Overview

Five leading causes of death, ages 1 to 17
King County, WA, 2010 to 2014

<table>
<thead>
<tr>
<th>Cause</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Accident” (unintentional injury)</td>
<td>62</td>
</tr>
<tr>
<td>Malignant neoplasm (cancer)</td>
<td>49</td>
</tr>
<tr>
<td>Suicide (only applied to deaths age 10 to 17)</td>
<td>38</td>
</tr>
<tr>
<td>Homicide</td>
<td>20</td>
</tr>
<tr>
<td>Congenital malformations, deformations and chromosomal abnormalities</td>
<td>17</td>
</tr>
</tbody>
</table>
Most common causes of fatal intentional injury, ages 1 to 17, King County, 2010-2014

<table>
<thead>
<tr>
<th>Cause</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suicide by suffocation/obstruction</td>
<td>23</td>
</tr>
<tr>
<td>Suicide by firearm</td>
<td>12</td>
</tr>
<tr>
<td>Homicide by firearm</td>
<td>11</td>
</tr>
<tr>
<td>Other homicide</td>
<td>5</td>
</tr>
</tbody>
</table>

Cost of Childhood Injury Deaths, Washington, 2010

<table>
<thead>
<tr>
<th>Category</th>
<th>Unintentional: n=95</th>
<th>Suicide: n=25</th>
<th>Homicide: n=28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average medical cost</td>
<td>$12,432</td>
<td>$7,617</td>
<td>$16,020</td>
</tr>
<tr>
<td>Average work loss cost</td>
<td>$1,640,662</td>
<td>$1,895,676</td>
<td>$1,557,762</td>
</tr>
<tr>
<td>Combined cost for all</td>
<td>$157,044,000</td>
<td>$47,582,000</td>
<td>$44,066,000</td>
</tr>
<tr>
<td>Total cost</td>
<td>$254,266,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Foundational Public Health Services

[Diagram of Foundational Public Health Services]
Polling Question #1
Which of the following prevention programs are available in your jurisdiction?

- Safe infant sleep
- Gun safety
- Drowning prevention
- Suicide prevention
- Traffic safety
- Other

The Spectrum of Prevention

- Influencing Policy and Legislation
- Changing Organizational Practices
- Fostering Coalitions and Networks
- Educating Providers
- Promoting Community Education
- Strengthening Individual Knowledge and Skills

www.preventioninstitute.org

Child Death Review
Reducing Unintentional Child Injury Deaths in King County, 2000-2009

- Unintentional child injury deaths dropped by 62%
- 193 lives saved
- Improvements surpassed a national 29% decline in childhood injury deaths

Child Death Review (CDR)

- Comprehensive, multidisciplinary
- Aimed at understanding how and why children die
- Leads to action
- Information legally protected

Child Death Review in Washington State

<table>
<thead>
<tr>
<th>Period</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1980s-1990s: CDR Begins | - Statewide infant mortality review  
                        - Review of all deaths of children in state care  
                        - Some local teams formed                                       |
| Late 1990s-2000: Work Toward Statewide CDR | - CDR teams in all local health jurisdictions (LHJs)  
                                           - State agencies collaborated to train and support LHJs |
| 2000s-2010s: Funding Instability | - State funds eliminated in 2003  
                                   - Support from Harborview Injury Prevention and Research Center  
                                   - Some state support renewed |
| Today: CDR at the local level | - 6 LHJs conducting CDRs in 7 of 39 counties  
                                - 2 additional LHJs in transition to begin CDR  
                                - Some DOH support |
Child Death Review in King County

Funded locally by Public Health—Seattle & King County

<table>
<thead>
<tr>
<th>2013-2014</th>
<th>2015-present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Coordinator (0.6 FTE)</strong></td>
<td><strong>Program coordinator cut in late 2014</strong></td>
</tr>
<tr>
<td><strong>Program Manager (0.5 FTE)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Administrative support (0.2 FTE)</strong></td>
<td></td>
</tr>
</tbody>
</table>

Reviews conducted monthly

Coordinated with partners to implement recommendations

Enter data into national CDR case reporting system

Enter data into national CDR case reporting system

Overview of Demographics

<table>
<thead>
<tr>
<th>Sex</th>
<th>% of Cases</th>
<th>% of &lt;18 KC Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>66%</td>
<td>51%</td>
</tr>
<tr>
<td>Female</td>
<td>33%</td>
<td>49%</td>
</tr>
<tr>
<td>Transgender</td>
<td>1%</td>
<td>–</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>% of Cases</th>
<th>% of &lt;18 KC Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>54%</td>
<td>60%</td>
</tr>
<tr>
<td>Asian</td>
<td>13%</td>
<td>15%</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>8%</td>
<td>12%</td>
</tr>
<tr>
<td>Unknown</td>
<td>1%</td>
<td>–</td>
</tr>
</tbody>
</table>

Ethnicity

| Hispanic | 10% | 15% |
| Not Hispanic | 90% | 85% |

Total cases reviewed: 125

Data Source: American Community Survey, 2010-2014; Prepared by PHSKC; Assessment, Policy Development & Evaluation Unit, 7/2016
Overview of Child Deaths Reviewed

