

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



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Population Health Clerkship 2019



By: Emily Gentile, Erin Caffrey, Sumner Kilmarx, Julianna Buchwald, Melody Banasiak, William Coughlin, Ashley Lin, Terence Lee, Zoheret Memmert-Miller, Timothy Winn, Mark Liu, and Alyssa Tonelli

# Background

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

Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital Anomalies 4,580	Unintentional Injury 1,267	Unintentional Injury 718	Unintentional Injury 860	Unintentional Injury 13,441	Unintentional Injury 25,669	Unintentional Injury 22,828	Malignant Neoplasms 39,266	Malignant Neoplasms 114,810	Heart Disease 519,052	Heart Disease 647,457
2	Short Gestation 3,749	Congenital Anomalies 424	Malignant Neoplasms 418	Suicide 517	Suicide 6,252	Suicide 7,948	Malignant Neoplasms 10,900	Heart Disease 32,658	Heart Disease 80,102	Malignant Neoplasms 427,896	Malignant Neoplasms 599,108
3	Maternal Pregnancy Comp. 1,432	Malignant Neoplasms 325	Congenital Anomalies 188	Malignant Neoplasms 437	Homicide 4,905	Homicide 5,488	Heart Disease 10,401	Unintentional Injury 24,461	Unintentional Injury 23,408	Chronic Low. Respiratory Disease 136,139	Unintentional Injury 169,936
4	SIDS 1,363	Homicide 303	Homicide 154	Congenital Anomalies 191	Malignant Neoplasms 1,374	Heart Disease 3,681	Suicide 7,335	Suicide 8,561	Chronic Low. Respiratory Disease 18,667	Cerebrovascular Disease 125,653	Chronic Low. Respiratory Disease 160,201
5	Unintentional Injury 1,317	Heart Disease 127	Heart Disease 75	Homicide 178	Heart Disease 913	Malignant Neoplasms 3,616	Homicide 3,351	Liver Disease 8,312	Diabetes Mellitus 14,904	Alzheimer's Disease 120,107	Cerebrovascular Disease 146,383
6	Placenta Cord. Membranes 843	Influenza & Pneumonia 104	Influenza & Pneumonia 62	Heart Disease 104	Congenital Anomalies 355	Liver Disease 918	Liver Disease 3,000	Diabetes Mellitus 6,409	Liver Disease 13,737	Diabetes Mellitus 59,020	Alzheimer's Disease 121,404
7	Bacterial Sepsis 592	Cerebrovascular Disease 66	Chronic Low. Respiratory Disease 59	Chronic Low Respiratory Disease 75	Diabetes Mellitus 248	Diabetes Mellitus 823	Diabetes Mellitus 2,118	Cerebrovascular Disease 5,198	Cerebrovascular Disease 12,708	Unintentional Injury 55,951	Diabetes Mellitus 83,564
8	Circulatory System Disease 449	Septicemia 48	Cerebrovascular Disease 41	Cerebrovascular Disease 56	Influenza & Pneumonia 190	Cerebrovascular Disease 593	Cerebrovascular Disease 1,811	Chronic Low. Respiratory Disease 3,975	Suicide 7,982	Influenza & Pneumonia 46,862	Influenza & Pneumonia 55,672
9	Respiratory Distress 440	Benign Neoplasms 44	Septicemia 33	Influenza & Pneumonia 51	Chronic Low. Respiratory Disease 188	HIV 513	Septicemia 854	Septicemia 2,441	Septicemia 5,838	Nephritis 41,670	Nephritis 50,633
10	Neonatal Hemorrhage 379	Perinatal Period 42	Benign Neoplasms 31	Benign Neoplasms 31	Complicated Pregnancy 168	Complicated Pregnancy 512	HIV 831	Homicide 2,275	Nephritis 5,671	Parkinson's Disease 31,177	Suicide 47,173

Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.  
Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.



Centers for Disease  
Control and Prevention  
National Center for Injury  
Prevention and Control

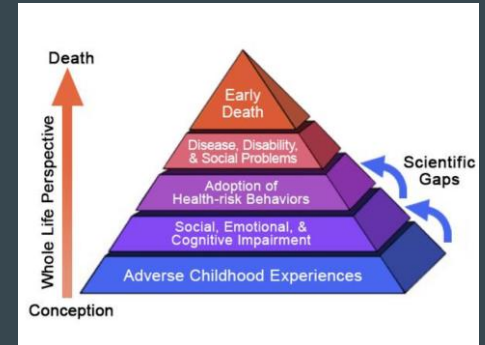
# Newborns: Carseat Training

- 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



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  - Dr. Jeremy Aidlen
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# References

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