

# GUN VIOLENCE

## INTRODUCTION TO THE MEDICAL EXAMINER



Carnegie  
Mellon  
University

## GRAPHIC CONTENT

THE OPINIONS THAT ARE  
EXPRESSED IN THIS  
PRESENTATION ARE NOT  
THE OFFICIAL OPINIONS  
OF THE DISTRICT OF  
COLUMBIA  
GOVERNMENT



NO SLIDE  
PHOTOGRAPHY





## OBJECTIVES

- Participants will be introduced to the definition of the Medical Examiner
- Participants will gain an understanding of role of the Medical Examiner in Public Health Surveillance of Gun Violence
- Participants will be introduced to the characteristics of gunshot wounds
- Participants will be encouraged to be an advocate for Gun Violence Reform

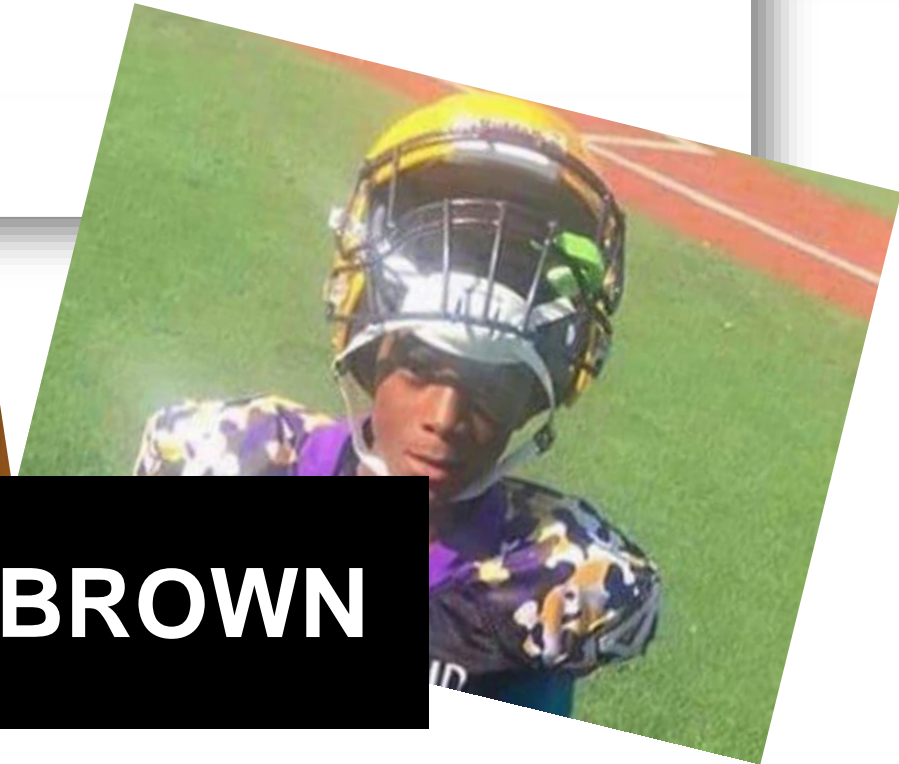


# WHY ARE WE HERE?

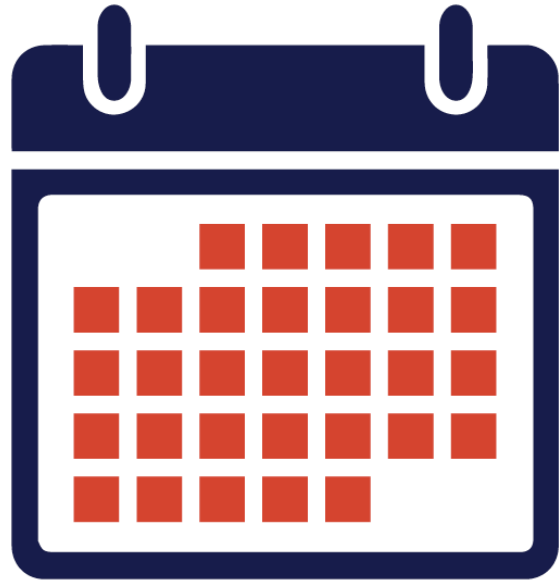
Public Safety

With 19 people found shot in 5 days, District seeks to quell gun violence

11-year-old boy among 7 shot dead in 4 days in Washington, D.C.



**KARON BROWN**



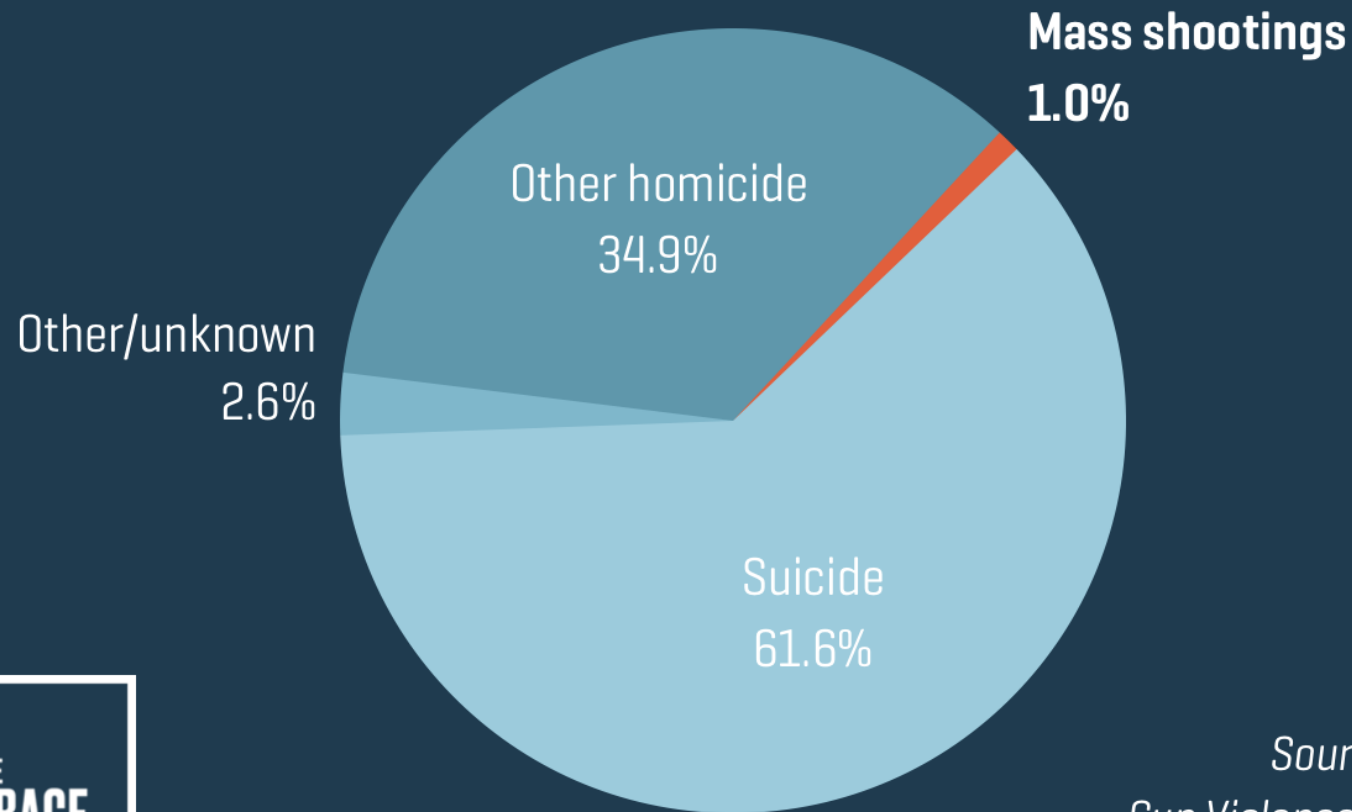
**100 AMERICANS  
ARE KILLED WITH GUNS  
EVERY DAY**

Source: CDC WISQARS, 2013–2017

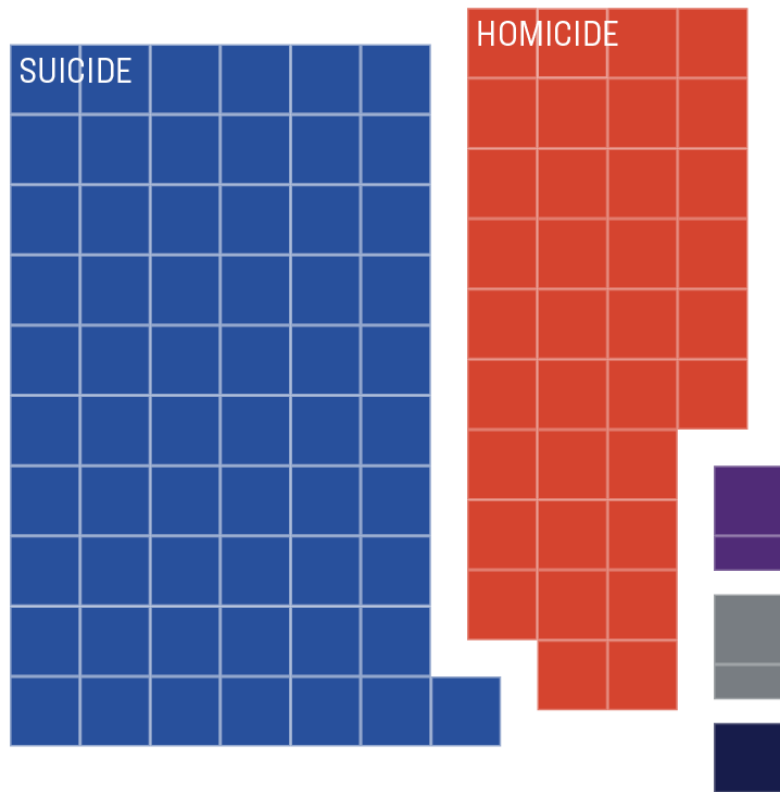
**GIFFORDS**

## ONLY 1% OF GUN DEATHS HAPPEN IN MASS SHOOTINGS

Numbers reflect gun deaths between 2013 and 2016. Mass shooting deaths were counted by Gun Violence Archive. Other causes of death are from the CDC.



*Source: CDC,  
Gun Violence Archive*



# EACH YEAR

## 36,383 AMERICANS

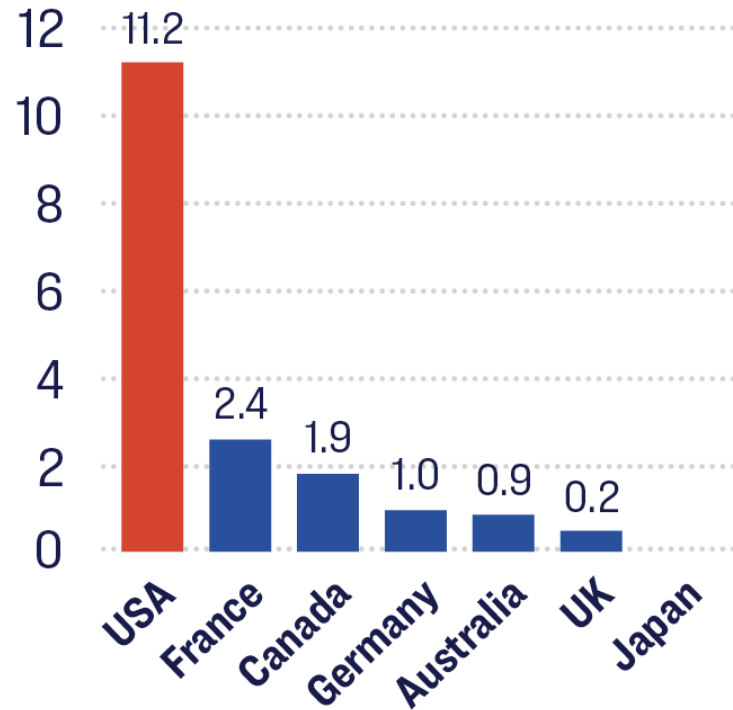
### DIE FROM GUN VIOLENCE

- GUN SUICIDES: 22,274 (61%)
- GUN HOMICIDES: 12,830 (35%)
- LAW ENFORCEMENT SHOOTINGS: 496 (1.4%)
- UNINTENTIONAL SHOOTINGS: 487 (1.3%)
- UNDETERMINED: 295 (0.8%)

