Injury Prevention: Utilizing a Public Health Model in Healthcare Settings

Tennessee Department of Health
Division of Family Health and Wellness
Injury and Violence Prevention

Presentation to the 7th Annual Rural Trauma Symposium
I, Terrence R. Love

DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.
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I, Terrence R. Love,

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Tennessee Department of Health
Injury Prevention

* Located in Maternal Child Health Division
* Injury Prevention Section includes:
  * Injury Prevention
  * Rape and Sexual Violence Prevention
  * Child Fatality Review
  * Infant Mortality Reduction Initiatives
## Leading Causes of Death for Tennessee Residents, 2012

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1yr</th>
<th>1-4yr</th>
<th>5-14yr</th>
<th>15-24yr</th>
<th>25-34yr</th>
<th>35-44yr</th>
<th>45-54yr</th>
<th>55-64yr</th>
<th>65+</th>
<th>All ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Congenital anomalies</td>
<td>Unintentional Injuries</td>
<td>Unintentional Injuries</td>
<td>Unintentional Injuries</td>
<td>Unintentional Injuries</td>
<td>Malignant neoplasms</td>
<td>Malignant neoplasms</td>
<td>Malignant neoplasms</td>
<td>Heart Disease</td>
<td>Heart Disease</td>
</tr>
<tr>
<td>2</td>
<td>Unintentional Injuries</td>
<td>Homicide</td>
<td>Malignant neoplasms</td>
<td>Homicide</td>
<td>Suicide</td>
<td>Heart Disease</td>
<td>Heart Disease</td>
<td>Heart Disease</td>
<td>Malignant neoplasms</td>
<td>Malignant neoplasms</td>
</tr>
<tr>
<td>3</td>
<td>Heart Disease</td>
<td>Congenital anomalies</td>
<td>Congenital anomalies</td>
<td>Suicide</td>
<td>Homicide</td>
<td>Malignant neoplasms</td>
<td>Unintentional Injuries</td>
<td>Chronic lower respiratory diseases</td>
<td>Chronic lower respiratory diseases</td>
<td>Chronic lower respiratory diseases</td>
</tr>
<tr>
<td>4</td>
<td>Homicide</td>
<td>Malignant neoplasms</td>
<td>Homicide</td>
<td>Malignant neoplasms</td>
<td>Heart Disease</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Unintentional Injuries</td>
<td>Cerebrovascular diseases</td>
<td>Unintentional Injuries</td>
</tr>
<tr>
<td>5</td>
<td>Nephritis, nephrotic syndrome and nephrosis</td>
<td>Influenza and pneumonia</td>
<td>Heart Disease</td>
<td>Heart Disease</td>
<td>Malignant neoplasms</td>
<td>Homicide</td>
<td>Chronic liver disease and cirrhosis</td>
<td>Diabetes Mellitus</td>
<td>Alzheimer’s disease</td>
<td>Cerebrovascular diseases</td>
</tr>
</tbody>
</table>

Source: Tennessee Department of Health, Death Statistical System
Injury is a major public health issue across the U.S. and in Tennessee and is the leading cause of death from ages 1-44. In 2012:

- **5,105** fatal injuries
- **17,230** trauma center admissions
- **37,568** hospitalizations
- **745,475** ED visits

Source: Tennessee Department of Health, Death Statistical System, Hospital Discharge Data System; Trauma Registrar.
Table 2. Leading Causes of Injury Deaths, Hospitalizations and ED Visits by Age Group, 2006-2012

