Injury Prevention IS Public Health: A Glimpse of Injury Prevention Across the Lifespan

Population Health Clerkship 2019

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### 10 Leading Causes of Death by Age Group, United States - 2017

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Congenital Anomalies 4,580</td>
<td>Unintentional Injury 1,237</td>
<td>Unintentional Injury 718</td>
<td>Unintentional Injury 860</td>
<td>Unintentional Injury 13,441</td>
<td>Unintentional Injury 22,628</td>
<td>Malignant Neoplasms 39,266</td>
<td>Malignant Neoplasms 114,810</td>
<td>Heart Disease 519,052</td>
<td>Heart Disease 647,457</td>
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<td>2</td>
<td>Short Gestation 3,749</td>
<td>Congenital Anomalies 424</td>
<td>Malignant Neoplasms 418</td>
<td>Suicide 517</td>
<td>Suicide 6,252</td>
<td>Suicide 7,948</td>
<td>Suicide 10,900</td>
<td>Heart Disease 32,658</td>
<td>Heart Disease 80,102</td>
<td>Malignant Neoplasms 427,896</td>
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<td>3</td>
<td>Maternal Pregnancy Comp. 1,432</td>
<td>Malignant Neoplasms 326</td>
<td>Congenital Anomalies 188</td>
<td>Malignant Neoplasms 437</td>
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<td>Heart Disease 10,401</td>
<td>Unintentional Injury 24,461</td>
<td>Chronic Low Respiratory Disease 106,867</td>
<td>Chronic Low Respiratory Disease 126,139</td>
<td>Unintentional Injury 160,304</td>
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<td>SIDS 1,363</td>
<td>Homicide 303</td>
<td>Homicide 154</td>
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<td>Heart Disease 3,681</td>
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<td>Suicide 8,561</td>
<td>Chronic Low Respiratory Disease 18,067</td>
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<td>Cerebrovascular Disease 183,683</td>
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<td>Unintentional Injury 1,317</td>
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<td>Heart Disease 75</td>
<td>Homicide 178</td>
<td>Heart Disease 913</td>
<td>Malignant Neoplasms 3,515</td>
<td>Homicide 3,351</td>
<td>Liver Disease 8,312</td>
<td>Diabetes Mellitus 14,904</td>
<td>Alzheimer’s Disease 120,107</td>
<td>Cerebrovascular Disease 146,383</td>
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<td>6</td>
<td>Placenta Cord. Membranes 843</td>
<td>Influenza &amp; Pneumonia 104</td>
<td>Influenza &amp; Pneumonia 62</td>
<td>Heart Disease 104</td>
<td>Congenital Anomalies 355</td>
<td>Liver Disease 918</td>
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<td>Diabetes Mellitus 6,409</td>
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<td>Alzheimer’s Disease 121,404</td>
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<td>Bacterial Septis 592</td>
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<td>Chronic Low Respiratory Disease 79</td>
<td>Chronic Low Respiratory Disease 148</td>
<td>Diabetes Mellitus 283</td>
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<td>Diabetes Mellitus 5,198</td>
<td>Cerebrovascular Disease 127,088</td>
<td>Unintentional Injury 55,951</td>
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<td>Circulatory System Disease 449</td>
<td>Septicemia 48</td>
<td>Cerebrovascular Disease 41</td>
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<td>Suicide 7,882</td>
<td>Influenza &amp; Pneumonia 46,862</td>
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<td>Respiratory Disease 440</td>
<td>Benign Neoplasms 44</td>
<td>Septicemia 33</td>
<td>Influenza &amp; Pneumonia 51</td>
<td>Chronic Low Respiratory Disease 188</td>
<td>HIV 313</td>
<td>Septicemia 834</td>
<td>Septicemia 2,441</td>
<td>Septicemia 5,838</td>
<td>Nephritis 41,670</td>
<td>Nephritis 50,633</td>
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<td>10</td>
<td>Neonatal Hemorrhage 379</td>
<td>Puerperal Period 42</td>
<td>Benign Neoplasms 31</td>
<td>Benign Neoplasms 31</td>
<td>Complicated Pregnancy 168</td>
<td>Complicated Pregnancy 512</td>
<td>HIV 831</td>
<td>Homicide 2,275</td>
<td>Nephritis 5,671</td>
<td>Parkinson’s Disease 31,177</td>
<td>Suicide 47,173</td>
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</tbody>
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Newborns: Carseat Training

- Motor vehicle crashes are the leading cause of death for children aged 3-14 yrs
- How is UMass addressing this issue?
  - UMass Memorial Child Passenger Safety Program
    - Provides free car seats to families who are in financial need
    - Holds Car Seat Safety Checks every other Thursday
Childhood: Trauma, Neglect, and Abuse