Source: CDC WISQARS, 2013-17

**GIFFORDS**

## GUN DEATH RATE PER 100,000

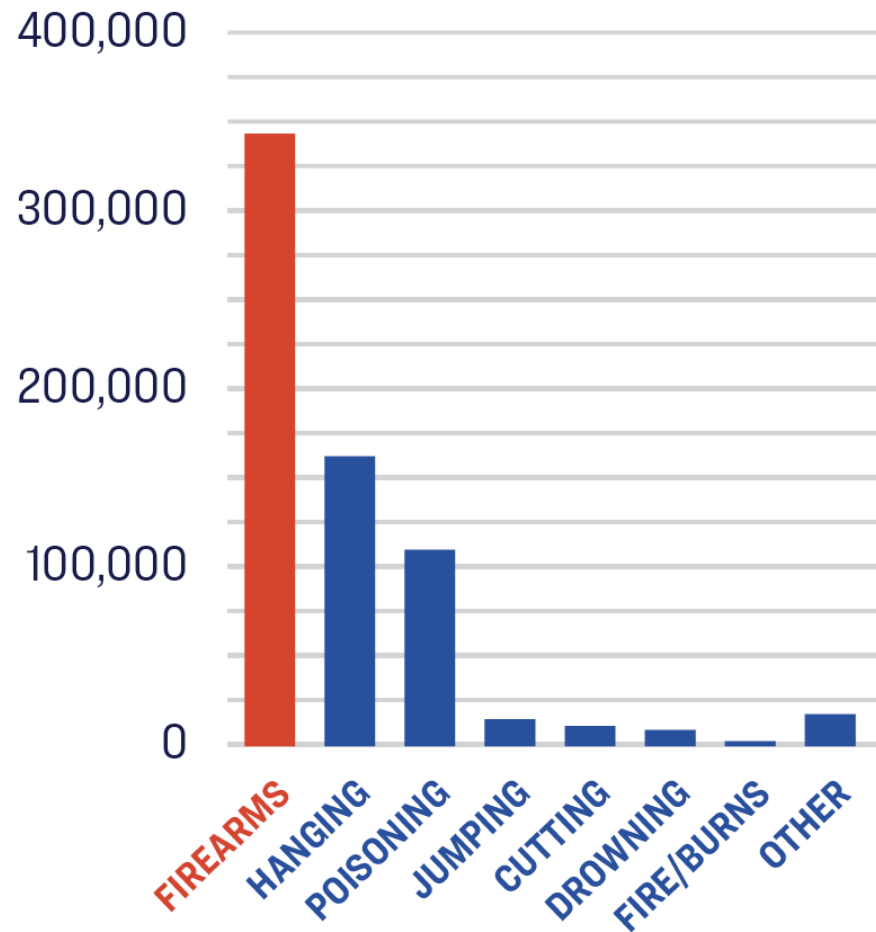


**AMERICANS ARE  
25 TIMES MORE  
LIKELY TO DIE FROM  
GUN VIOLENCE  
THAN RESIDENTS OF PEER NATIONS**

Source: American Journal of Medicine, 2019

**GIFFORDS**

NUMBER OF SUICIDE DEATHS 2000–2017

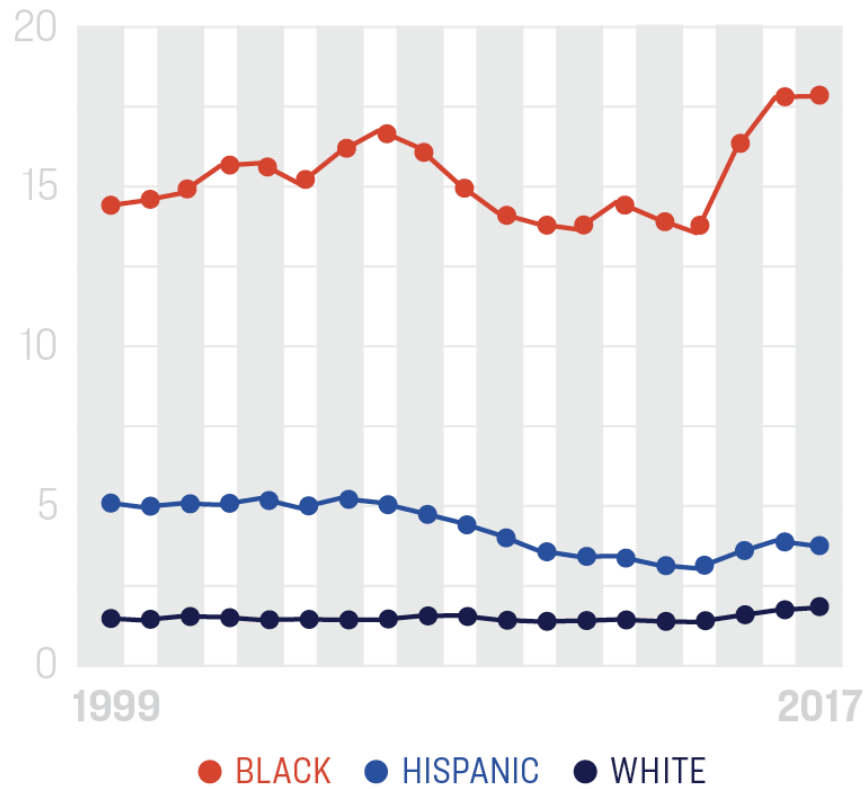


**51%**  
**OF SUICIDES**  
**IN AMERICA**  
**INVOLVE A**  
**FIREARM**

Source: CDC WISQARS

**GIFFORDS**

GUN DEATH RATE 1999–2017 (PER 100K)



**BLACK AMERICANS  
ARE 10 TIMES MORE  
LIKELY THAN WHITE  
AMERICANS  
TO BE MURDERED  
WITH A GUN**

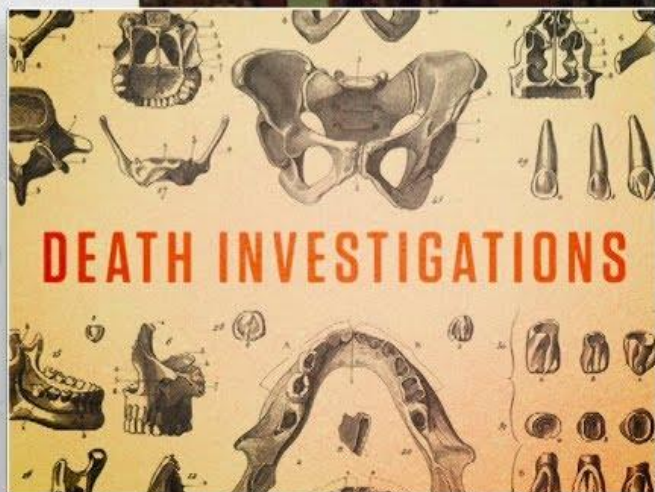
Source: CDC WONDER

**GIFFORDS**



**WE CAN END  
GUN VIOLENCE**

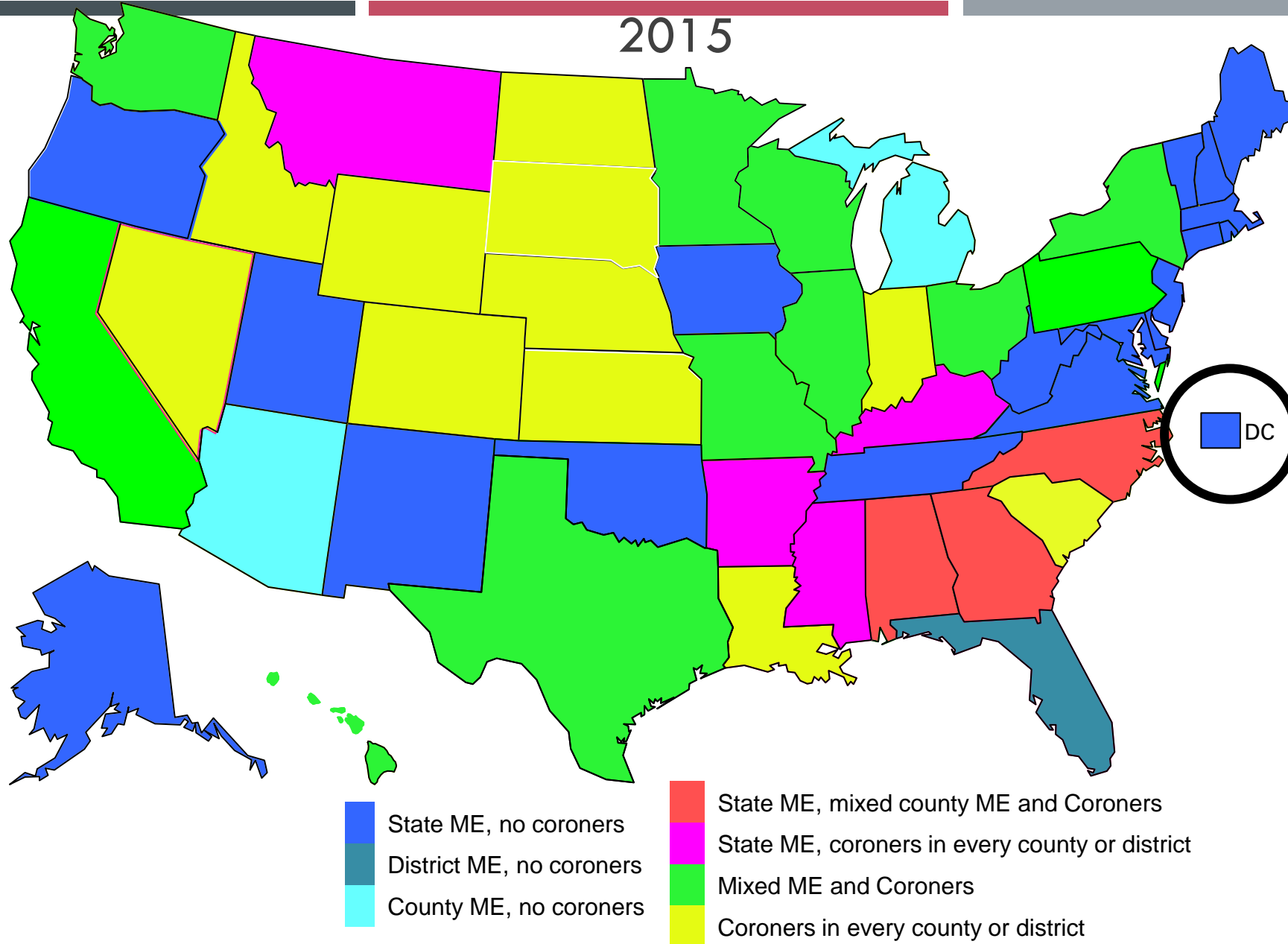




# CONSOLIDATED FORENSIC LABORATORY (CFL)



2015





# CURRENT PRACTICES IN US

## Coroner/JP

- Elected official
- No training or MD degree



## Medical Examiner

- Appointed
- MD degree



# DEATHS REPORTED FOR INVESTIGATION

- violent death, whether apparently homicidal, suicidal or accidental, including deaths due to
- thermal, chemical, electrical or radiation injury and deaths due to criminal abortion;
- deaths that are sudden, unexpected or unexplained;
- deaths that occur under suspicious circumstances;
- deaths of persons whose bodies are to be cremated, dissected or buried at sea:
- deaths at the workplace or resulting from work activity;

---

# DEATHS REPORTED FOR INVESTIGATION

- deaths that are due to diseases that may constitute a threat to public health;
- deaths of persons who are wards of the District government;
- deaths related to medical or surgical intervention;
- deaths that occur while persons are in the legal custody of the District;
- fetal deaths related to maternal trauma or maternal drug use;

# DEATHS REPORTED FOR INVESTIGATION

- deaths for which the Metropolitan Police Department (MPD), or other law enforcement agency, or the United States Attorney's Office requests, or a court order investigation; and
- dead bodies brought within the District without proper medical certification.