<table>
<thead>
<tr>
<th>CAUSE</th>
<th>DEATH</th>
<th>HOSPITALIZATION</th>
<th>EMERGENCY ROOM VISITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age-group 1-14yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Motor Vehicle</td>
<td>Fall</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Drowning</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Fire</td>
<td>Poisoning</td>
<td>Poisoning</td>
</tr>
<tr>
<td>Age-group 15-24yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Motor Vehicle</td>
<td>Fall</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Firearms</td>
<td>Poisoning</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Suicides</td>
<td>Suicides</td>
<td>Poisoning</td>
</tr>
<tr>
<td>Age-group 25-34yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Poisoning</td>
<td>Poisoning</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Firearms</td>
<td>Suicides</td>
<td>Poisoning</td>
</tr>
<tr>
<td>Age-group 35-44yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Poisoning</td>
<td>Poisoning</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Suicides</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Firearms</td>
<td>Suicides</td>
<td>Poisoning</td>
</tr>
<tr>
<td>Age-group 45-64yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Poisoning</td>
<td>Poisoning</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Suicides</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
<td>Poisoning</td>
</tr>
<tr>
<td>Age-group 65+yr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1</td>
<td>Fall</td>
<td>Fall</td>
<td>Fall</td>
</tr>
<tr>
<td>#2</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
<td>Motor Vehicle</td>
</tr>
<tr>
<td>#3</td>
<td>Suicides</td>
<td>Motor Vehicle</td>
<td>Poisoning</td>
</tr>
</tbody>
</table>

Source: Tennessee Department of Health, Death Statistical System, Hospital Discharge Data System.
Trend of the age-adjusted death rates by types of injury, 2007-2012
What is Injury Prevention?

- Injury Prevention is creating conditions in individuals, families, workplaces, communities, and systems so that injury is less likely to occur (skills, norms, support, policies, procedures).
- Prevention is an ongoing process, not awareness, not an event.
- Prevention is based in science and data (evidence-informed).
- Prevention is different than treatment in that it utilizes a public health approach and is usually focused on population-level change.
What ISN’T Injury Prevention?

• **NOT** – Awareness Alone (brochures, health fairs, motivational or cautionary assembly lectures)
• **NOT** – Scare tactics (emotional arousal, crash pictures, mock crashes without any skill building)
• **NOT** – Enforcement Alone (fines, tickets, “write-ups”, etc.)
• **NOT** – Done alone…Prevention happens best with a coalition of like-minded individuals who can impact various aspects of the community.

Tooth decay is not prevented by hearing a scary story about cavities and brushing your teeth one week in October… prevention is a way of life.
Centers for Disease Control CORE
VIPP Grant

Supports 20 states to maintain and strengthen injury and violence prevention programs in their efforts to:

- Build a solid prevention infrastructure
- Collect and analyze injury data
- Design, implement, and evaluate programs
- Provide technical support and training
- Affect behavior change and knowledge gain
TDH CORE Grant Injury Priorities

- Prescription Drug Overdose
- Motor Vehicle Crashes (Teens)
- Older Adult Falls
- Infant Safe Sleep

Support other prevention efforts such as: Suicide prevention, Rape and Sexual Violence Prevention, Infant Mortality Reduction Initiatives
Current Projects

- Count It! Lock It! Drop It!
- Prevention Alliance of TN
- TDEC Partnership - 106 Drug Drop Boxes in 65 counties
- Battle of the Belt
- ReduceTNCrashes.Org
- Teen Safe Driving Coalition
- Distracted and Impaired Driving Community of Practice
- Graduated Drivers License Education
- “Stepping On”
- Falls Prevention Coalition
- D.O.S.E. Infant Sleep Training
- Hospital Safe Sleep Project
- Suicide Prevention Research Grant
TDH Injury Prevention Partners (CCIP)

