive symptoms.

Missouri has the following injury-related Priority Needs:

• Improve the mental health status of MCH populations.
• Reduce intentional and unintentional injuries among women, children, and adolescents.

State Contact Information

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Adolescent Health Coordinator: Patti Van Tuinen, patti.vantuinen@health.mo.gov

State Fact Sheets Figure & Table Source Data

Table 1 Source: WISQARS Leading Causes of Death Reports, 2006-2010
Table 2 Source: National Center for Health Statistics, Multiple Cause of Death Data, 2006-2010
Table 3 Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013.
Table 4 Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2013.
Figure 1 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 2 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 3 Source: WISQARS Injury Mortality Reports, 2006-2010
Figure 4 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 5 Source: CDC WONDER Multiple Cause of Death data, 2006-2010 and Urban-Rural Definition Classification System
The classification scheme can be found at: http://wonder.cdc.gov/wonder/help/CMF/Urbanization-Methodology.html. 2006 NCHS Urban-Rural Classification Scheme for Counties, by Deborah D. Ingram and Sheila Franco.
Figure 6 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 7 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figures 8 & 9 Source: Youth Online: High School Youth Risk Behavior Survey (YRBS), 2003-2011
Figure 10 Source: WISQARS Injury Mortality Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 11 Source: WISQARS Fatal Injury Reports, 2006-2010 and WISQARS Injury Mortality Reports, 2003-2007
Figure 12 Source: CDC WONDER Multiple Cause of Death data, 2006-2010 and Urban-Rural Definition Classification System
Figures 13 & 14 Source: HRSA, Title V Information System Multi-Year Report. Some states may have changed their method of calculation.

About Children’s Safety Network

The Children's Safety Network (CSN) National Injury and Violence Prevention Resource Center, funded by the Maternal and Child Health (MCH) Bureau, works with states to utilize a science-based, public health approach for injury and violence prevention (IVP). CSN is available to provide information and technical assistance on injury surveillance and data; needs assessments; best practices; and the design, implementation, and evaluation of programs to prevent child and adolescent injuries.

In this fact sheet CSN provides a cursory review of the injury morbidity and mortality data available for the state. The figures and tables in this fact sheet can help you understand the state’s progress in addressing motor vehicle traffic injuries and suicide. To target and address these and other injury issues, it is critical to understand this data. CSN can assist you in conducting detailed data analyses, utilizing surveillance systems, and undertaking needs assessments. For assistance, contact the Children’s Safety Network at csninfo@edc.org.

Connect with the Children’s Safety Network
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CSN’s website: http://www.ChildrensSafetyNetwork.org
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Register for the CSN newsletter: http://go.edc.org/csn-newsletter
Need TA? Have Questions? E-mail: csninfo@edc.org

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January 2013

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