DC Law (DC Code §5-1405)



## CAUSE OF DEATH

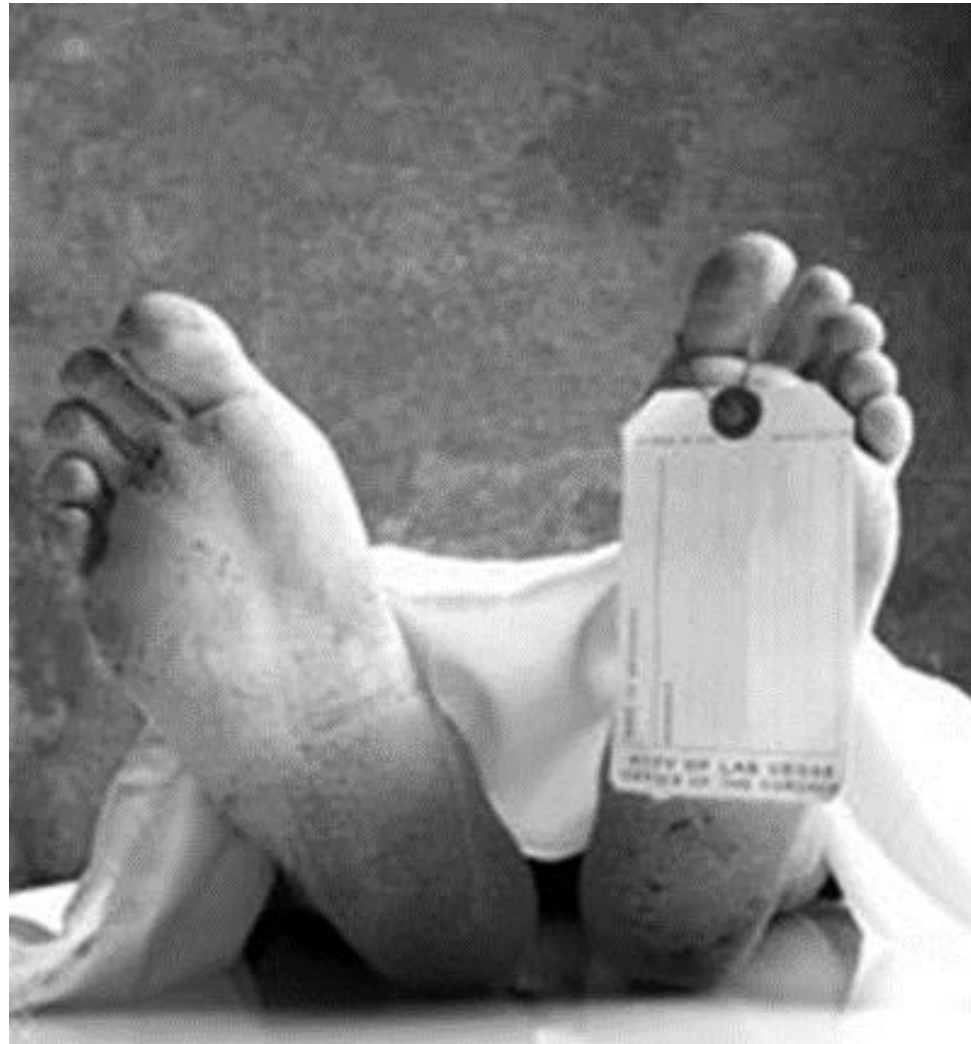
The disease, injury, or combination responsible for the fatality.





# MANNER OF DEATH

- Explanation of how the cause arose
  - Natural vs. Non-natural.
    - Natural is 100% caused by disease.
  - Classifications:
    - **Natural**
    - **Accident**
    - **Homicide**
    - **Suicide**
    - **Undetermined**





---

## DISCHARGE OF FIREARM

---

# WHAT OCCURS WHEN A FIREARM IS DISCHARGED

- Fire or flame is emitted from the barrel.
- This is followed by smoke.
- The bullet emerges from the barrel.
- Additional smoke and grains of both burned and unburned gunpowder follow the bullet out of the barrel.

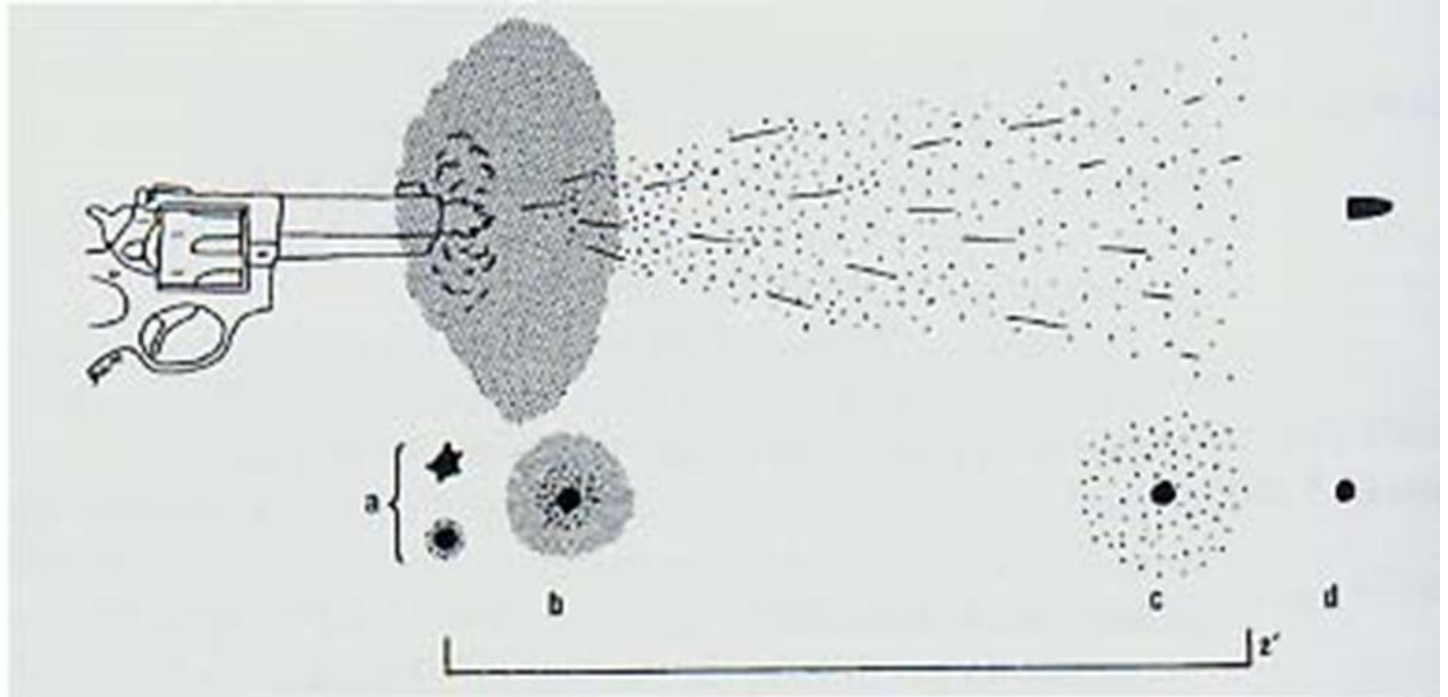
DISCHARGE OF FIREARM



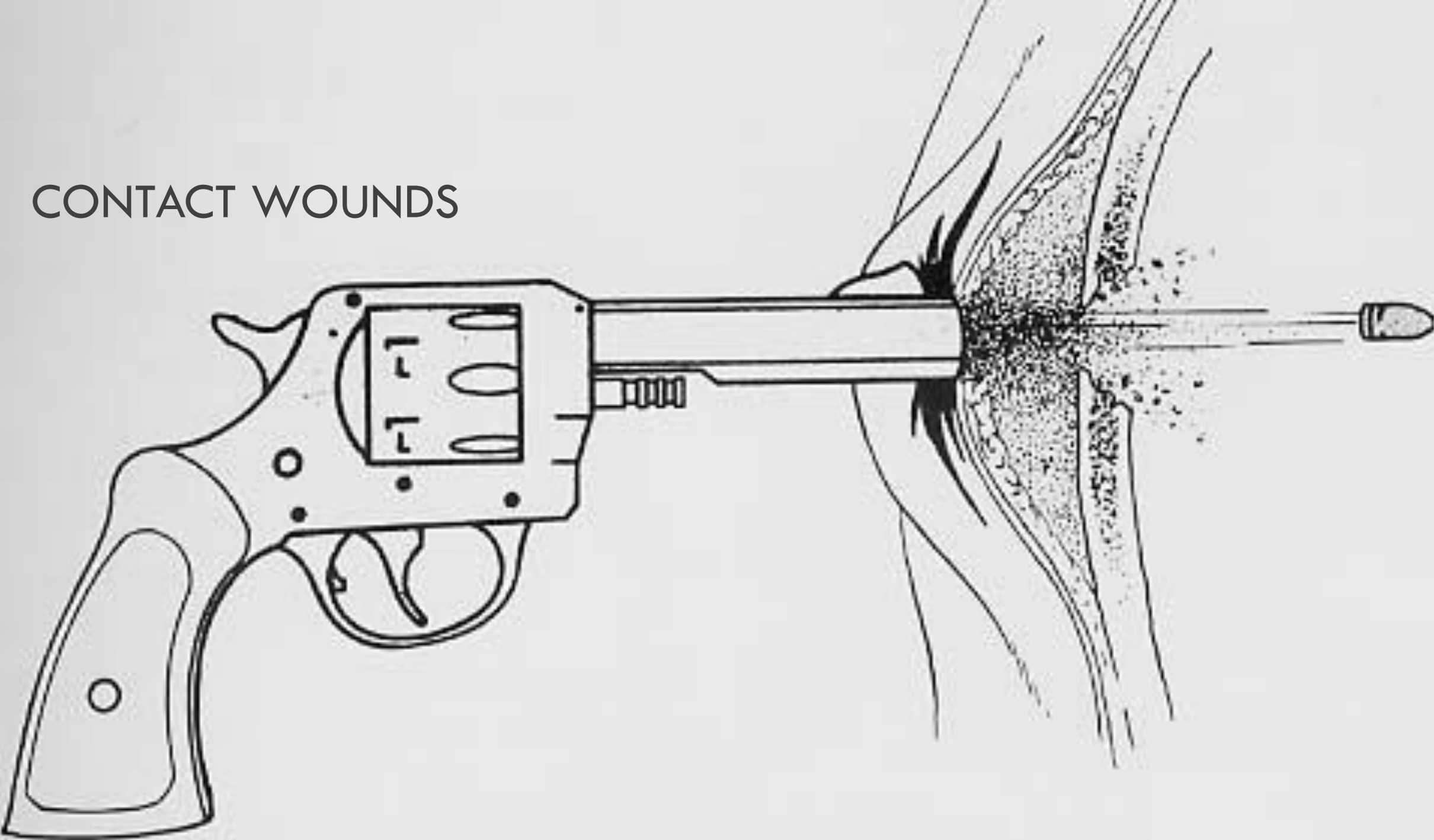


# CATEGORIES OF GUNSHOT WOUNDS: RANGE OF FIRE

- Contact: muzzle against the skin
- Near contact:  $< 3/4$  inch
- Intermediate:  $< 2$  feet (18-24 inches)
- Distant:  $> 2$  feet (18-24 inches)