- Adverse Childhood Experiences (ACEs)
  - Include abuse, neglect, substance use disorder, witness of domestic violence
  - Higher number of ACEs leads to worse outcomes
    - Earlier alcohol, tobacco use
    - Higher incidence of depression, sleep disorders, suicide attempts

- Injuries are the leading cause of death in children ages 1-15
  - Child abuse is being increasingly recognized as a cause of injuries

- Most important factor to consider when diagnosing abuse:
  - Does the history fit the injury?
  - Maintain a high index of suspicion
Adolescence: Suicide Prevention

- Suicide rates have increased by 33% in the past 20 years
- Risk of suicide varies
  - Males are 3.5x more likely to complete
  - Females are 1.4x more likely to attempt
  - Veterans, Native Americans, and LGBT individuals have above average rates
- Anxiety and depression among young people are also on the rise
  - 42% of college students felt too depressed to function
  - 63% felt overwhelming anxiety
- Postvention allows a community to grieve after a suicide
- Community Involvement:
  - The Jordan Porco Foundation
  - The Joint Commission's Zero Suicide Initiative
**Adulthood: Gangs and Gun Violence**

- On average, **100** Americans are killed by guns every day.
- Gangs operate in and around Worcester.
- Guns are a significant risk factor for community violence and injury.
- Current Local Interventions:
  - Goods for Guns buyback program.
  - Strong partnerships between the “blue coats” and the “white coats” in Worcester.
Adulthood: Substance Use Disorders

- Every 14 minutes, someone dies from a drug overdose in the United States
- Stigma and lack of awareness leads to difficulty finding resources
  - Associated feelings of guilt, shame, blame, isolation
- Addiction is a disease, not a character flaw
- Interventions in the Community:
  - Community Health Improvement Plan
  - Worcester Drug Court
- Additional online resources:
  - Massachusetts Helpline [www.helpline-online.com/](http://www.helpline-online.com/)
  - Local initiatives [www.mass.gov/stopaddiction](http://www.mass.gov/stopaddiction)
  - Peer-led support network [www.learn2cope.org/](http://www.learn2cope.org/)
Geriatrics and Patients with Disabilities

- **Fall prevention**
  - NOT a normal part of aging, yet extremely common
  - Multifactorial approach to treatment & prevention

- **Visually-impaired training**
  - Experiencing the non-visual world
  - How to help orient a Visually Impaired Person (VIP)
Across the Lifespan: Domestic Violence

- 1 in 4 women and 1 in 9 men experience domestic violence in their lifetime
- Institutions that are in place to help survivors, such as shelters, police, hospitals, courts, etc are often not helpful
  - Due to difficulty of access, language barriers, inability to disclose the full scope of the abuse due to shame, distrust, concern for consequences for themselves or their children
- Dispelling myths about why people are abusive: it is not due to childhood trauma, losing control, repressed emotion, mismanagement of anger, discrimination, religious or cultural beliefs, poor mental health, substance abuse
- People are abusive due to an abusive mentality: feeling entitled and justified.
- YWCA Domestic Violence Services
  - 24-Hour Helpline: 508-755-9030
  - Confidential Emergency Shelter (call SAFELINK at 877-785-2020)
Injury Prevention in the Community: Public Health and Policy

- Emergency and Disaster Preparedness
- Community Health Assessment
- Community Health Improvement Plan
- Stigma Free Worcester App
Service Project: Narcan Secret Shopper

- Visited 43 different pharmacies and medical supply stores
- Worcester, Shrewsbury, Holden, West Boylston, Millbury, and Grafton

Takeaways:

- Majority of pharmacies carried intranasal Narcan, very few carried injectable
- Medical supply stores did not carry Narcan
- Cost varied with and without insurance ($40-$200 without insurance)
- Dispense rates varied based on location
- Some pharmacies offered training, some had patients rely on package instructions
- Overall, most interactions with pharmacy staff were positive
Key Takeaways

- Work to develop and maintain strong partnerships with both health-related and non-health-related organizations in the community
- Ask the community what they perceive to be the public health challenges, and work with them to develop potential solutions
- Be open to listening to people with perspectives that are different from your own
Acknowledgements

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  ○ YWCA
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● Presenters:
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  ○ Dr. Sarah McGee
  ○ Dr. Jeremy Aidlen
  ○ Liz Myska
  ○ Dr. Payal Modi
  ○ Gina Smith
  ○ Dr. George Debusk
  ○ Mike Weisser
  ○ Marissa Porco
References

● CHIP and CHA https://www.healthygreaterworcester.org/about-the-cha-and-chip