American Automobile Association
American Automobile Association
Area Agency on Aging and Disability
Blue Cross Blue Shield of TN
Brentwood Fire Department
Bristol Regional Medical Center – Trauma System
Child Fatality Review Committee
Coffee County Anti-Drug Coalition
East TN Children’s Hospital Safe Kids
East TN State University
Erlanger Hospital - Safe & Sound Program
Erlanger Hospital – Safe and Sound Program
Erlanger Medical Center
Governor’s Highway Safety Office
Greater Nashville Regional Council of AAAD
Hamilton Co. Department of Health
HCA Trauma Services
Holston Valley Medical Center Injury Prevention
Knoxville Department of Health
LeBonheur Children’s Hospital – Margaret Cunningham Women’s Center
Meharry – State Farm Alliance
Meharry Medical College Teen Violence Program
Meharry- State Farm Alliance
Nashville Metro Public Health
Nashville Metro Public Health
National Healthcare Corporation
NE TN Regional Health Office - Preventive Medicine and Public Health
Prevent Child Abuse Tennessee
Putnam Co. Emergency Services
Regional Medical One Health
Regional One Health – Regional Medical Center
Rural Health Association of TN
Safe and Sound Program/Safe Kids
Safe Kids
T.C. Thompson Children’s Hospital
TN Association of Mental Health Organizations
TN Chapter of Children’s Advocates
TN Children’s Trust Fund
TN Coalition to End Domestic Violence
TN Commission on Aging and Disability
TN Commission on Children and Youth
TN Department of Commerce and Insurance
TN Department of Education-Coordinated School Health
TN Department of Environment and Conservation
TN Department of Health – Traumatic Brain Injury
TN Department of Health—Health Care Facilities
TN Department of Mental Health
TN Department of Risk Management
TN Department of Transportation
TN Dept. of Safety Research and Planning Division
TN Emergency Medical Services for Children
TN Environment and Conservation
TN Governor’s Highway Safety Office
TN Highway Patrol
TN National Guard – Suicide Prevention
TN Poison Control Center
TN Regional Health Council
TN Risk Watch Program - Columbia Fire Department
TN Suicide Prevention Network
TN Tech University
TN Trauma Advisory Council
Trauma Registry – Johnson City Medical Center
United Healthcare – Middle TN CHOICES
UT Medical Center – Trauma Program
UT Medical Center – Trauma Services
Vanderbilt Pediatric Trauma Injury Prevention
Vanderbilt Trauma
Vanderbilt University Medical Center
Wellmont Health Systems – Trauma Center
Injury Deaths
Tennessee, 2012

State Rate: 77.0 / 100,000

Age-Adjusted Rate
Per 100,000

Data sources: 1) Tennessee Department of Health; Division of Policy, Planning and Assessment; Death Statistical System; 2) U.S. Census Bureau

Map produced by Tennessee Department of Health; Division of Policy, Planning and Assessment; Surveillance, Epidemiology and Evaluation
Non-Fatal Injury Hospitalizations
Tennessee, 2012

State Rate: 558.2 / 100,000

Age-Adjusted Rate
Per 100,000

Data sources: 1) Tennessee Department of Health; Division of Policy, Planning and Assessment; Hospital Discharge Data System; 2) U.S. Census Bureau

Map produced by Tennessee Department of Health; Division of Policy, Planning and Assessment; Surveillance, Epidemiology and Evaluation
How Can I Help As A Rural Nursing Leader?

1. Learn how to access and use injury data (DATA FIRST - DATA LAST!),

2. Seek further training for primary injury prevention and public health methods,

3. Seek out prevention professionals in your area who practice evidence-informed methods such as Local Health Councils, Substance Abuse Prevention Coalitions, GSHO funded grantees,

4. Contact TDH Injury Prevention for consultation,

5. Review policies, procedures, and practices... change if needed.

6. Change the world! 😊
Summary

• Injury is the leading cause of death among 1-44 year olds in Tennessee.
• Injury fatalities ARE PREVENTABLE.
• Rx Drug Overdose is the leading cause of injury death.
• MVC are the leading cause of death for teens.
• Falls are the leading cause of hospitalization for all TN and kill more older adults than any injury.

• Rural counties can have high injury and fatality rates.
• Injury Prevention is most effective when evidence-informed methods are used.
• Information and scare tactics alone do not work.
• There are multiple partners available to those who wish to reduce injury in their area.

• Injury Prevention Works!
Get Upstream to Impact Primary Prevention!
Questions?