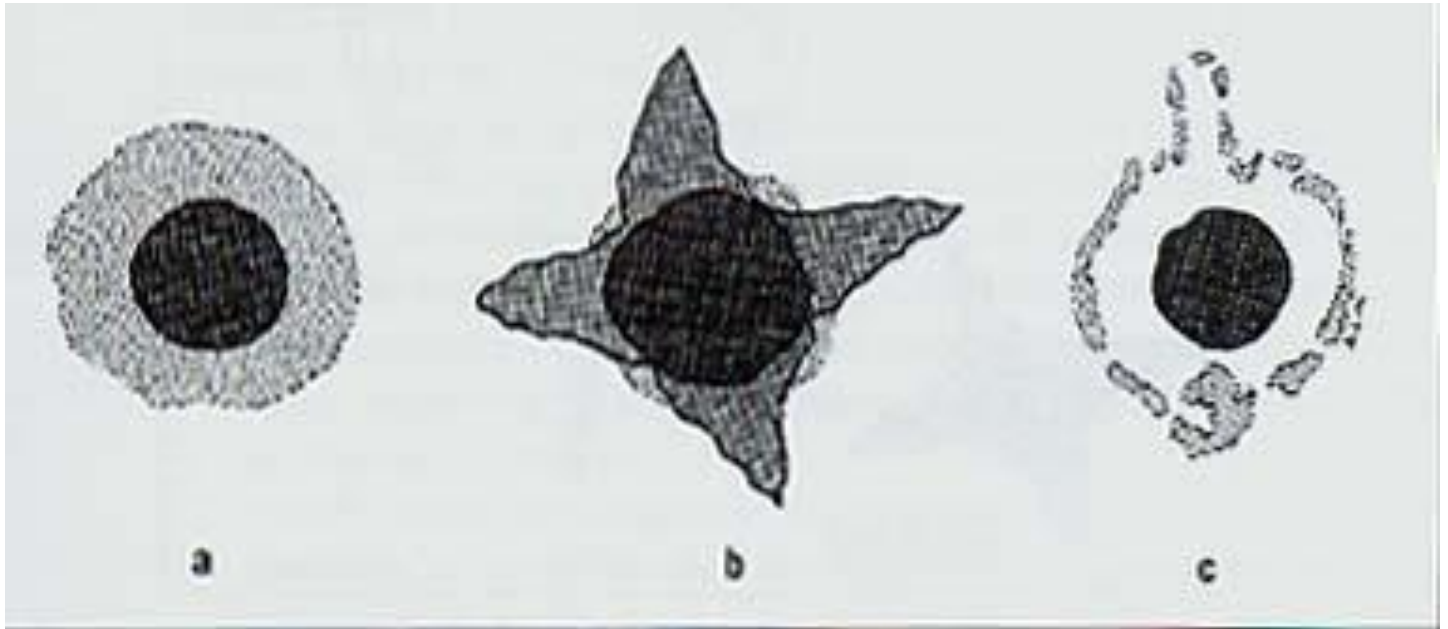


CONTACT WOUNDS

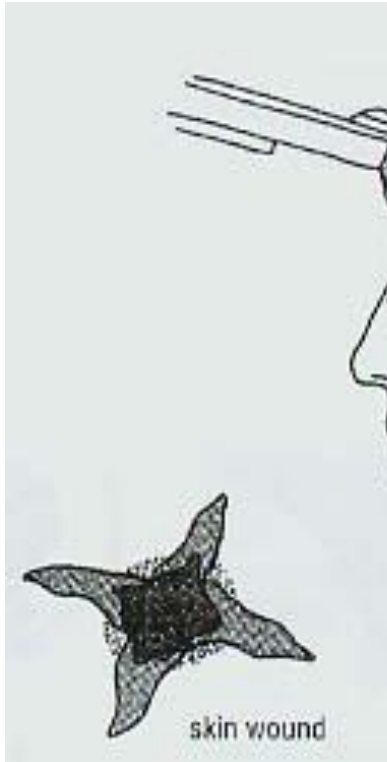


## TYPES OF HARD CONTACT WOUNDS

- a. round with blackened margin, seared abrasion
- b. split open stellate tear
- c. muzzle imprint



# HARD CONTACT WOUND OF HEAD



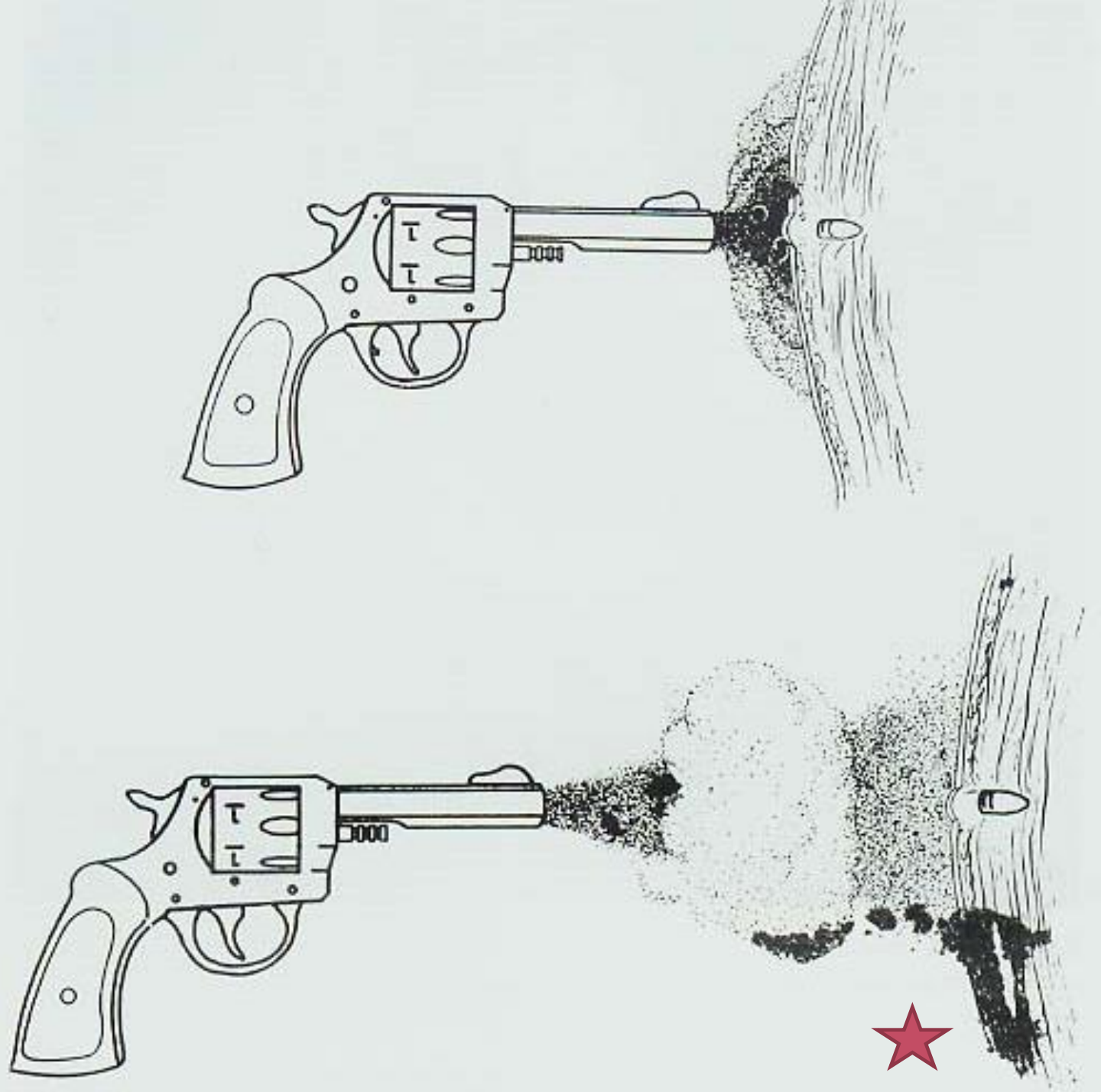


## INTERMEDIATE RANGE WOUNDS

- **Stippling** at entrance wound: unburned gunpowder
  - Multiple reddish-brown to orange-red lesions of skin surrounding wound
    - **Punctate abrasions**: cannot be wiped away
  - These marks are **NOT** powder burns!
- Occur when muzzle to target distance **exceeds 3/4 inch**.

