

#### **City of Cincinnati**

801 Plum Street Cincinnati, OH 45202

#### Agenda - Final-revised

#### **Public Safety & Governance**

Councilmember Scotty Johnson, Chair Vice Mayor Jan-Michele Kearney, Vice Chair Councilmember Mark Jeffreys Councilmember Anna Albi

Tuesday, April 30, 2024

9:30 AM

Council Chambers, Room 300

#### **PRESENTATIONS**

#### Food Insecurity and Firearm Violence in the United States

#### Dr. Sharven Taghavi

#### **AGENDA**

1. 202401206 MOTION, submitted by Councilmembers Owens, Albi and Vice Mayor

Kearney, **WE MOVE** that the administration prepare a report within thirty (30) days on the feasibility of the formation/construction of a permanent memorial for victims of gun violence in Cincinnati. (BALANCE ON FILE IN THE CLERK'S

OFFICE) (STATEMENT ATTACHED)

Sponsors: Owens

<u>Attachments:</u> 202401206

**2.** 202401267 **PRESENTATION**, submitted by Councilmember Johnson from Dr. Sharven

Taghavi titled, Food Insecurity and Firearm Violence in the United States.

**Sponsors:** Johnson

<u>Attachments:</u> Presentation

ADJOURNMENT

# City of Cincinnati



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202401206

Meeka D. Owens Cincinnati City Council

April 18th, 2024

#### Gun Violence Victims Memorial Motion

WE MOVE that the administration prepare a report within thirty (30) days on the feasibility of the formation/construction of a permanent memorial for victims of gun violence in Cincinnati. This report should include:

- Funding Sources/Opportunities
- Overall Cost
- Community Engagement Processes
- Site Identification
- Key Community Partners
- Key External Partners including but not limited to The Gun Violence Memorial Project
- Educational Opportunities

Anna Allr

Councilmember Meeka D. Owens

Up No 124

#### **STATEMENT**

Cincinnati City Council declared Gun Violence as a public health crisis in 2021; for most of us, it was our first act on this Council. As a city, we should confront our pain and recognize those we have lost through this crisis. In 2023, over 1,600 children died from gun violence, there were 656 mass shootings that killed over 712 people, and over 18,874 people were killed due to gun deaths, excluding suicides. Many members of our country and our community have lost family members, friends, classmates, co-workers, and more. Their lives and memories should not be lost because they are no longer physically with us.

Around the United States, cities are beginning to memorialize moments of gun violence in their communities. The Gun Violence Memorial Project has already installed memorials in Chicago and is actively working to install memorials in Orlando, FL; El Paso, TX; Newtown, CT; New Haven, CT; and Thousand Oaks, CA. Although many of these communities have been sites of prominent mass shootings, these memorials are being placed in communities that are experiencing gun violence continuously.

Our city is becoming a community of survivors—those who are surviving physical and emotional wounds. By acknowledging our community's loss and pain, we aim to find a comprehensive solution to this crisis between mind and soul.

# Food Insecurity and Firearm Violence in the United States



Sharven Taghavi MD, MPH, MS, FACS, FCCP
Section Chief of Acute Care Surgery
Division of Trauma and Surgical Critical Care
Tulane University School of Medicine
Violence Prevention Institute

# DISCLOSURES



• Funding from Centers for Disease Control and Prevention (CDC) Center Grant (U01 CE003384-01)







## TRAUMA IN NEW ORLEANS





## TRAUMA IN NEW ORLEANS

#### The World's Most Violent Cities

Cities with the most homicides per 100,000 inhabitants in 2022



Only includes cities with 300,000 or more inhabitants. No data available for Venezuela.