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Cases</th>
<th>% of &lt;18 KC Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant death (SUID/SIDS)</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Suicide</td>
<td>26%</td>
<td></td>
</tr>
<tr>
<td>Unintentional traffic</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Other unintentional</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Homicide</td>
<td>8%</td>
<td></td>
</tr>
</tbody>
</table>

Infant Deaths

Infant Deaths: Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Cases</th>
<th>% of &lt;18 KC Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>64%</td>
<td>51%</td>
</tr>
<tr>
<td>Female</td>
<td>36%</td>
<td>49%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>Asian</td>
<td>2%</td>
<td>15%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>29%</td>
<td>8%</td>
</tr>
<tr>
<td>American Indian or Alaskan Native</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Data Source: United States Census Bureau; King County, Washington, data 2010-2015
Interactions with Services Prior to Infant Deaths

<table>
<thead>
<tr>
<th>Family CPS History Prior to Death</th>
<th>Family Public Health Services Prior to Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior CPS History</td>
<td>Received Public Health services</td>
</tr>
<tr>
<td>No Prior CPS History</td>
<td>Did not receive Public Health services</td>
</tr>
<tr>
<td>Unknown</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Polling Question #2

What other traditional or nontraditional partners or service providers would you include in an infant death review in your area?

Please type your answer in the chat box.

Identified Modifiable Risk Factors in Infant Deaths

<table>
<thead>
<tr>
<th>Identified Modifiable Risk Factor</th>
<th>% Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases with multiple identified modifiable risk factors</td>
<td>79%</td>
</tr>
<tr>
<td>Total SUID/SIDS cases reviewed</td>
<td>42</td>
</tr>
<tr>
<td>Bed-sharing</td>
<td>60%</td>
</tr>
<tr>
<td>Soft sleep surface and/or loose bedding</td>
<td>57%</td>
</tr>
<tr>
<td>Parental/caregiver substance use involved</td>
<td>43%</td>
</tr>
<tr>
<td>Born premature</td>
<td>31%</td>
</tr>
<tr>
<td>Warm sleep environment</td>
<td>29%</td>
</tr>
<tr>
<td>Toys or other objects in sleep environment</td>
<td>26%</td>
</tr>
<tr>
<td>Maternal smoking or drug use during pregnancy</td>
<td>24%</td>
</tr>
<tr>
<td>Secondhand smoke exposure</td>
<td>17%</td>
</tr>
<tr>
<td>Sleep position on stomach</td>
<td>10%</td>
</tr>
</tbody>
</table>
Bed-sharing as an overlapping modifiable risk factor

<table>
<thead>
<tr>
<th>Identified Modifiable Risk Factor</th>
<th># of Cases with Bed-sharing as co-factor</th>
<th># of Cases without Bed-sharing as co-factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondhand smoke exposure</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Warm sleep environment</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Toy(s) or other object(s) in sleep environment</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Maternal smoking or drug use during pregnancy</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Premature birth</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Parental/Caregiver substance use involved</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Soft sleep surface and/or loose bedding</td>
<td>18</td>
<td>8</td>
</tr>
</tbody>
</table>

Note: Multiple cases have more than two identified modifiable risk factors

Safe Sleep Recommendations

- Increase and strengthen messaging with multiple partners
- SUIDI Foundation developed a Safe Sleep training roll call video for cadets in law enforcement training: [http://www.youtube.com/watch?v=EKdKKdMBBH0](http://www.youtube.com/watch?v=EKdKKdMBBH0)
- Developed and distributed a Trauma Informed Safe Sleep Script
- Baby Bed Box Project

Suicides and Homicides
Suicides: Demographics

<table>
<thead>
<tr>
<th>Sex</th>
<th>% of Cases</th>
<th>% of &lt;18 Y.O. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>73%</td>
<td>51%</td>
</tr>
<tr>
<td>Female</td>
<td>24%</td>
<td>49%</td>
</tr>
<tr>
<td>Transgender</td>
<td>3%</td>
<td>unknown</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>% of Cases</th>
<th>% of &lt;18 Y.O. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
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<td>60%</td>
</tr>
<tr>
<td>Asian</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
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</tr>
<tr>
<td>Multi-Racial</td>
<td>9%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Suicides by Method

- **Firearm**: 30%
- **Hanging**: 15%
- **Poisoning, Asphyxiation, or Fall**: 55%