---

# NEAR CONTACT V. INTERMEDIATE



## NEAR CONTACT



Soot deposition surrounding wound: < 6-8 inches

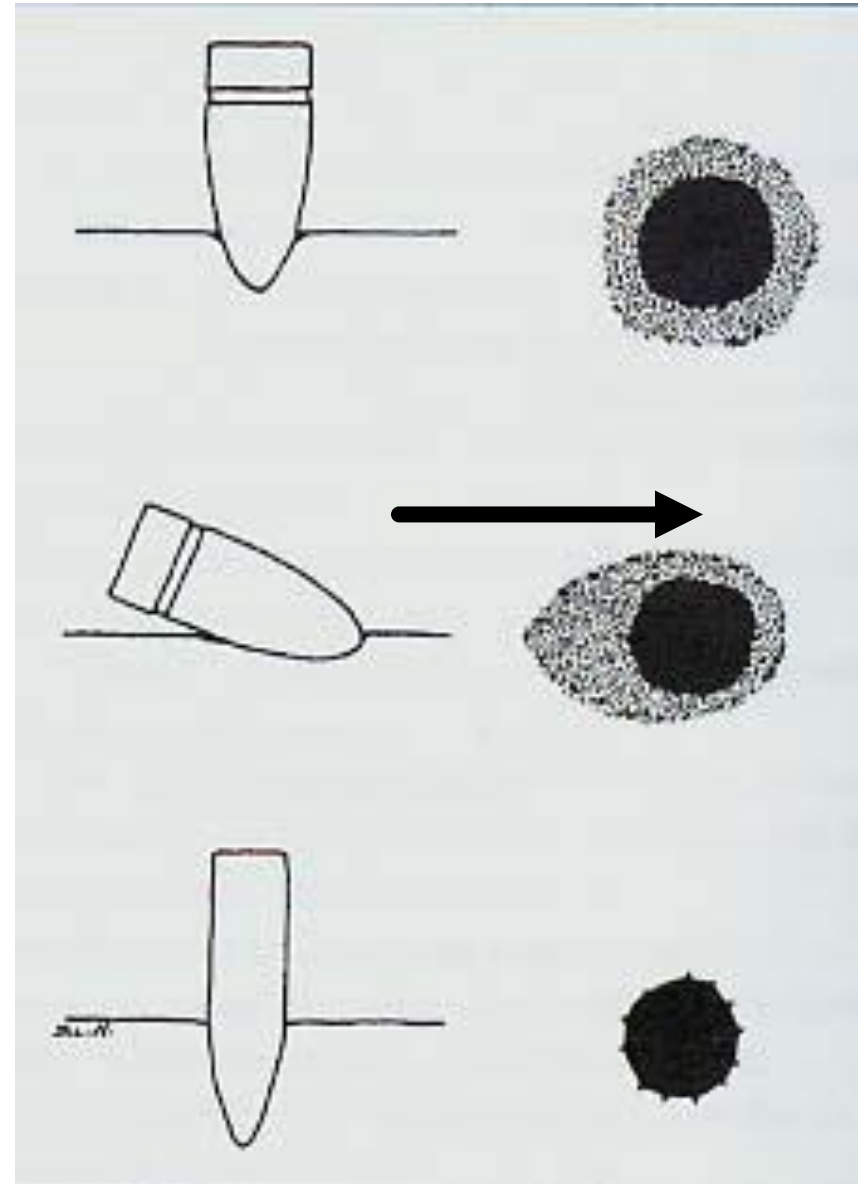


# INTERMEDIATE WOUND: **STIPPLING**



# ENTRANCE WOUNDS

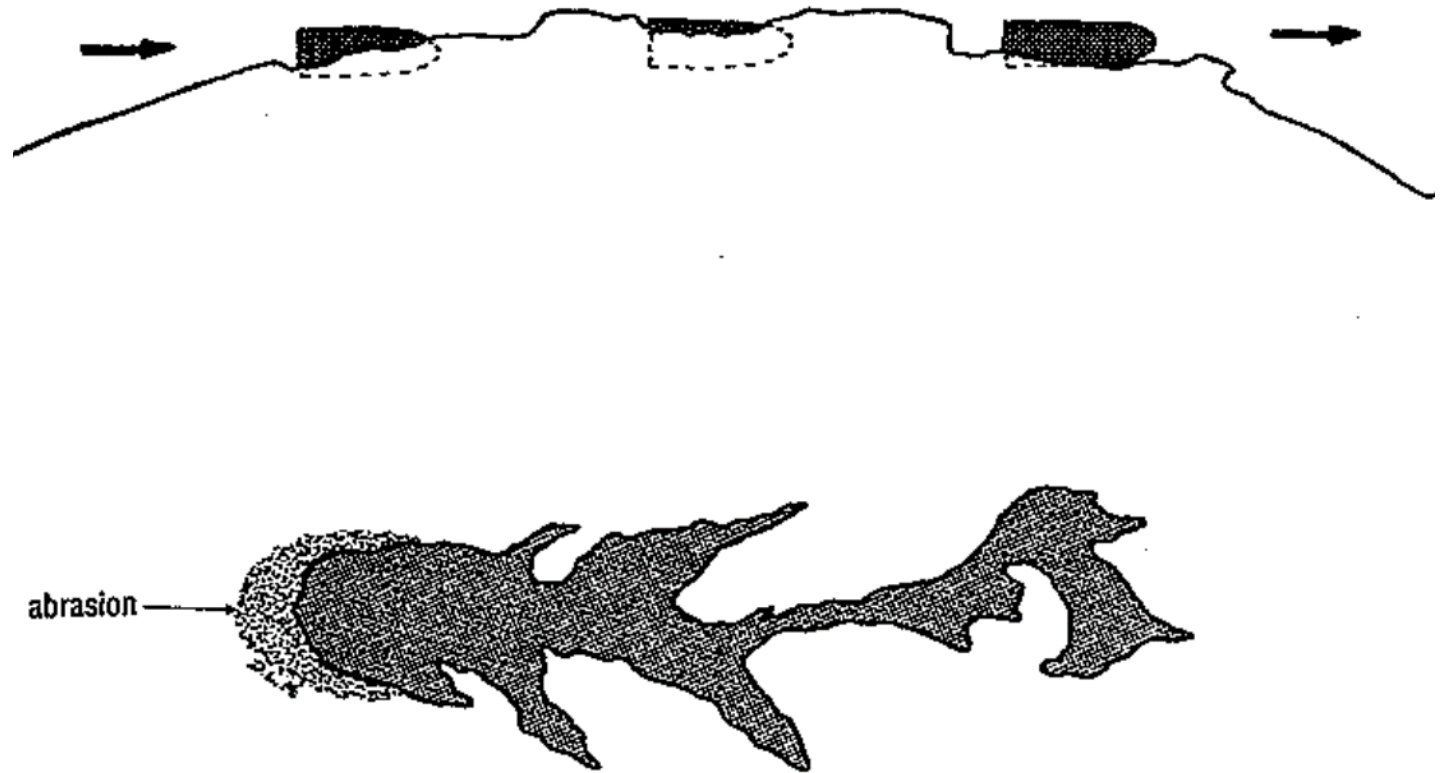
- Bullet enter skin at right angle; regular round abrasion collar (margin of abrasion)
- Entrance at oblique angle; crescent-shaped abrasion collar (**determine direction of penetration**).
- Rifle entrance: micro tears around entry (high velocity)







# GRAZE WOUND







GRAZE WOUND



# DISTANT WOUNDS



---

## EXIT WOUNDS

- Larger and more irregular than entrance due to bullet destabilization and/or deformation
- Can be slit-like, stellate, small or large
- Do not have abrasion ring – not contact with skin's outer surface
- Do not have central defect upon re-opposing the tissue (**except shored exit**)