Source: Mexico Citizens Council for Public Security and Criminal Justice













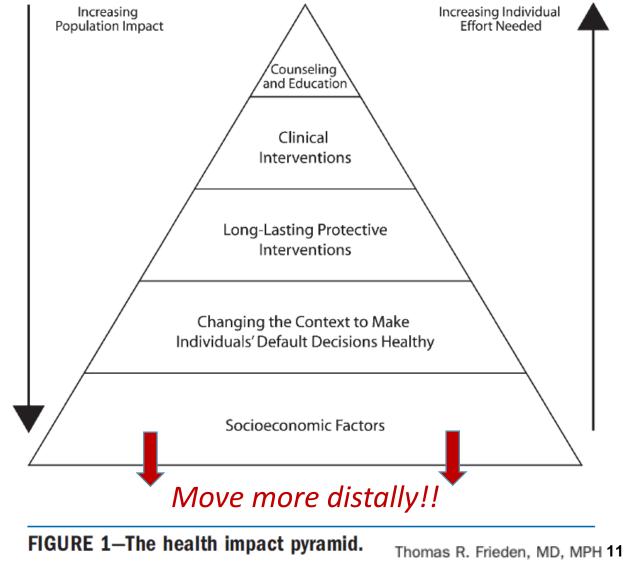
## FRAMING THE PROBLEM - FIREARM VIOLENCE

- No federal funding for firearm violence research for 20 years
- Compared to other public health problems research on firearm deaths has fallen behind
  - Firearm deaths are leading cause of death in children in U.S.
  - In Louisiana, homicides have outpaced death rates from diabetes, heart disease, cancer
- Now that federal funding for research is available unique opportunity to rapidly advance knowledge

## Violence as a Public Health Problem

- Violence is a leading cause of death and disability
- Affects the individuals involved, their families, friends, and communities around them
- A "public health approach" recognizes that population-wide interventions that change the context or environment and those that address socioeconomic determinants
- Even with this knowledge, only few population-level, place-based solutions to violence have emerged to date

### A Framework for Public Health Action: The Health Impact Pyramid



**Youth Violence Prevention Centers** 

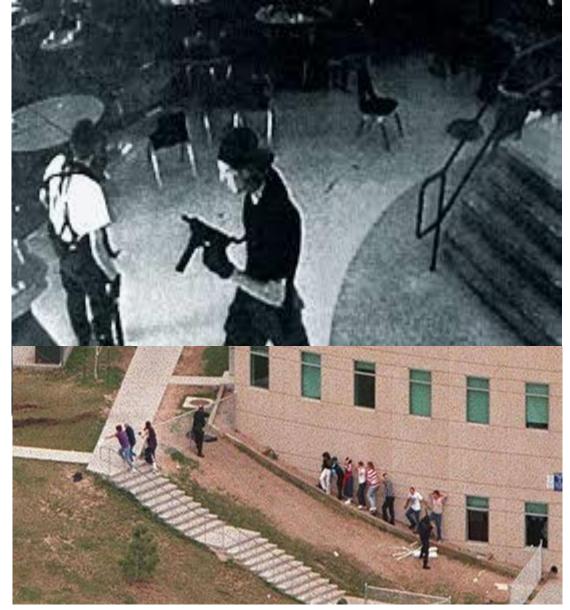
Rigorous Evaluations of Prevention Strategies to Prevent and Reduce Community Rates of Youth Violence





# The Beginning of the YVPCs (1999-2000)

- 1999 Columbine High School shooting
- CDC's National Centers of Excellence in Youth Violence Prevention (YVPCs) established in 2000
- Objectives
  - Foster collaborations between academic researchers and communities
  - Empower communities to address youth violence
  - Develop scientific infrastructure
  - Conduct etiological work on risk/protective factors
  - Promote interdisciplinary research
  - Build the pipeline of YV prevention researchers



Maass, Brian. "Image of Columbine Murder." Time Magazine. Vol. 153 No. 17. 3 May 1999.

