Arizona Child Fatality Review Program

Eighteenth Annual Report

November, 2011
Arizona Child Fatality Review Program

• Created in 1993 by Arizona statute
  – Data collection began 1994

• 1 State Team, 12 Local Teams
  – State Team makes recommendations, educates the public
  – Local Teams review individual cases
  – Team membership outlined in statute

• Program coordination by ADHS-BWCH
Arizona Child Fatality Review Process

National Center for Child Death Review has 6 steps to a quality review:

1. Share, questions, and clarify all case information
2. Discuss the investigation that occurred
3. Discuss the delivery of services
4. Identify risk/preventive/contributing factors
5. Recommend systems improvements
6. Identify & take action to implement prevention recommendations
Demographics
Deaths Among Children by Age Group and Sex, Arizona, 2010 (n=862)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Male (n=521)</th>
<th>Female (n=341)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth-27 Days</td>
<td>192</td>
<td>142</td>
</tr>
<tr>
<td>28-365 Days</td>
<td>112</td>
<td>80</td>
</tr>
<tr>
<td>1-4 Years</td>
<td>119</td>
<td>72</td>
</tr>
<tr>
<td>5-9 Years</td>
<td>58</td>
<td>47</td>
</tr>
<tr>
<td>10-14 Years</td>
<td>66</td>
<td>41</td>
</tr>
<tr>
<td>15-17 Years</td>
<td>93</td>
<td>72</td>
</tr>
</tbody>
</table>

Birth-27 Days (n=334)  
28-365 Days (n=192)  
1-4 Years (n=119)  
5-9 Years (n=58)  
10-14 Years (n=66)  
15-17 Years (n=93)
Deaths Among Children by Age Group, Arizona, 2010 (n=862)

- Birth-27 Days: 38% (n=334)
- 28-365 Days: 22% (n=192)
- 1-4 Years: 14% (n=119)
- 5-9 Years: 7% (n=58)
- 10-14 Years: 8% (n=66)
- 15-17 Years: 11% (n=93)
- 28-365 Days: 22% (n=192)

Health and Wellness for all Arizonans
Deaths Among Children by Race/Ethnicity, Arizona, 2010 (n=862)

- Hispanic: 45% (n=393)
- White, Non-Hispanic: 33% (n=289)
- American Indian: 9% (n=74)
- African American: 8% (n=68)
- Asian: 4% (n=32)
- 2 or More Races: 1% (n=6)
Deaths Among Children by Race/Ethnicity Compared to Population, Arizona, 2010 (n=862)

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Fatalities</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>African Americans</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>American Indian</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>45%</td>
<td>43%</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>33%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Health and Wellness for all Arizonans
Child Fatality Review Findings
Deaths Among Children by Manner, Arizona, 2010 (n=862)

- Natural: 65% (n=565)
- Accident: 19% (n=160)
- Suicide: 3% (n=24)
- Homicide: 4% (n=36)
- Undetermined: 9% (n=74)
- Unknown: <1% (n=3)
Percentage of Deaths by Age Group and Manner, Arizona, 2010 (n=862)
Preventability
Deaths Among Children by Preventability, Arizona, 2010 (n=862)

- Probably Not Preventable: 57% (n=491)
- Probably Preventable: 33% (n=288)
- Could Not Determine: 10% (n=83)
Percentage of Preventable Deaths Among Children by Manner, Arizona, 2010 (n=862)

- Natural (n=39): 7%
- Accident (n=147): 92%
- Suicide (n=18): 75%
- Homicide (n=32): 88%
- Undetermined (n=52): 70%
Percentage of Preventable Deaths
Among Children by Age Group, Arizona, 2010 (n=862)

- Birth-27 Days (n=37): 11%
- 28-365 Days (n=73): 38%
- 1-4 Years (n=65): 54%
- 5-9 Years (n=20): 34%
- 10-14 Years (n=28): 42%
- 15-17 Years (n=65): 69%
Substance Use
Deaths Among Children Involving Drugs and/or Alcohol by Manner, Arizona, 2010 (n=175)

- Natural: 35% (n=62)
- Accident: 33% (n=57)
- Suicide: 6% (n=10)
- Homicide: 12% (n=21)
- Undetermined: 14% (n=25)
Child Deaths Involving Substance Use by Sex and Age Group, Arizona, 2010 (n=175)

- Male (n=111)
- Female (n=64)