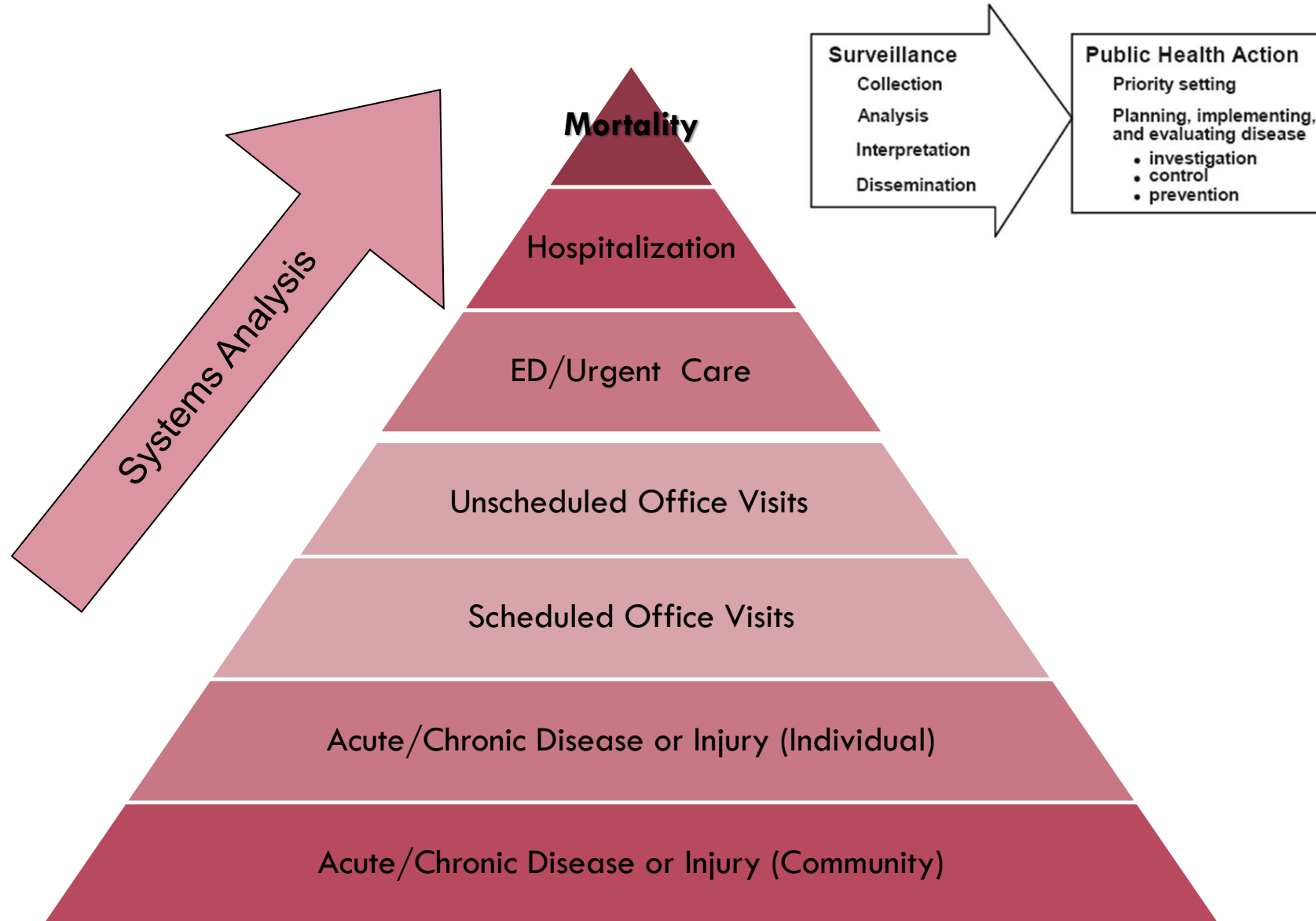


# EXIT WOUNDS

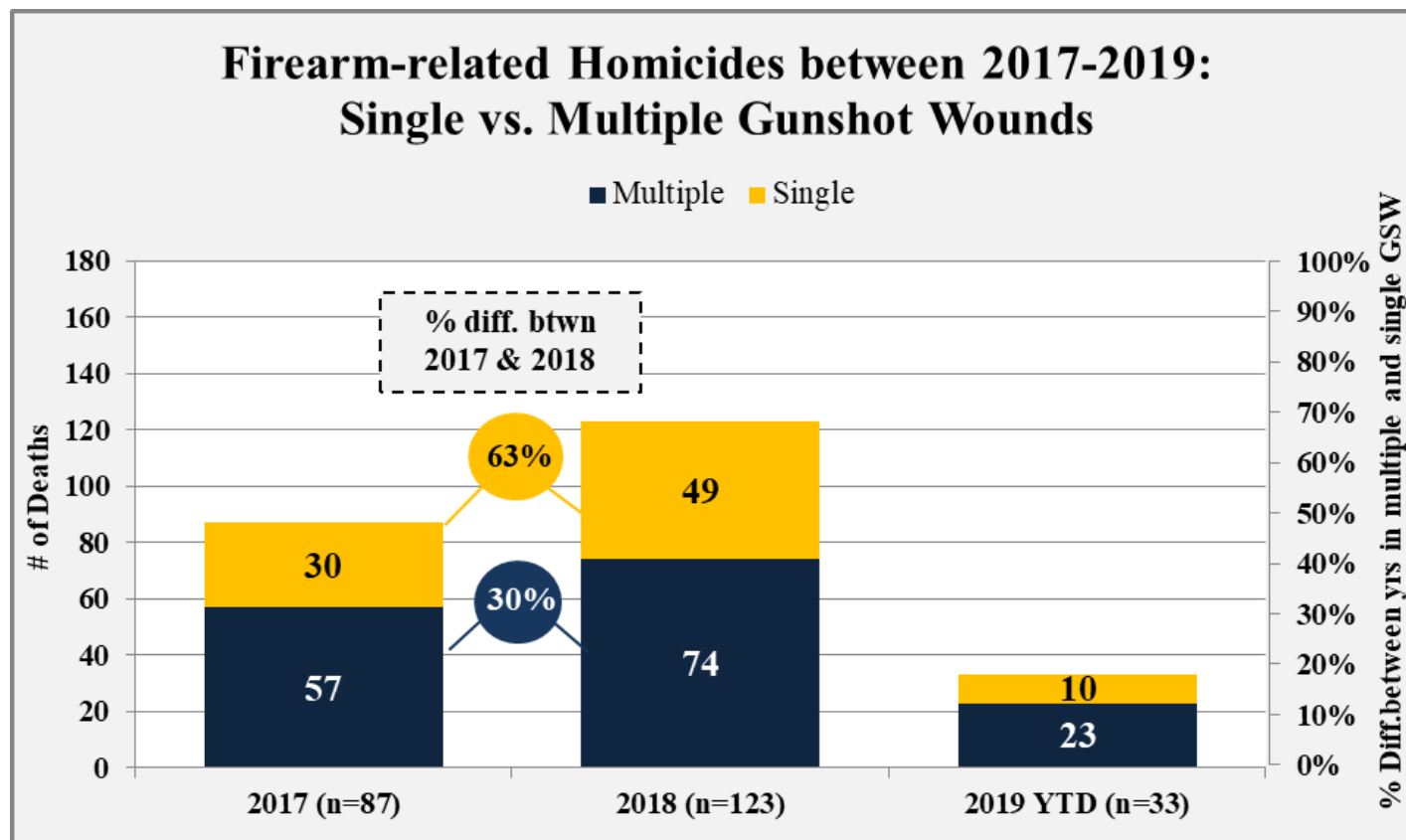




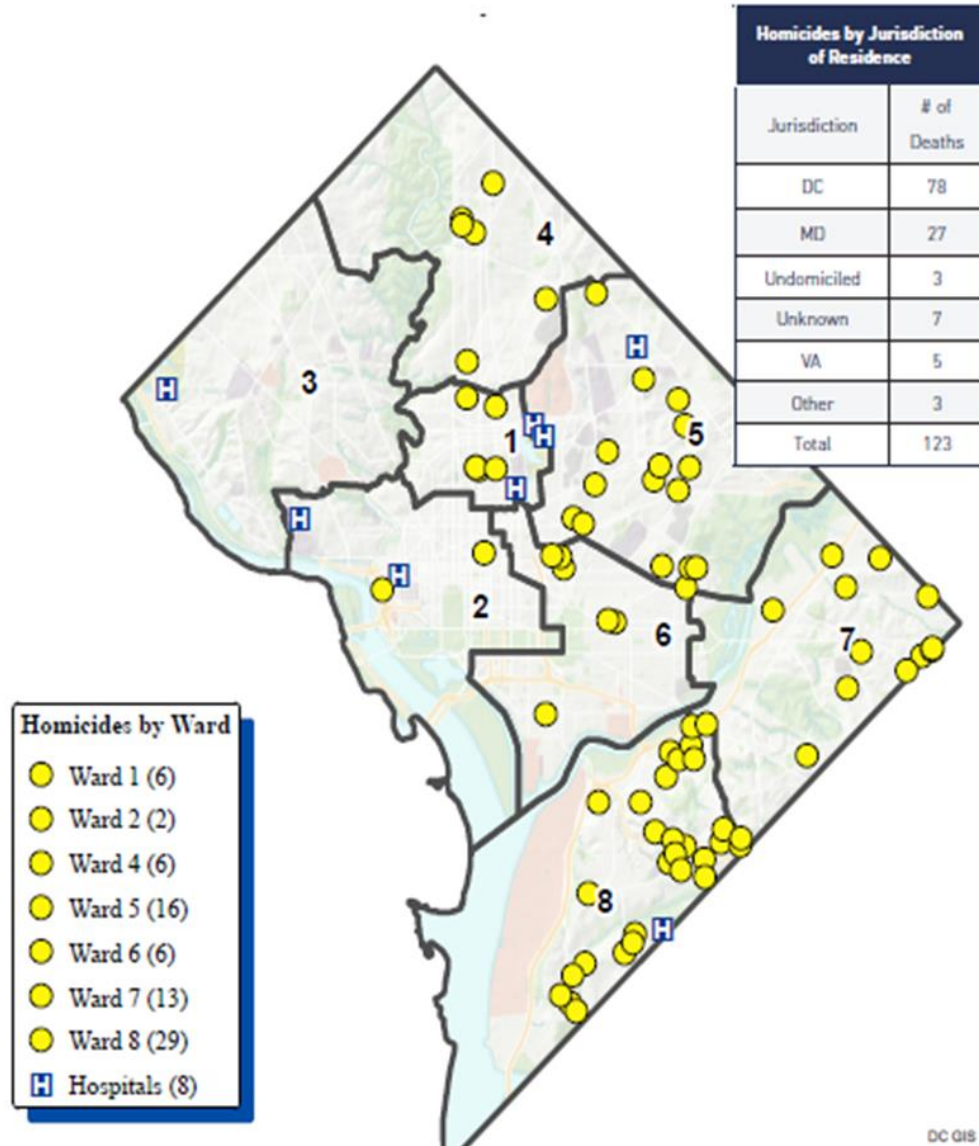
# VIOLENCE AND ITS AFFECT ON HEALTH



# FIREARM RELATED HOMICIDES

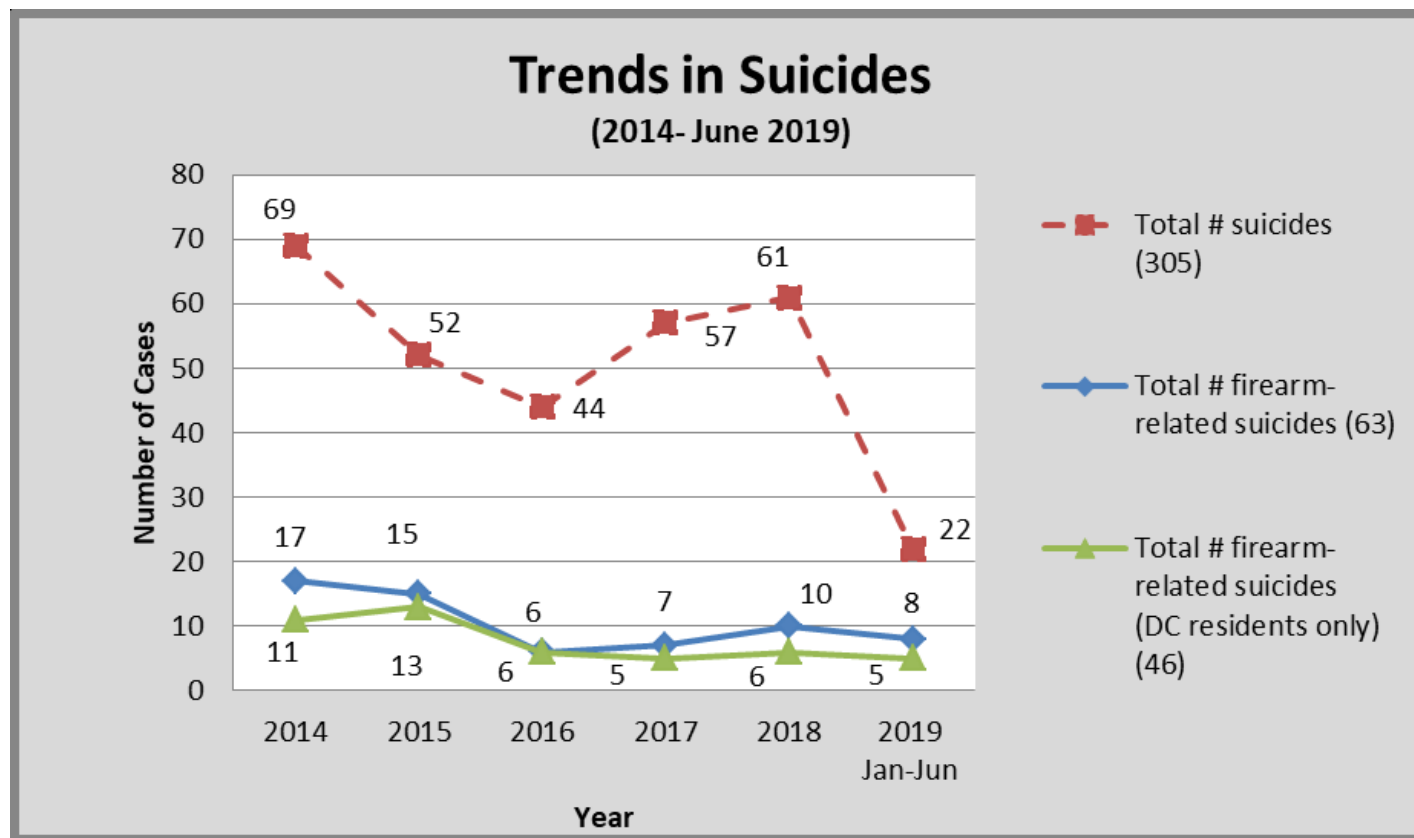


# HOMICIDES IN THE DISTRICT

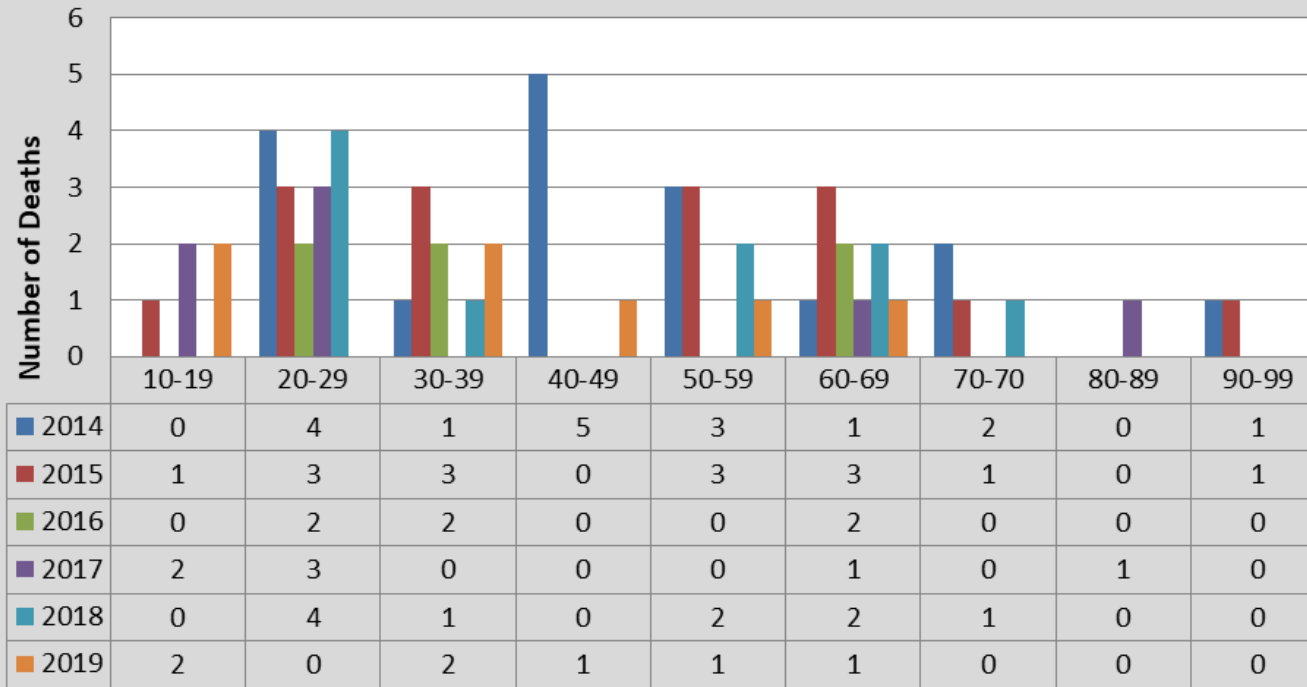




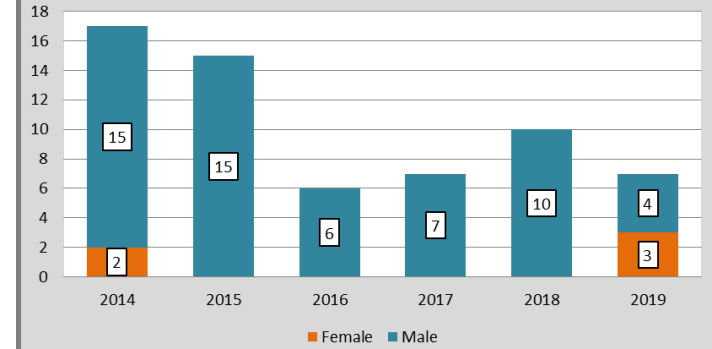
# FIREARM RELATED SUICIDES



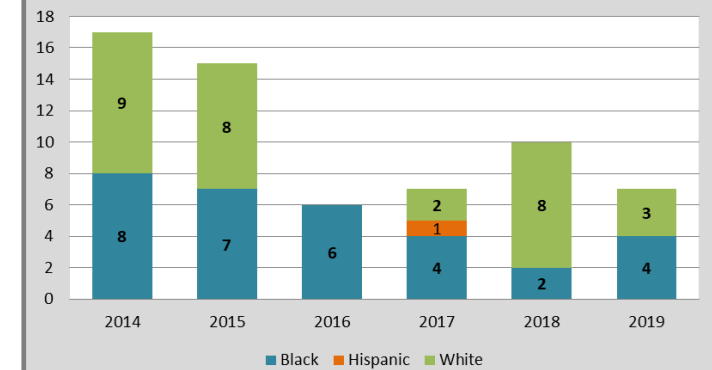
## Suicides by Age Category (2014- June 2019)



## Suicides by Gender (2014- June 2019)

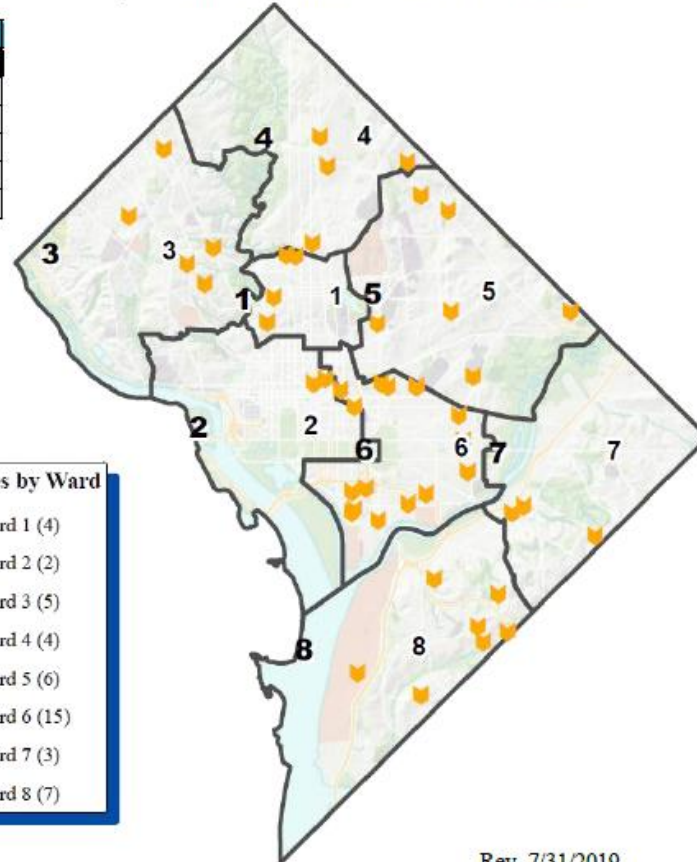


## Suicides by Race/Ethnicity (2014- June 2019)



Suicides by Ward of Residence, 2014 - June 2019

| Suicides by Jurisdiction of Residence and Year |      |      |      |      |      |      |
|--|------|------|------|------|------|------|
|  | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| DC   | 11   | 13   | 6    | 5    | 6    | 5    |
| MD   | 2    | 0    | 0    | 0    | 1    | 1    |
| VA   | 4    | 1    | 0    | 1    | 1    | 0    |
| Other  | 0    | 1    | 0    | 0    | 2    | 0    |
| Unknown  | 0    | 0    | 0    | 1    | 0    | 1    |