## **Current YVPCs**



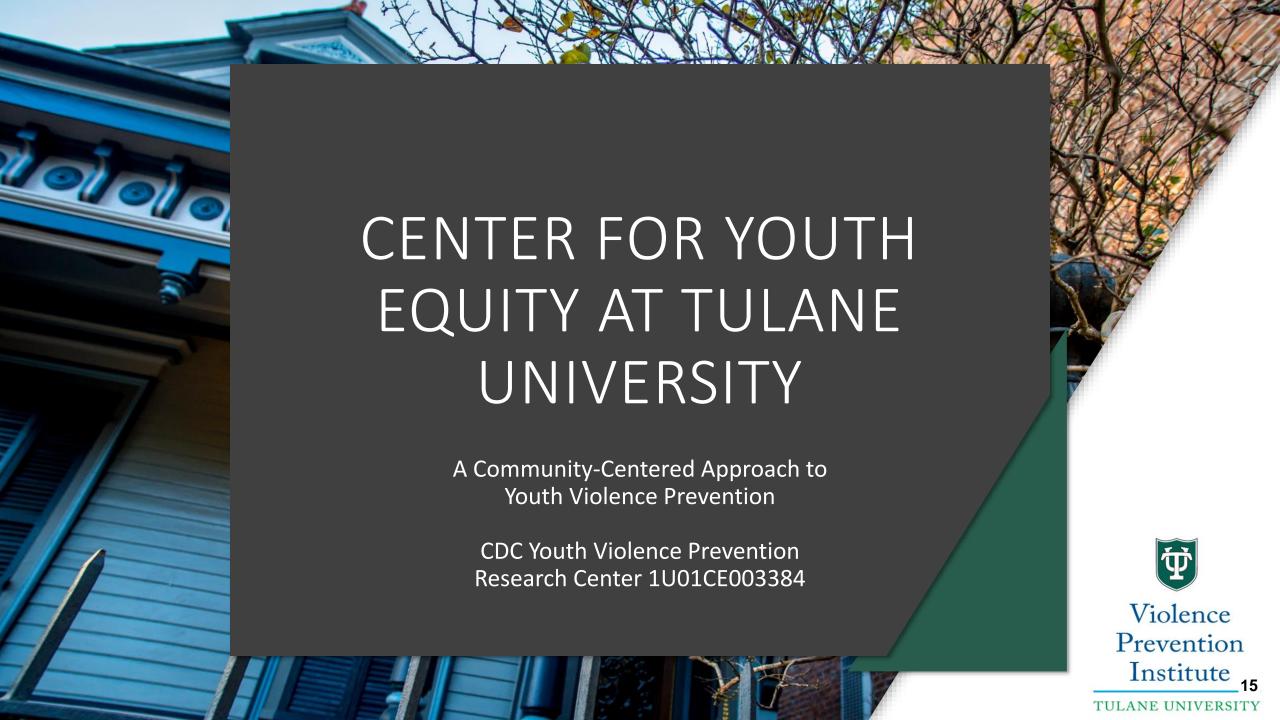












## Overall CYE Aims

To establish a culturally responsive youth violence prevention research center embedded within the ongoing community partnerships and existing infrastructure of the VPI to build and strengthen the network for youth violence prevention in New Orleans and across the Gulf South

(Administrative Core)

To adapt, implement, and evaluate a multicomponent sociopolitical development (SPD) enrichment and empowerment program to prevent and reduce exposure to police violence among younger African American youth (10-17 years) through youth-led grassroots organizing and activism for social and structural change.

(Research Project 1 / RP1).

To evaluate the effects of a hospital-initiated, community-integrated **practice**-based approach in reducing gun violence among older youth (18-35 years).

(Research Project 2 / RP2)

To translate the evidence base for community youth violence prevention strategies into widespread outreach and dissemination efforts targeting community groups, youth-serving organizations, hospital systems, and policymakers.

(Outreach and Translation Core / O&T)

To develop innovative and transdisciplinary educational and training opportunities for early career and junior scholars, youth, and professionals aimed at developing and strengthening a workforce that is best positioned to impact youth violence prevention efforts locally, regionally, and nationally.