Identified Modifiable Risk Factors in Suicides

<table>
<thead>
<tr>
<th>Modifiable Risk Factor</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases with multiple identified modifiable risk factors</td>
<td>91%</td>
</tr>
<tr>
<td>Total suicide cases reviewed</td>
<td>33</td>
</tr>
<tr>
<td>Diagnosed mental illness</td>
<td>49%</td>
</tr>
<tr>
<td>History of substance abuse</td>
<td>49%</td>
</tr>
<tr>
<td>Verbalized suicidal ideations</td>
<td>39%</td>
</tr>
<tr>
<td>School or job issues (failure, attendance, new school, loss of job)</td>
<td>36%</td>
</tr>
<tr>
<td>Recent breakup or argument with boyfriend or girlfriend</td>
<td>33%</td>
</tr>
<tr>
<td>Access to firearms</td>
<td>30%</td>
</tr>
<tr>
<td>Experienced domestic violence or family conflict</td>
<td>30%</td>
</tr>
<tr>
<td>Made prior suicide attempt</td>
<td>24%</td>
</tr>
<tr>
<td>History of rape, physical or sexual abuse</td>
<td>21%</td>
</tr>
<tr>
<td>History of self-harm/mutilation</td>
<td>18%</td>
</tr>
<tr>
<td>Recent argument with parent or caregiver</td>
<td>18%</td>
</tr>
<tr>
<td>Involvement in juvenile justice system and/or legal trouble</td>
<td>13%</td>
</tr>
<tr>
<td>Experienced the recent death of a family member</td>
<td>12%</td>
</tr>
<tr>
<td>Experienced suicide of a friend, relative, or acquaintance</td>
<td>9%</td>
</tr>
</tbody>
</table>
Recommendations for Suicide Deaths

### Firearm Safety
- Safe storage laws, policies and education
- Firearm Safe Storage Campaign 11/25/2013

### Other Interventions
- Increase awareness of immigrant community stressors and provide additional resources
- Provide postvention resources available in King County to communities and schools impacted by a youth suicide
- Coordinate scene response with first responders to provide care to survivors at the scene of a completed suicide

---

Homicides: Demographics

<table>
<thead>
<tr>
<th>Sex</th>
<th>% of Cases</th>
<th>% of &lt;18 KC Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>30%</td>
<td>51%</td>
</tr>
<tr>
<td>Female</td>
<td>70%</td>
<td>49%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>% of Cases</th>
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</thead>
<tbody>
<tr>
<td>White</td>
<td>10%</td>
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<tr>
<td>Black or African American</td>
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</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>20%</td>
<td>1%</td>
</tr>
<tr>
<td>Multi-Racial</td>
<td>30%</td>
<td>12%</td>
</tr>
<tr>
<td>Unknown</td>
<td>10%</td>
<td>--</td>
</tr>
</tbody>
</table>

---

Homicides

Homicide Cases Reviewed by Age and Cause of Death

- Blunt force injury
- Gunshot or stab wound

Family CPS History Prior to Death

- Prior CPS History: 20%
- No Prior CPS History: 80%
Identified Modifiable Risk Factors in Homicide Deaths

<table>
<thead>
<tr>
<th>Identified Modifiable Risk Factors</th>
<th>% Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases with multiple identified modifiable risk factors</td>
<td>100%</td>
</tr>
<tr>
<td>Total homicide cases reviewed</td>
<td>10</td>
</tr>
<tr>
<td>Substance use involved</td>
<td>90%</td>
</tr>
<tr>
<td>Exposure violence and conflict in the family, including domestic violence</td>
<td>70%</td>
</tr>
<tr>
<td>Victim has history of being victimized by violence</td>
<td>50%</td>
</tr>
<tr>
<td>Parental substance abuse</td>
<td>50%</td>
</tr>
<tr>
<td>Victim involvement with drugs, alcohol or tobacco</td>
<td>40%</td>
</tr>
</tbody>
</table>

Firearms: A Major Risk Factor

Firearm Burden and Prevention

A public health approach to gun violence:
- Is data-driven
- Evaluates programs
- Engages the community
- Examines the issue at a local level

- 600 deaths
- 243 nonfatal injuries resulting in hospitalization

2013
King County Child Firearm Suicide

Data from 1999-2012

| Number of King County children under 18 who died by suicide using a firearm | 25 |
| Percentage of cases involving gun ownership | 80% |
| Percentage of cases involving a gun owned by a family member | 56% |

Firearm Ownership and Storage, Washington State, 2013

Data from the Behavioral Risk Factor System Survey (BRFSS)

| Number of adult residents who reported firearms in or around their homes | 1.8 million |
| Number of adult residents who reported at least one unlocked firearm in or around their home | 950,000 |
| Number of children residing in homes with unlocked firearms | 200,000 |

Child Suicide & Unsecured Firearms

Estimate based on CDR and BRFSS Data

Increased risk of suicide completion in households where firearms are kept unlocked and are easily accessible | 900% |
LokItUp Campaign

• Began in 1997, led by Harborview Injury Prevention and Research Center
• Focused on safe firearms storage as a key modifiable risk factor
• Relaunched in 2013 with law enforcement and firearm storage device retailers

Focus on Child Safety

Next Steps: Young Adult Violence Review
Firearm Homicides

Source: WA State Homicide Investigation Tracking System

King County’s Young Adult Violence Review

- Goal: review the circumstances of the death, but look at upstream indicators of the lives of the youth to better inform prevention.

Determinants of Youth Violence

Key

X Strong evidence
< Moderate Evidence
< Weak evidence
Blank Relationship not found
CDR Participant Quote

“The anecdotal and circumstantial information I receive from CDR not only reminds me of why injury prevention is so important, but it also helps me develop better programming because I have a better “picture” of what is really happening with these injuries.

It puts a face on the data that is very important to me.”

Questions?