- Birth-27 Days: Male 23, Female 15
- 28-365 Days: Male 20, Female 23
- 1-4 Years: Male 14, Female 8
- 5-9 Years: Male 10, Female 5
- 10-14 Years: Male 16, Female 3
- 15-17 Years: Male 33, Female 5

Health and Wellness for all Arizonans
Prematurity
Rate of Child Deaths due to Prematurity (per 1,000 live births), Arizona, 2005-2010

- 2005: 3.0
- 2006: 2.9
- 2007: 3.1
- 2008: 2.7
- 2009: 2.6
- 2010: 2.3

Health and Wellness for all Arizonans
Percentage of Child Deaths due to Prematurity by Race/Ethnicity, Arizona, 2007-2010

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>2007 (n=321)</th>
<th>2008 (n=271)</th>
<th>2009 (n=241)</th>
<th>2010 (n=197)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>50</td>
<td>46</td>
<td>47</td>
<td>55</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>33</td>
<td>29</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>African American</td>
<td>8</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>American Indian</td>
<td>5</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Asian</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>3</td>
</tr>
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</table>
Sudden Unexpected Infant Deaths
<table>
<thead>
<tr>
<th>Cause</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undetermined</td>
<td>60</td>
<td>53%</td>
</tr>
<tr>
<td>Suffocation</td>
<td>23</td>
<td>20%</td>
</tr>
<tr>
<td>SIDS</td>
<td>1</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Pneumonia/Influenza</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Other Medical</td>
<td>10</td>
<td>9%</td>
</tr>
<tr>
<td>Other Injury</td>
<td>10</td>
<td>9%</td>
</tr>
</tbody>
</table>
Preventable Factors for Sudden Unexpected Infant Deaths, Arizona, 2010

<table>
<thead>
<tr>
<th>Factor*</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unsafe Sleep Environment</td>
<td>77</td>
<td>68%</td>
</tr>
<tr>
<td>Lack of Supervision</td>
<td>63</td>
<td>55%</td>
</tr>
<tr>
<td>Drugs and/or Alcohol</td>
<td>37</td>
<td>32%</td>
</tr>
<tr>
<td>Infant Exposure to Smoking</td>
<td>22</td>
<td>19%</td>
</tr>
</tbody>
</table>

*More than one factor may have been identified for each death
Motor Vehicle Crashes and Other Transport Fatalities
Rate of Child Deaths due to Motor Vehicle Crashes (per 100,000 children), Arizona, 2005-2010

- 2005: 8.4
- 2006: 9.9
- 2007: 7.2
- 2008: 4.7
- 2009: 4.7
- 2010: 3.6
Motor Vehicle and Other Transport Deaths by Race/Ethnicity, Arizona, 2010 (n=61)

- Hispanic: 43% (n=26)
- White, Non-Hispanic: 33% (n=20)
- American Indian: 18% (n=11)
- Asian: 3% (n=2)
- 2 + Races: 3% (n=2)
Motor Vehicle and Other Transport Deaths by Age Group, Arizona, 2010 (n=61)

- 0-27 Days: 2% (n=1)
- 27-365 Days: 2% (n=1)
- 1-4 Years: 31% (n=19)
- 5-9 Years: 16% (n=10)
- 10-14 Years: 20% (n=12)
- 15-17 Years: 29% (n=18)
Motor Vehicle and Other Transport Deaths by Age Group and Location, Arizona, 2010 (n=61)

- 0-27 Days:
  - Driver (n=4): 1
  - Passenger (n=30): 1
- 28-365 Days:
  - Driver (n=4): 9
  - Passenger (n=30): 7
  - Bicycle (n=2): 3
- 1-4 Years:
  - Driver (n=4): 10
  - Passenger (n=30): 9
- 5-9 Years:
  - Driver (n=4): 7
  - Passenger (n=30): 3
  - Bicycle (n=2): 2
  - Pedestrian (n=25): 3
- 10-14 Years:
  - Driver (n=4): 7
  - Passenger (n=30): 3
  - Bicycle (n=2): 2
- 15-17 Years:
  - Driver (n=4): 9
  - Passenger (n=30): 4
  - Bicycle (n=2): 5

Health and Wellness for all Arizonans
Motor Vehicle and Other Transport Deaths, Improper or Unknown Restraint by Age Group, Arizona, 2010 (n=20)

- 1-4 Years: 30% (n=6)
- 5-9 Years: 10% (n=2)
- 10-14 Years: 15% (n=3)
- 15-17 Years: 45% (n=9)
Drownings
Drowning Deaths by Age Group Among Children, Arizona, 2010 (n=33)