(Training and Education Core / T&E)

## BACKGROUND ON FOOD INSECURITY



#### SOCIAL DETERMINANTS OF HEALTH

- WHO: "conditions in which people are born, grow, live, work, and age", and "the fundamental drivers of these conditions"
- Poverty, income inequality, food insecurity



#### FOOD INSECURITY

- USDA definition: a lack of consistent access to enough food to live active, healthy lives
- Food insecurity is significantly higher in communities effected by systemic racial injustice
- Many do not qualify for federal nutrition programs
- USDA: 38 million people in the United States are food insecure, 12 million children



#### FOOD INSECURITY AND MEDICINE

- Associations with
  - Developmental difficulties
  - Anemia
  - Asthma
  - Child maltreatment
  - Mental health
  - Hypertension
  - Diabetes
  - Domestic partner violence
  - Substance abuse



# Food Insecurity Predicts Urban Gun Violence

The American Surgeon 2020, Vol. 86(9) 1067–1072 © The Author(s) 2020 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/0003134820942194 journals.sagepub.com/home/asu

**\$**SAGE

Randi N. Smith, MD, MPH<sup>1,2</sup>, Keneeshia N. Williams, MD<sup>1,2</sup>, Robert M. Roach, BS<sup>3</sup>, and Brett M. Tracy, MD<sup>1,2</sup>



#### Community distress predicts youth gun violence☆·☆☆

Brett M. Tracy <sup>a,\*</sup>, Randi N. Smith <sup>a</sup>, Krista Miller <sup>b</sup>, Eric Clayton <sup>b</sup>, Kathryn Bailey <sup>b</sup>, Carrol Gerrin <sup>b</sup>, Tatiana Eversley-Kelso <sup>b</sup>, David Carney <sup>b</sup>, Heather MacNew <sup>b</sup>



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<sup>&</sup>lt;sup>b</sup> Department of Surgery, Memorial University Medical Center, Savannah, Georgia

### STUDY IN NEW ORLEANS

#### 2022 EAST PODIUM PAPER

# The association between food insecurity and gun violence in a major metropolitan city

Ayman Ali, BS, Jacob Broome, MS, Danielle Tatum, PhD, Julia Fleckman, PhD, Katherine Theall, PhD, M. Pia Chaparro, PhD, Juan Duchesne, MD, and Sharven Taghavi, MD, MPH, MS, New Orleans, Louisiana



# **METHODS**



#### **POPULATION**

- Firearm data was acquired from University Medical Center, in New Orleans, Louisiana (2016-2020)
- Only level I trauma center in southeastern Louisiana
- Missing parish of residence data (2.5%) were excluded
- Residence outside of Louisiana (0.8%) excluded
- Transferred patients not excluded if otherwise meeting inclusion criteria
- 29 parishes with 3,115 patients in final analysis

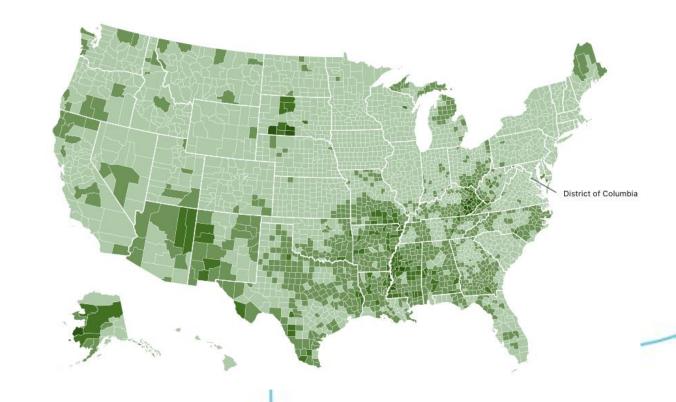




# **EXPOSURE: FOOD INSECURITY DATA**



- Food insecurity at the parish level, estimated by the Map the Meal Gap dataset
- Estimated with variables associated with food insecurity (disability, income, poverty, unemployment, homeownership)