Suicides by Ward

- Ward 1 (4)
- Ward 2 (2)
- Ward 3 (5)
- Ward 4 (4)
- Ward 5 (6)
- Ward 6 (15)
- Ward 7 (3)
- Ward 8 (7)



Office of the Chief Medical Examiner  
401 E. Street SW, Washington, DC 20024

Rev. 7/31/2019

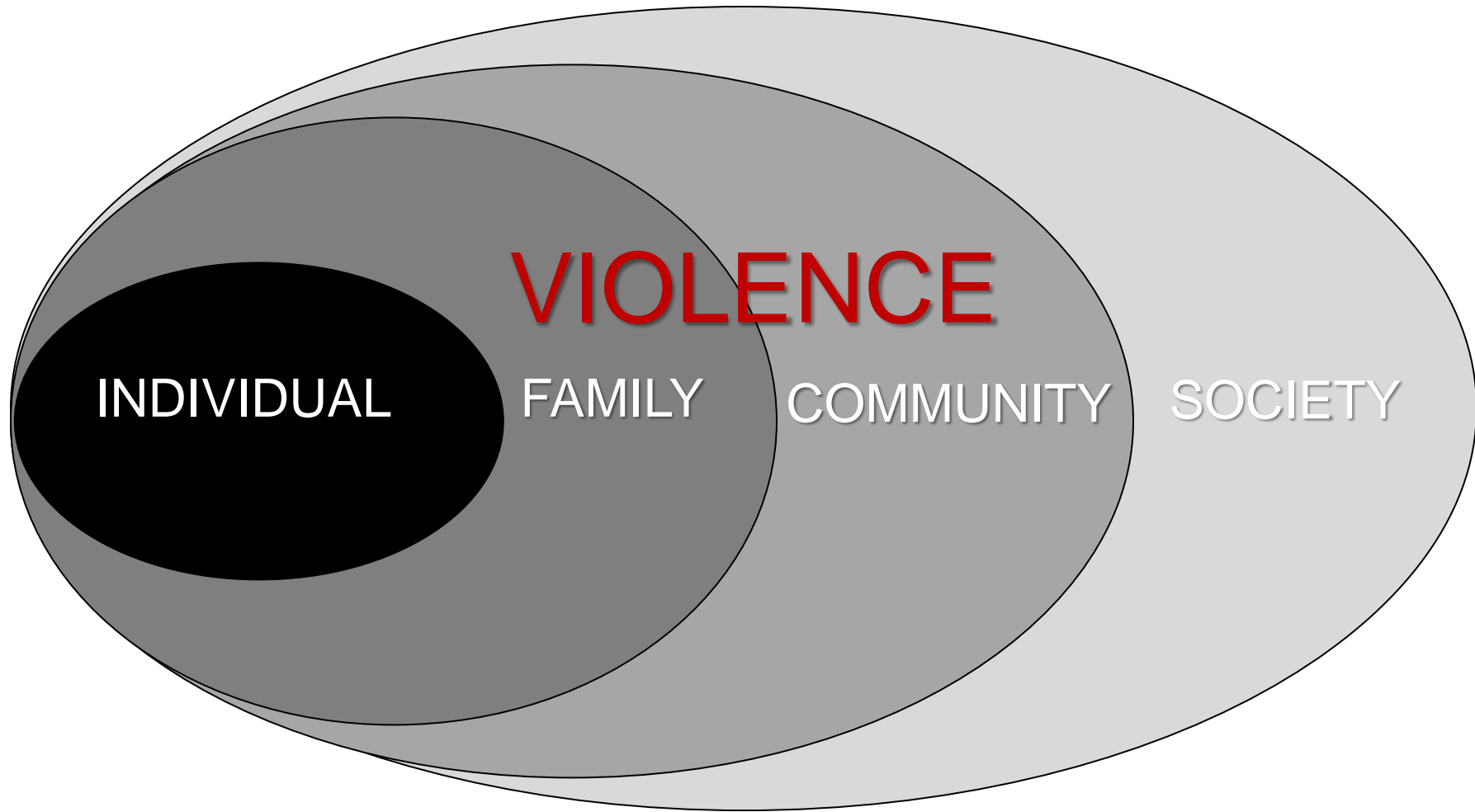
Prepared by: OCME Surveillance Reports

# FIREARM RELATED SUICIDES



---

## VIOLENCE AS A PUBLIC HEALTH ISSUE





Box 4-1. Early and late risk factors for violence at age 15 to 18 and proposed protective factors, by domain

| Domain     | Risk Factor   |  | Protective Factor*  |
|------------|---|--|---|
|            | Early Onset<br>(age 6–11)   | Late Onset<br>(age 12–14)  |   |
| Individual | General offenses<br>Substance use<br>Being male<br>Aggression**<br>Psychological condition<br>Hyperactivity<br>Problem (antisocial) behavior<br>Exposure to television violence<br>Medical, physical<br>Low IQ<br>Antisocial attitudes, beliefs<br>Dishonesty** | General offenses<br>Psychological condition<br>Restlessness<br>Difficulty concentrating**<br>Risk taking<br>Aggression**<br>Being male<br>Physical violence<br>Antisocial attitudes, beliefs<br>Crimes against persons<br>Problem (antisocial) behavior<br>Low IQ<br>Substance use | Intolerant attitude toward deviance<br>High IQ<br>Being female<br>Positive social orientation<br>Perceived sanctions for transgressions |
| Family     | Low socioeconomic status/poverty<br>Antisocial parents<br>Poor parent-child relations<br>Harsh, lax, or inconsistent discipline<br>Broken home<br>Separation from parents<br>Other conditions<br>Abusive parents<br>Neglect                                     | Poor parent-child relations<br>Harsh, lax discipline; poor monitoring, supervision<br>Low parental involvement<br>Antisocial parents<br>Broken home<br>Low socioeconomic status/poverty<br>Abusive parents<br>Other conditions<br>Family conflict**                                | Warm, supportive relationships with parents or other adults<br>Parents' positive evaluation of peers<br>Parental monitoring             |
| School     | Poor attitude, performance  | Poor attitude, performance<br>Academic failure   | Commitment to school<br>Recognition for involvement in conventional activities  |
| Peer Group | Weak social ties<br>Antisocial peers  | Weak social ties<br>Antisocial, delinquent peers<br>Gang membership  | Friends who engage in conventional behavior   |
| Community  |   | Neighborhood crime, drugs<br>Neighborhood disorganization  |   |

\* Age of onset not known.

\*\* Males only.

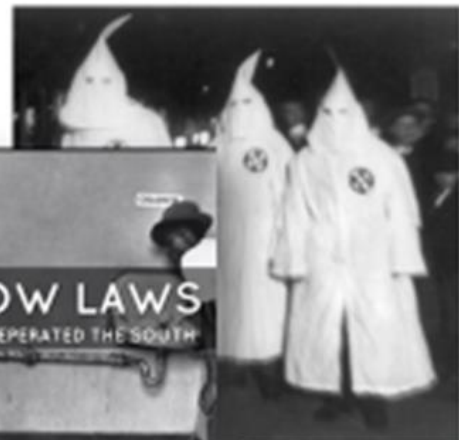




WITH THE AME

## JIM CROW LAWS

THE LAWS THAT SEPERATED THE SOUTH



**25 DOLLARS REWARD.**  
The subscribers will give for the apprehension and return of a colored man, named THORNTON, who absconded from our employ on the 3d or 4th of July. He is about 5 feet, 9 or 10 inches high, made, and of a yellow complexion, and of good address; had on when I saw him a blue coat and pantaloons, boots, and a black hat. WURTS



1 out of 3



1 out of 17

WILL GO TO PRISON



NIXON LAUNCHES  
WAR ON DRUGS



THE U.S. STATE AND FEDERAL PRISON POPULATION  
HAS INCREASED OVER 800% IN JUST 40 YEARS





# Institutional Racism

*"...white terrorists bomb a black church and kill five black children that is an act of individual racism...*

*But when in the same city – Birmingham, Alabama-five hundred black babies die each year because of the lack of proper food, shelter and medical facilities, and thousands more are destroyed and maimed physically, emotionally and intellectually because of conditions of poverty and discrimination in the black community that is a function of institutional racism".*

*(Carmichael & Hamilton 1967:2)*



Stokely Carmichael



Childhood  
experiences



Housing



Education



Social support



Family income



Employment

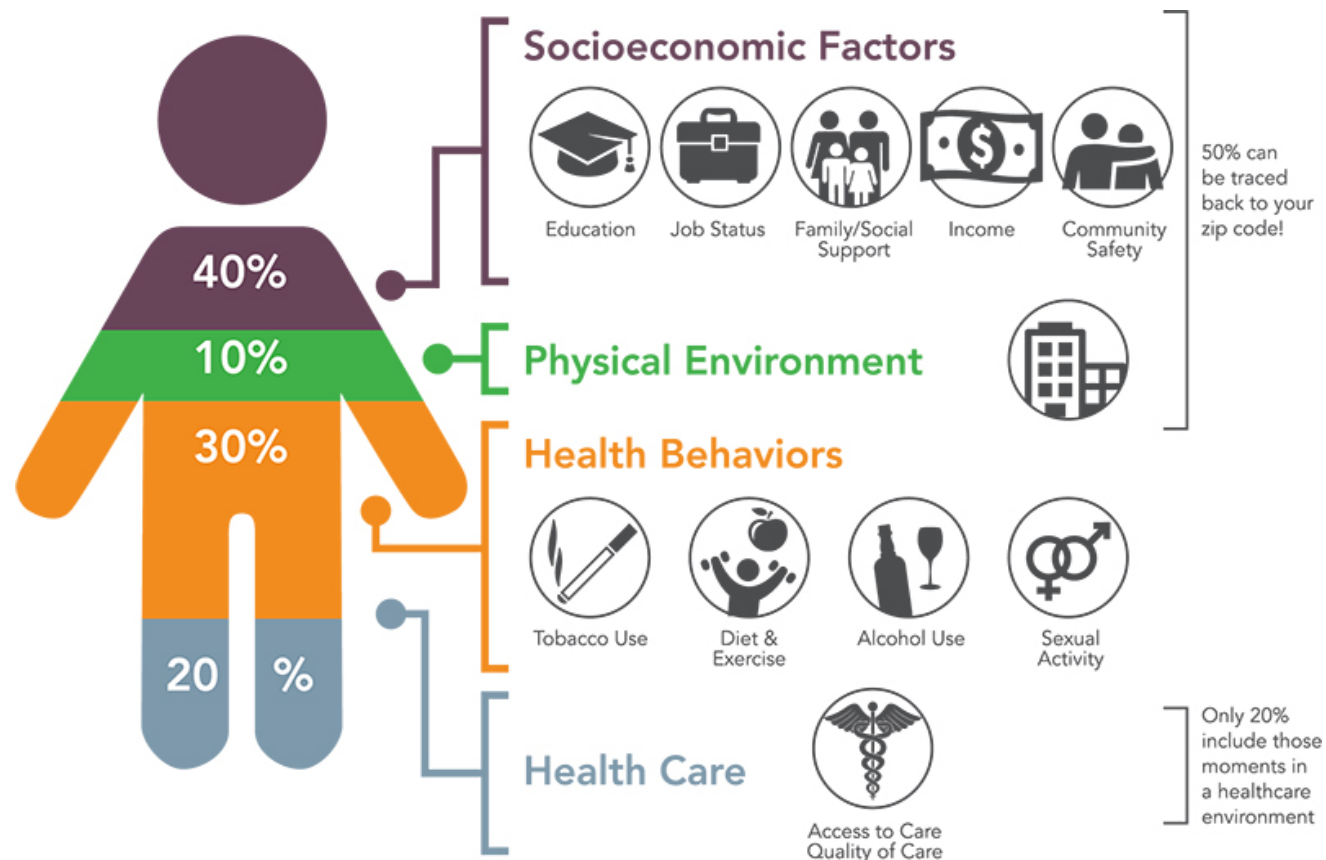


Our communities



Access to health  
services

# WHAT ARE SOCIAL DETERMINANTS?



Source: Institute for Clinical Systems Improvement, Going Beyond Clinical Walls: Solving Complex Problems (October 2014)





**Equality**

doesn't mean

**Equity**

## Equality



## Equity



© 2017 Robert Wood Johnson Foundation.  
May be reproduced with attribution.