- 1-4 Years: 67% (n=22)
- 5-9 Years: 12% (n=4)
- 10-14 Years: 6% (n=2)
- 15-17 Years: 9% (n=3)
- 28-365 Days: 6% (n=2)
Drowning Deaths by Age Group and Location Among Children, Arizona, 2010 (n=33)
Home Safety-Related Deaths
Home Safety-Related Deaths Among Children by Age Group, Arizona, 2010 (n=155)

- < 1 Year: 49% (n=76)
- 1-4 Years: 29% (n=45)
- 5-9 Years: 5% (n=8)
- 10-14 Years: 6% (n=9)
- 15-17 Years: 11% (n=17)
<table>
<thead>
<tr>
<th>Cause</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undetermined</td>
<td>54</td>
<td>35%</td>
</tr>
<tr>
<td>Drowning</td>
<td>28</td>
<td>18%</td>
</tr>
<tr>
<td>Suffocation</td>
<td>24</td>
<td>15%</td>
</tr>
<tr>
<td>Poisoning</td>
<td>17</td>
<td>11%</td>
</tr>
<tr>
<td>Motor Vehicle Collisions</td>
<td>9</td>
<td>6%</td>
</tr>
<tr>
<td>Fire/Burn</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Fall/Crush</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Hanging</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Firearm-Related Injury</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Hyperthermia</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>155</strong></td>
<td></td>
</tr>
</tbody>
</table>
Suicides
Rate of Suicides (per 100,000 children), Arizona 2005-2010

- 2005: 2.2
- 2006: 2.9
- 2007: 1.7
- 2008: 2.0
- 2009: 1.6
- 2010: 1.5
Suicides Among children by Age Group, Arizona, 2010 (n=24)

10-14 Years
37% (n=9)

15-17 Years
63% (n=15)
Suicides Among Children by Age Group and Cause of Death, Arizona, 2010 (n=24)

- **Firearm**
  - 10-14 Years (n=9): 3
  - 15-17 Years (n=15): 3

- **Suffocation**
  - 10-14 Years (n=9): 0
  - 15-17 Years (n=15): 1

- **Hanging**
  - 10-14 Years (n=9): 6
  - 15-17 Years (n=15): 10

- **Unknown**
  - 10-14 Years (n=9): 0
  - 15-17 Years (n=15): 1
Suicides Among Children by Cause of Death and Sex, Arizona, 2010 (n=24)

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Male (n=19)</th>
<th>Female (n=5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firearm</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Suffocation</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Hanging</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
### Factors That May Have Contributed to the Child’s Despondency Prior to Suicide, Arizona, 2010

<table>
<thead>
<tr>
<th>Factor</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Discord</td>
<td>7</td>
<td>29%</td>
</tr>
<tr>
<td>History of Drug and/or Alcohol Use</td>
<td>6</td>
<td>25%</td>
</tr>
<tr>
<td>Recent break-up With Boy/Girlfriend</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>Failure at School</td>
<td>5</td>
<td>21%</td>
</tr>
<tr>
<td>Victim of Bullying</td>
<td>3</td>
<td>13%</td>
</tr>
<tr>
<td>Recent argument With Boy/Girlfriend</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>History of Problems With the Law</td>
<td>2</td>
<td>8%</td>
</tr>
<tr>
<td>Sexual Orientation</td>
<td>2</td>
<td>8%</td>
</tr>
</tbody>
</table>

*More than one factor may have been identified for each death*
Homicides
Rate of Homicides (per 100,000 children), Arizona, 2005-2010

2005: 3.6
2006: 3.8
2007: 3.9
2008: 3.5
2009: 3.0
2010: 2.2
Homicides Among Children by Age Group, Arizona, 2010 (n=36)

- Birth-365 Days: 25% (n=9)
- 15-17 Years: 30% (n=11)
- 10-14 Years: 11% (n=4)
- 5-9 Years: 17% (n=6)
- 1-4 Years: 17% (n=6)
Homicides Among Children by Cause of Death, Arizona, 2010 (n=36)

- Firearm: 36% (n=13)
- Blunt Force Trauma: 31% (n=11)
- Exposure: 17% (n=6)
- Sharp Force Trauma: 5% (n=2)
- Motor Vehicle Crash: 3% (n=1)
- Unknown: 8% (n=3)
### Homicides Among Children by Perpetrator, Arizona, 2010 (n=36)