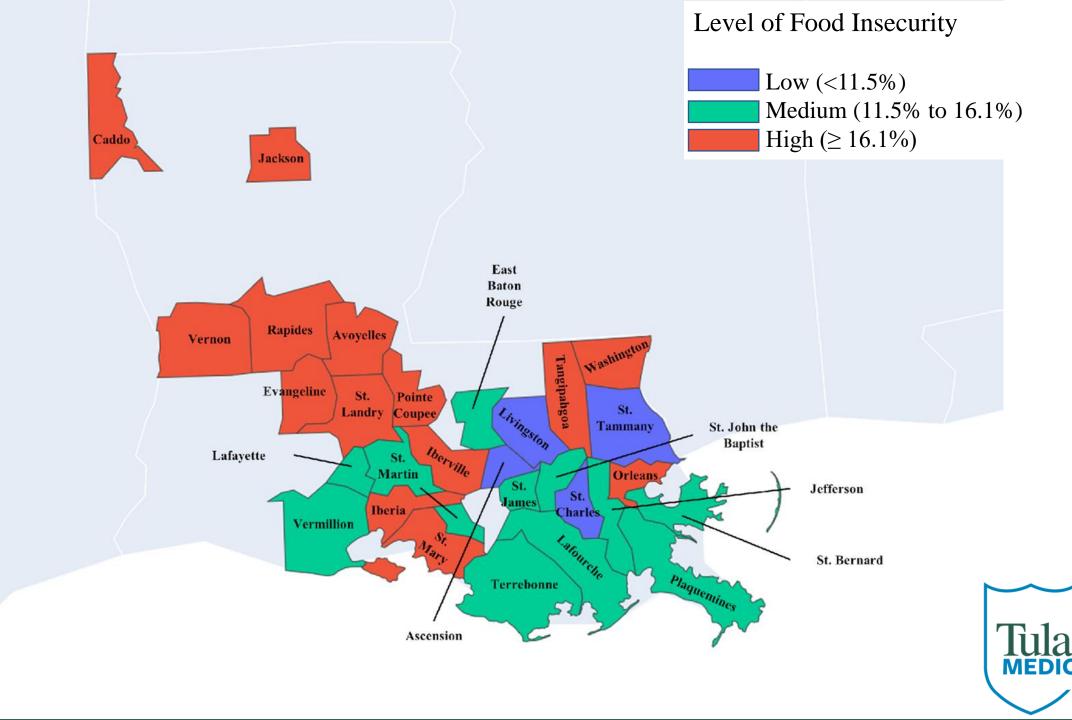




#### FOOD INSECURITY

- Food insecurity categorized per parish as low, medium and high
  - For examination of demographical differences
- Low: parish food insecurity level lower than the national average (11.5%)
- Medium: parish food insecurity level between the national (11.5%) and Louisiana (16.1%) averages
- High: parish food insecurity level higher than Louisiana averages (16.1%)





#### **OUTCOME DEFINITIONS**

- Outcomes: firearm violence & firearm-related trauma
- For firearm-related trauma, only cases with catchment area were included (9/29 parishes, 96% of study population)
  - Parish level firearm-related trauma rate were estimated with cases divided by population
- Gun-related violence was classified when intent was considered an assault



