



Integrating Injury Prevention in the Clinical Setting and Our Community

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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^{1,2}

Population Size: 206,518 (14% increase in 10 years⁸)

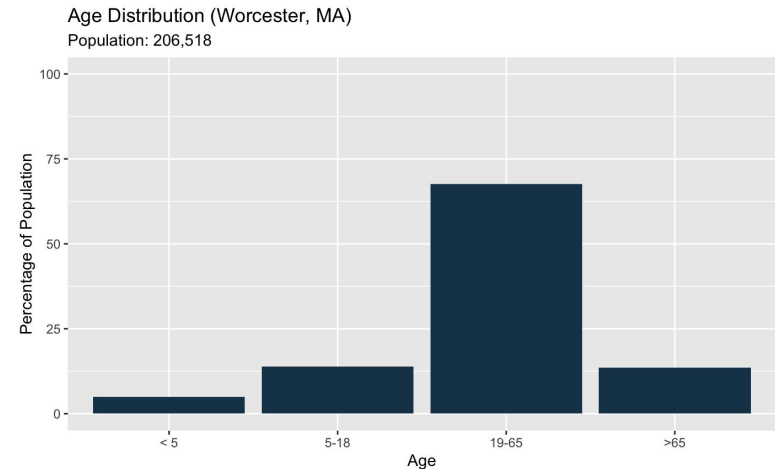
Sex Ratio: 50.9% Female : 49.1% Male

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 birth⁸

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

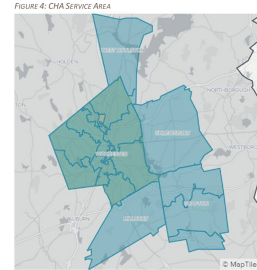
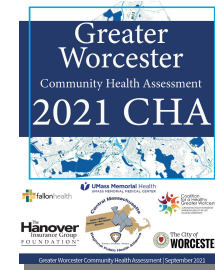
Health: With disability <65 years of age (11.2%), Persons without insurance <65 years of age (3.3%), and Total COVID Cases (27,954)



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

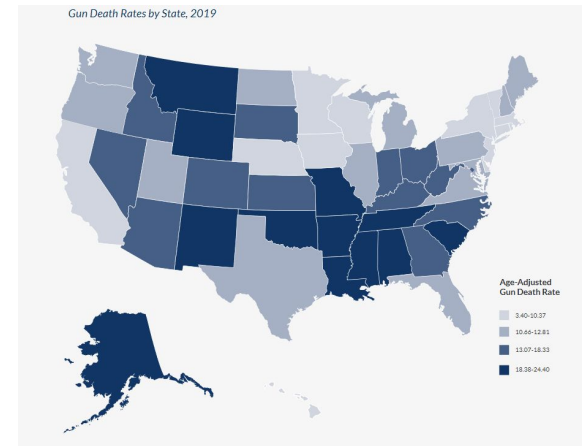
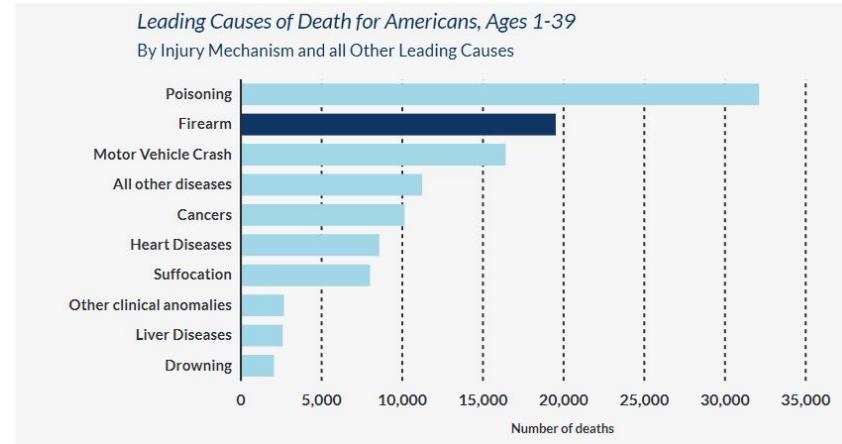
Update on COVID-19²

- 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 ⁴
- 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 ⁵



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+

Worcester County, MA Year	Long Guns	Short Guns	Semi-Auto Long/Short	Replica Guns	Total Guns	Total Cost	\$\$/Gun
2002	67	111	72	0	250	\$12,625	\$50.50
2003	37	116	91	0	244	\$13,550	\$55.53
2004	71	135	99	0	305	\$15,950	\$52.30
2005	43	77	86	0	206	\$11,375	\$55.22
2006	64	77	130	0	271	\$15,200	\$56.09
2007	63	80	74	0	217	\$11,125	\$51.27
2008	27	49	51	0	127	\$6,950	\$54.72
2009	72	93	76	0	241	\$12,150	\$50.41
2010	61	69	65	0	195	\$9,850	\$50.51
2011	48	40	25	0	113	\$5,075	\$44.91
2012	20	50	72	0	142	\$8,400	\$59.15
2013	26	16	43	0	85	\$4,675	\$55.00
2014	4	61	45	0	110	\$6,525	\$59.32
2015	116	122	51	51	340	\$14,100	\$41.47
2016	79	102	46	41	268	\$11,550	\$43.10
2017	96	71	43	51	261	\$10,450	\$40.04
2018	61	21	40	28	150	\$6,275	\$41.83
2019	48	32	35	48	163	\$6,625	\$40.64
2020	8	7	9	2	26	\$1,275	\$49.04
Totals:	1011	1329	1153	221	3714	\$183,725	\$49.47



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 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 bruise 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



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