Integrating Injury Prevention in the Clinical Setting and Our Community

Maria Davila, Ryan Fredette, Niharika Kareddy, Irena Kuzma, Becky Litwin, Alex Richard, Katie Salley, Becca Sullivan, Jackie Vittum
Agenda

- Population of Focus
- Lectures and Experiential Learning
  - Worcester DPH
  - COVID-19 Press Conference
  - Gun Safety and Buybacks
  - Seatbelt Safety
  - Pediatric Trauma
- Takeaways and Acknowledgements
Population of Focus\textsuperscript{1,2}

Population Size: 206,518 (14% increase in 10 years\textsuperscript{8})

Sex Ratio: 50.9% Female : 49.1% Male

Ethnicities: White (69.2%), Hispanic or Latino (21.9%), Black or African American (13.3%), Asian (7.4%), American Indian or Alaska Native (0.6%), Native Hawaiian or Pacific Islander (0.1%),

Language: Language other than English spoken at home (34.6%), 38,606 of foreign birth\textsuperscript{8}

Income: Median Income ($48,139), Persons in Poverty (20.0%)

Health: With disability <65 years of age (11.2%), Persons without insurance <65 years of age (3.3%), and Total COVID Cases (27,954)
Worcester DPH

The first nationally accredited Public Health Department in the country. A small department that works closely with the community, organizations, schools, and hospitals to accomplish their mission.

- Greater Worcester 2021 Community Health Assessment 8
  - Collaborative, comprehensive, and culturally competent regional health assessment (see map) performed every 3 years
- Community Health Improvement Plan (2021-2026)
  - Adopting municipal racial equity policies
  - Community-wide policy change campaigns (see Figure 1)
  - Prioritized strategy and action agenda
- Race and Ethnic Approaches to Community Health (REACH) 9
  - A program funded by the CDC to achieve health equity of the LatinX community (see Figure 2)
- Emergency Preparedness 10,11
  - ALERTWorcester, Making a Plan, Getting Involved
- Vaccine Clinics
  - Vaccine depot for smaller clinics = ↑ access and availability to community.
City of Worcester Response to COVID-19

3/11/2020 Worcester declares Pandemic Emergency

Worcester Strategies
- Beaumont Center for Convalescent Elderly
- DCU Center as Emergency Field Hospital for COVID patients
- System at emergency shelters to identify COVID+ patients

Collaboration among former “competitors” of health care providers in Worcester area

Vaccine Corps of SOM and GSN students
- Training
- Vaccination Clinics

1/11/2021 First Vaccination in Worcester, MA

Major Challenge: Equity

Collaboration between DPH, Medical Community, City Government
Update on COVID-19

- Press conference on 10/22/21 at Worcester City Hall
- Speakers:
  - 1) Mayor Joseph Petty
  - 2) City Manager Edward M Augustus
  - 3) Michael P. Hirsh, M.D., Medical Director
- Memorial for each life lost to COVID:
  - Red for 2020
  - White for 2021; fewer but still too many lives lost
- In Worcester, the young adult population (ages 16-25) is the least vaccinated, 60 and above is the highest rate of vaccinated
- Efforts to continue encouraging vaccinations and now encouraging booster shots
- Working with the media to address concerns/questions
The US gun violence epidemic

- In the US, there are >390 million guns in circulation -- 120.5 guns per 100 people
  - 1 out of 3 homes with children has a gun
  - 1.7 million children live in a home with unlocked and loaded guns
- 39,707 deaths due to firearms in the US -- accounting for 16% of all injury-related deaths
  - Of those deaths, 23,941 were suicides involving firearms
- Gun-injuries were the second-leading cause of death in children and teens, and the leading cause of death in high school age teens
- Children ages 0-12 who were killed by a firearm, 85% were killed in their own home

Data from CDC 2019 study
Promoting gun safety: in the community & clinic

- 20 years of “Goods for Guns” in Worcester County
  - Over 3700 guns bought back
  - Community involvement (DA grants amnesty for one day, local Police Departments)
  - Most popular demographic to return guns: White males who are 55+

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<th>Year</th>
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<th>Short Guns</th>
<th>Semi-Auto Long/Short</th>
<th>Replica Guns</th>
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Promoting gun safety: in the community & clinic

- In clinic
  - Questions in Primary Care screening about guns in home
    - Integrate into questioning about safety especially of their children
    - Assess the risk of the gun in the home (who else is in the home, how is the gun being stored)

- In the community
  - Shot Spotter
    - Helps the police department identify use of guns and gunshot victims more quickly (secures the “Golden Hour” in a more efficient way)
  - Building community relationships with at-risk children and young-adults through summer camps and sports leagues (boxing and basketball)
    - Medical professionals are able to volunteer at these programs as onsite medical staff
  - Work on reaching out to Hispanic and Black communities and encouraging use of the gun buyback program.
Seatbelt Safety

Mary Maguire, Director, Public/Legislative Affairs at AAA Northeast
- 1.2 millions residents don't buckle up (out of 7.1 million)
- Secondary enforcement. Must first be pulled over for another moving violation
  - Working to make this a primary law
- Wearing your seatbelt in the backseat decreases your chance of a fatal accident by 50% and by 45% in the front seat.
- MA State officials testify that they rarely unbelt passengers in fatal accidents
- Responsibility as health care providers to ask patients whether they buckle up

Primary seatbelt hearing held on October 13, 2021
Pediatric Trauma

- ACEs (adverse childhood experiences) can lead to poor health outcomes in adulthood (Felitti, 2002)
- 50% of the cases that come into UMass Health ED are related to abusive trauma
- Impact of child trauma extends beyond the child to the family, community
- Division of Child Protection at UMass Chan Medical School
  - A resource for us as future providers
  - Work with other providers (for example radiologists), DCF, and justice system
- Recognizing the signs of abuse
  - Identifying non-accidental injury: “those who don't cruise rarely bruise” (Sugar, 1999)
  - Bruises where they shouldn’t be
  - Complete a full evaluation of all patients under with signs of abuse
    - This includes a full skeletal x-ray survey and head CT
- Acknowledging our own biases as health care providers
Takeaways

- Worcester is a diverse city served by interprofessional teams across many healthcare sectors
  - Public health officials (epidemiologists, public health nurses and administrators, managers, emergency prevention services, etc)
  - Providers in hospital settings and community health settings (MDs, NPs, PAs, RNs)
    - Working as an interdisciplinary team allows us to draw on each other's backgrounds and strengths to deliver quality healthcare--this includes cultural humility, a dedication addressing to social determinants of health, and preventing injuries
  - Advocacy: AAA (policy work), Worcester DPH vaccine outreach
Acknowledgements

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References


3. https://www.healthygreaterworcester.org/