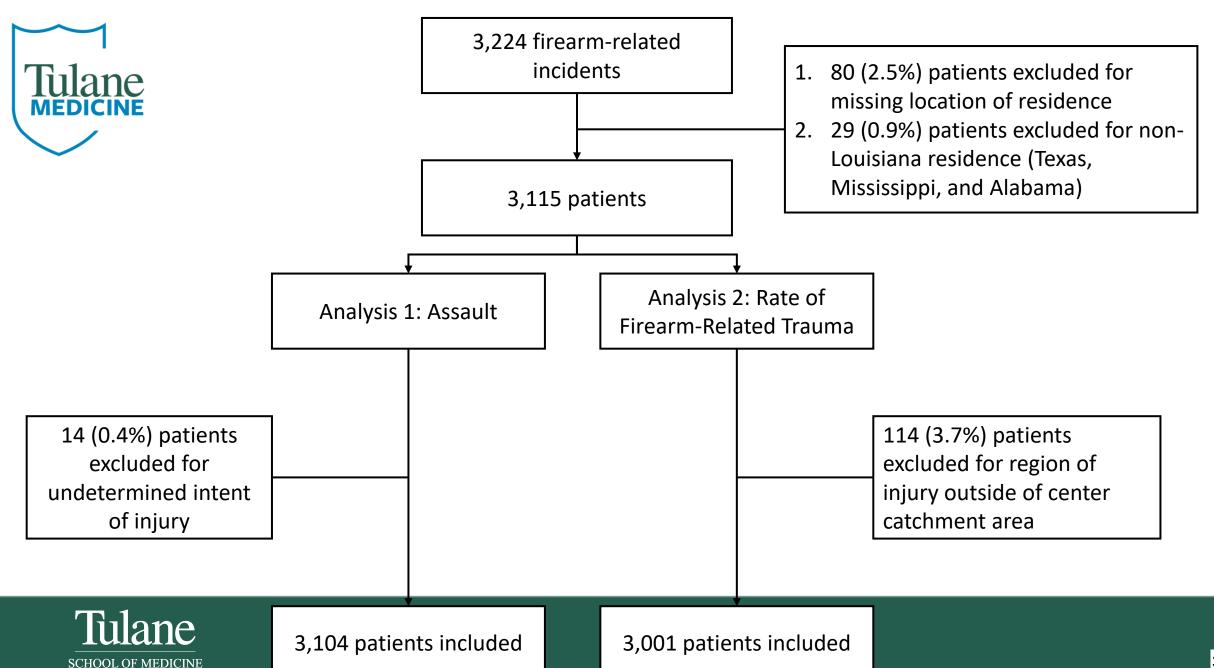
#### HYPOTHESIS TESTING

- Considered: age, sex, race, payment method, psychiatric/neurologic comorbidities, history of substance abuse
- Demographics: Pearson's chi-squared and Wilxocon-Kruskal-Wallis test for categorical/continuous variables respectively
- Overall firearm-related trauma rates: linear regression
- Violence: logistic regression
- Food insecurity encoded as a continuous variable for regressions
- Final covariates selected for regression models with forward and backwards stepwise AIC criterion