<table>
<thead>
<tr>
<th>Perpetrator*</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Parent/Step-Parent</td>
<td>14</td>
<td>37%</td>
</tr>
<tr>
<td>Child’s Friend/Acquaintance</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Unknown</td>
<td>5</td>
<td>13%</td>
</tr>
<tr>
<td>Other Relative</td>
<td>4</td>
<td>11%</td>
</tr>
<tr>
<td>Gang Member</td>
<td>3</td>
<td>8%</td>
</tr>
<tr>
<td>Mother’s Partner</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Stranger</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Child’s Boy/Girlfriend</td>
<td>2</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Perpetrator may fall into more than one category for each death*
Firearm-Related Fatalities
Firearm-Related Deaths Among Children by Age Group, Arizona, 2010 (n=22)

- 1-4 Years: 9% (n=2)
- 5-9 Years: 23% (n=5)
- 10-14 Years: 36% (n=8)
- 15-17 Years: 32% (n=7)
Firearm-Related Deaths Among Children by Manner, Arizona, 2010 (n=22)

- **Homicide**: 59% (n=13)
- **Suicide**: 27% (n=6)
- **Accident**: 9% (n=2)
- **Undetermined**: 5% (n=1)
<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handgun</td>
<td>17</td>
<td>79%</td>
</tr>
<tr>
<td>Shotgun</td>
<td>2</td>
<td>9%</td>
</tr>
<tr>
<td>Hunting Rifle</td>
<td>2</td>
<td>9%</td>
</tr>
<tr>
<td>Assault Rifle</td>
<td>1</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td></td>
</tr>
</tbody>
</table>
Owners of Firearms Involved in Child Deaths, Arizona, 2010 (n=22)

- Parent/Step-Parent: 32% (n=7)
- Unknown: 27% (n=6)
- Other: 14% (n=3)
- Relative: 9% (n=2)
- Friend: 9% (n=2)
- Stranger: 4% (n=1)
- Weapon Stolen: 5% (n=1)
### Locations of Firearms Involved in Child Deaths, Arizona, 2010 (n=22)

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>12</td>
<td>55%</td>
</tr>
<tr>
<td>Closet</td>
<td>5</td>
<td>23%</td>
</tr>
<tr>
<td>Not Stored</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>Under a Bed</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td>Locked in a Safe</td>
<td>1</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td></td>
</tr>
</tbody>
</table>
Maltreatment
Maltreatment Deaths Among Children by Age Group, Arizona, 2010 (n=70)

- 0-27 Days: 24% (n=17)
- 28-365 Days: 29% (n=20)
- 1-4 Years: 26% (n=18)
- 5-9 Years: 14% (n=10)
- 10-14 Years: 4% (n=3)
- 15-17 Years: 3% (n=2)
- 28-365 Days: 29% (n=20)
Maltreatment Deaths Among Children by Manner, Arizona, 2010 (n=70)

- **Homicide**: 30% (n=21)
- **Undetermined**: 26% (n=18)
- **Natural**: 23% (n=16)
- **Accident**: 20% (n=14)
- **Suicide**: 1% (n=10)
<table>
<thead>
<tr>
<th>Perpetrator*</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother</td>
<td>34</td>
<td>49%</td>
</tr>
<tr>
<td>Father</td>
<td>18</td>
<td>26%</td>
</tr>
<tr>
<td>Mother’s Partner</td>
<td>6</td>
<td>9%</td>
</tr>
<tr>
<td>Unknown</td>
<td>6</td>
<td>8%</td>
</tr>
<tr>
<td>Other Relative</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Foster Parent</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>70</strong></td>
<td></td>
</tr>
</tbody>
</table>

*May not have been under the jurisdiction of Arizona Child Protective Services*
2010 Recommendation Topics

• Training and screening on substance use
• Immunization recommendations
• Evaluation of safe sleep education programs
• Seat belt and booster seat laws
• Drowning prevention
• Storage of firearms
• Reporting of suspected child abuse/neglect
Successes

• Safe sleep information has become part of Child Care Facility and Group Home licensing.

• Arizona Game and Fish deployed 14 law enforcement officers dedicated to off-highway vehicle enforcement since 2009.

• The Drowning Prevention Coalition of Arizona has included “touch supervision” in water safety presentations.

• Arizona Department of Health Services is working with the CDC to increase awareness regarding preconception health to reduce deaths due to prematurity.
View the complete report at: http://azdhs.gov/phs/owch/ipcfr/cfr.htm

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