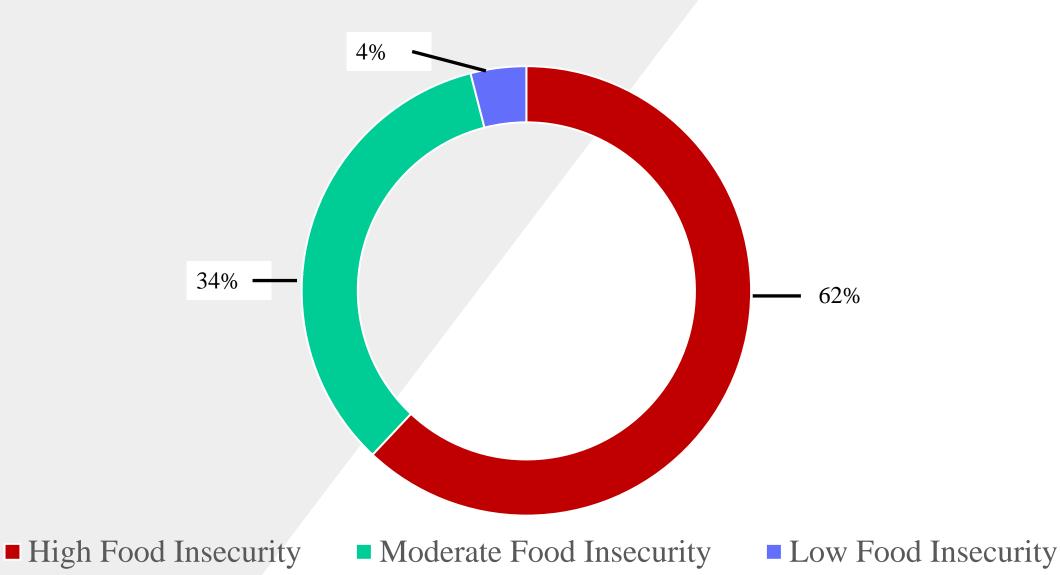


# RESULTS

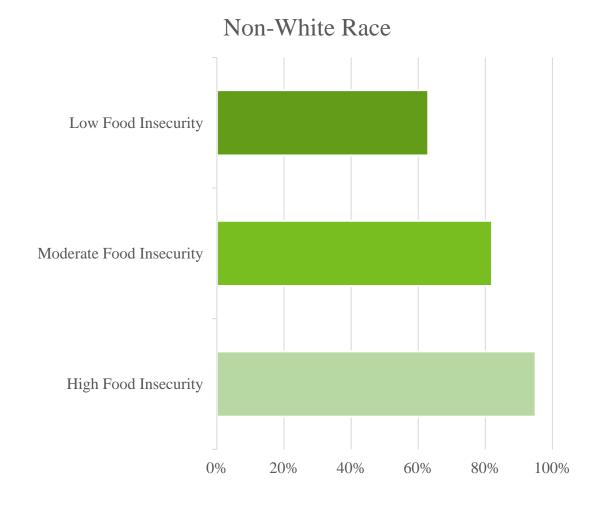




# Patient Parish of Residence



## **DEMOGRAPHICS**

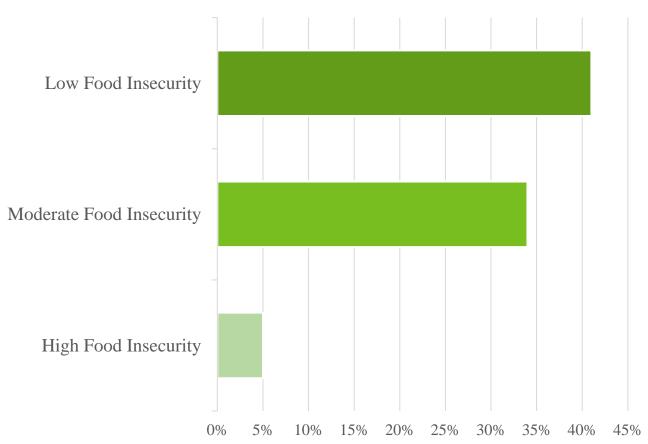


- 63% of patients from low FI were nonwhite
- 82% of patients from moderate FI were non-white
- 95% of patients from high FI regions were non-white



## ARE PATIENTS INJURED WHERE THEY LIVE?





- 41% of patients from low FI parishes were injured in a different parish of their residence
- 34% and 5% of patients residing in medium and high FI parishes were injured in a different parish of their residence



# FOOD INSECURITY INCREASES ODDS OF ASSAULT

- 90.6% of cases classified as assault
- FI was significantly associated with gun violence

Explanatory Variable		Odds Ratio (multivariable)
Age (Mean Years, Standard Deviation)	28.9 (12.0)	0.98 (0.98-0.99, p=0.001)
Non-White Race (n, %)	2613 (94.5)	8.13 (6.02-10.98, p<0.001)
Food Insecurity of Residence (Mean %, Standard Deviation)	16.4 (2.2)	1.13 (1.07-1.19, p<0.001)
Psychiatric/Neurologic Comorbidities (n, %)	147 (77.4)	0.42 (0.28-0.65, p<0.001)



# FIREARM-TRAUMA PER 100,000 PARISH RESIDENTS

• Each percent increase in food insecurity was related to 56 additional cases of firearm-related trauma per 100,000 parish residents

Explanatory Variable	Coefficient (multivariable)		
Alcohol/Drug Use	34.98 (5.82 to 64.14, p=0.02)		
Psychiatric/Neurologic Comorbidities	-20.96 (-43.80 to 1.88, p=0.07)		
Race (Non-White)	80.15 (61.42 to 98.89, p<0.001)		
Primary Payor			
Private/Commercial	-		
Medicaid/Medicare/Free	-20.66 (-37.44 to -3.87, p=0.02)		
None	-7.75 (-27.89 to 12.40, p=0.45)		
Other	-24.68 (-64.68 to 15.32, p=0.23)		
Food Insecurity Rate of Residence (%)	56.32 (53.78 to 58.86, p<0.001)		



# **CONCLUSIONS**



### FOOD INSECURITY AND FIREARM TRAUMA

- Increase in food insecurity is related to increased assault by firearm and all firearm-related injury
- Race associated with assault and rate of firearm-related trauma
- Low FI patients more likely to get shot in high FI area concentrating gun violence in disproportionately non-white areas
- Food assistance may be a root-cause intervention for firearm trauma
  - Community level
  - Individual level (hospital)





- Cross-sectional analysis of 51 largest metropolitan statistical areas
- Demographic data from US Census Bureau
- Food Insecurity obtained from Feeding America
- Firearm homicide rates obtained from the Centers for Disease Control and Prevention (CDC)



Principal City	MSA Total Population	Firearm Homicide Rate (per 100,000)	Food Insecurity Rate (%)	Child Food Insecurity Rate (%)	Average Cost Per Meal (\$)
Baltimore, MD	2,844,510	37.2	11.0	16.1	3.18
Birmingham, AL	1,115,289	21.1	16.1	21.1	3.21
Chicago, IL	9,618,502	10.9	10.1	11.9	3.19
Cincinnati, OH	2,256,884	7.5	14.1	18.7	3.05
Cleveland, OH	2,088,251	10.0	15.9	21.6	3.24
Detroit, MI	4,392,041	14.2	17.3	20.0	3.00
Memphis, TN	1,337,779	22.7	15.0	18.7	3.13
New Orleans, LA	1,271,845	27.1	18.0	25.9	3.67
Philadelphia, PA	6,245,051	18.8	16.3	22.0	3.37
St. Louis, MO	2,820,253	14.2	10.9	11.3	3.31
Washington, DC	6,385,162	16.5	10.7	18.0	4.33



TABLE 1. Factors Independently Associated with Firearm Homicide							
		95% Confidence Interval					
Independent Factors	Standardized $\beta$	Lower Limit	Upper Limit	р			
% Black Population	4.32	3.26	5.38	< 0.001			
Food Insecurity	1.33	0.27	2.39	0.02			



### CONCLUSIONS

- Community-based programs that target food insecurity may help combat the gun violence epidemic
- Individual or hospital-based programs targeting food insecurity may help high risk individuals avoid firearm injuries
  - Hospital-based programs may help decrease recidivism



# WHAT ARE WE DOING IN NEW ORLEANS?



### INCLUSION CRITERIA – SHIFT TRIAL

- 1. Gunshot injury due to community violence
- 2. Ages 18 24
- 3. Capacity to give voluntary informed consent
- 4. Resident of Orleans or Surrounding Parishes
- 5. Not in legal detention status





### HVIP RESOURCES

- Credible messenger uses motivational interviewing
- Total of 6 months support
- Trauma and Grief support with licensed LCSW and MSW
- Advocacy with law enforcement
- Crime victim's reparations (monetary support)
  - VOCA funds



### HVIP RESOURCES

- Intensive case management
  - Housing
  - Medical needs
  - Food stamps
  - SSI
- Referral to other community programs
- Firearm Safety Training
  - Biometric gun locks





# **CONCLUSIONS**



### FOOD INSECURITY AND FIREARM TRAUMA

- Food insecurity is related to firearm injury
  - Both violent and non-violent
- Suggestion that food assistance may be a root-cause intervention for communities
- Trauma centers should screen victims of firearm trauma for food insecurity
  - Lead to more research
  - Reduce recidivism
- Individual interventions may be effective preventative measures





# MOTIVATIONAL INTERVIEWING (MI)

- Applied mostly to substance abuse literature
- Driven by a trained Credible Messenger
- Collaborative developing a partnership in which patient's input and expertise is central
- Assumes motivation for change resides within the patient
- Respect patient's right to make informed changes (or not)
- Emphasizes patient control and choice





### LIMITATIONS

- Unable to determine when an effect of food intervention may occur: immediate or for future generations?
- Assumption that residence at time of injury was long-term residence
- Assumption that all catchment area cases were diverted to UMC
- Specific to a single institution, and may not be generalizable, particularly to rural areas