# ADVERSE CHILDHOOD EXPERIENCES – ACES

What are Adverse Childhood Experiences (ACEs)?  
ACEs are potentially traumatic events that occur in a child's life:



Physical Abuse



Emotional Abuse



Sexual Abuse



Domestic Violence



Parental Substance Abuse



Mental Illness



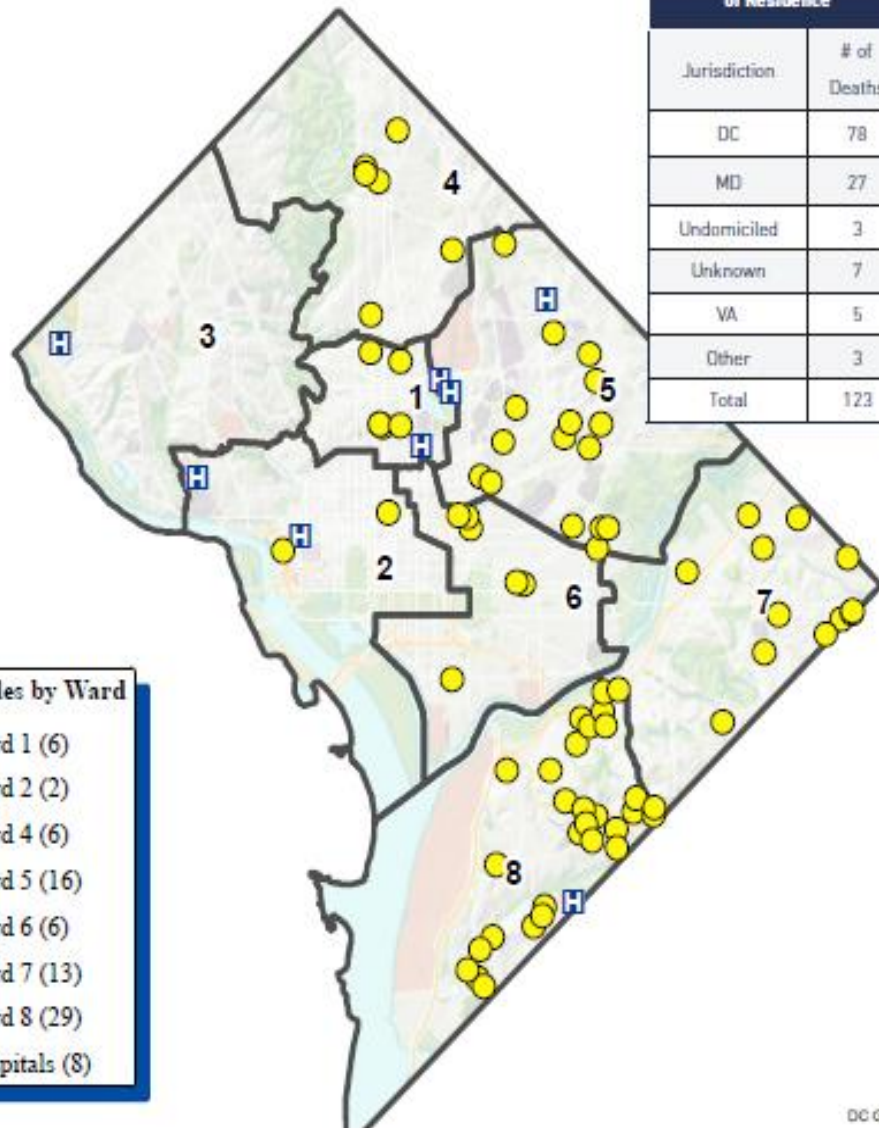
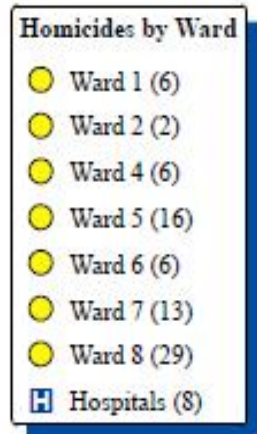
Suicide or Death



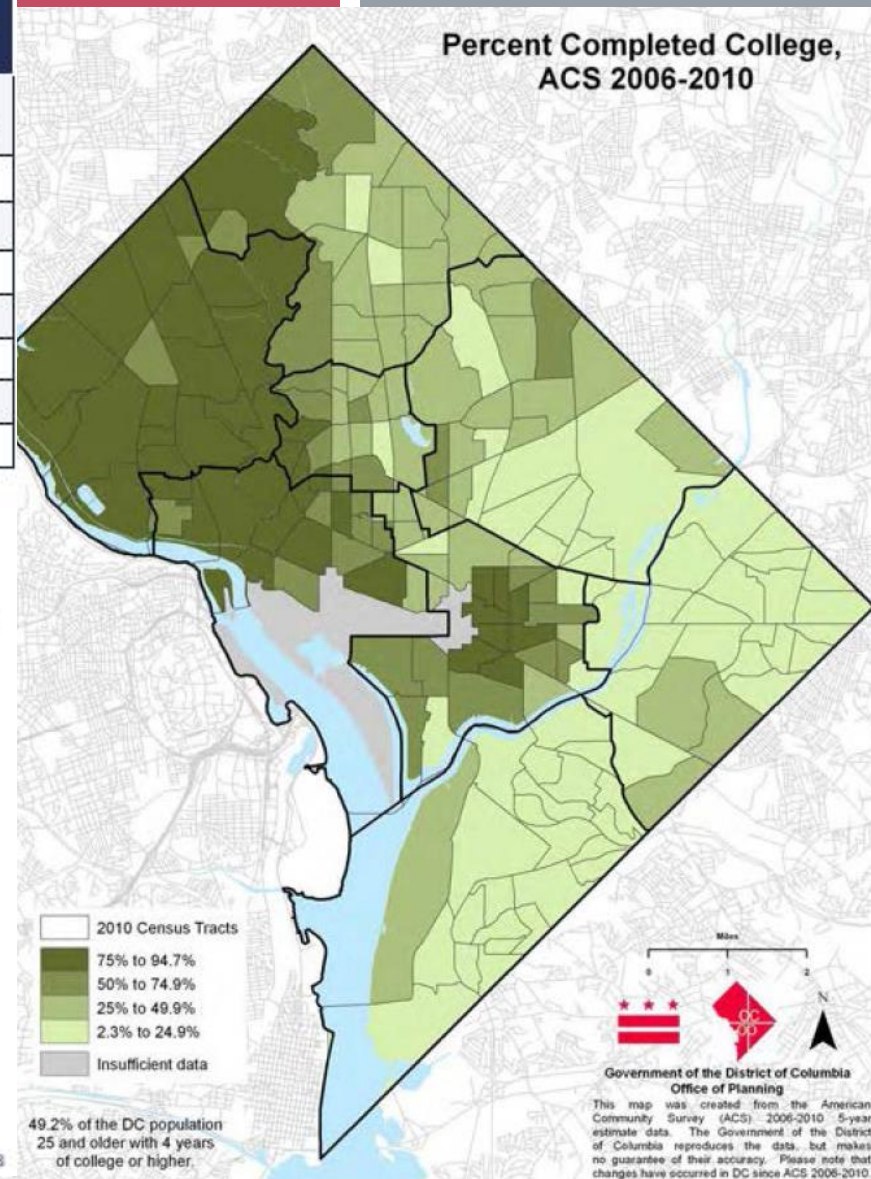
Crime or Imprisoned Family

Causing lifelong medical, mental & social suffering



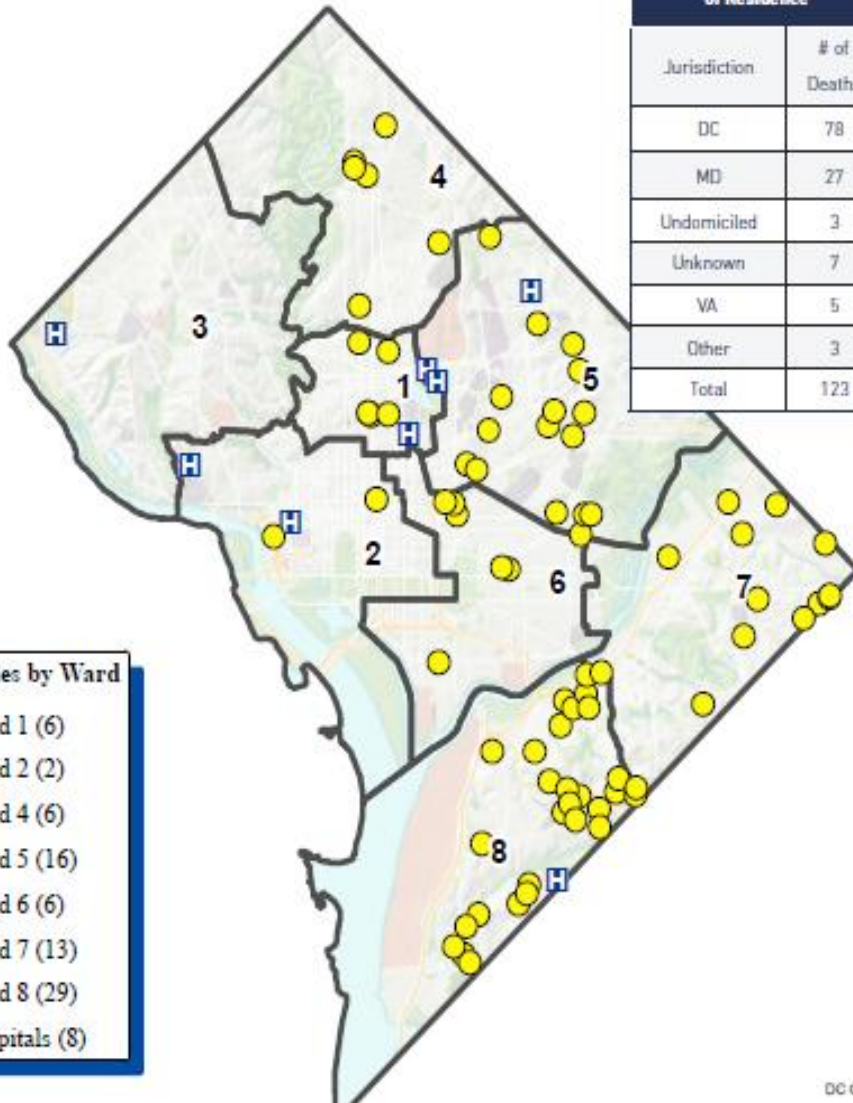
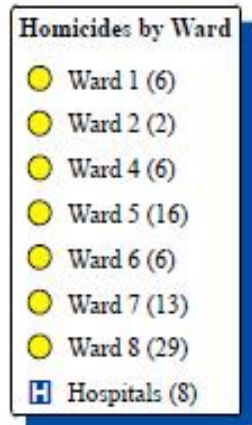


| Homicides by Jurisdiction of Residence |             |
|--|-------------|
| Jurisdiction                           | # of Deaths |
| DC                                     | 78          |
| MD                                     | 27          |
| Undomiciled                            | 3           |
| Unknown                                | 7           |
| VA                                     | 5           |
| Other                                  | 3           |
| <b>Total</b>                           | <b>123</b>  |

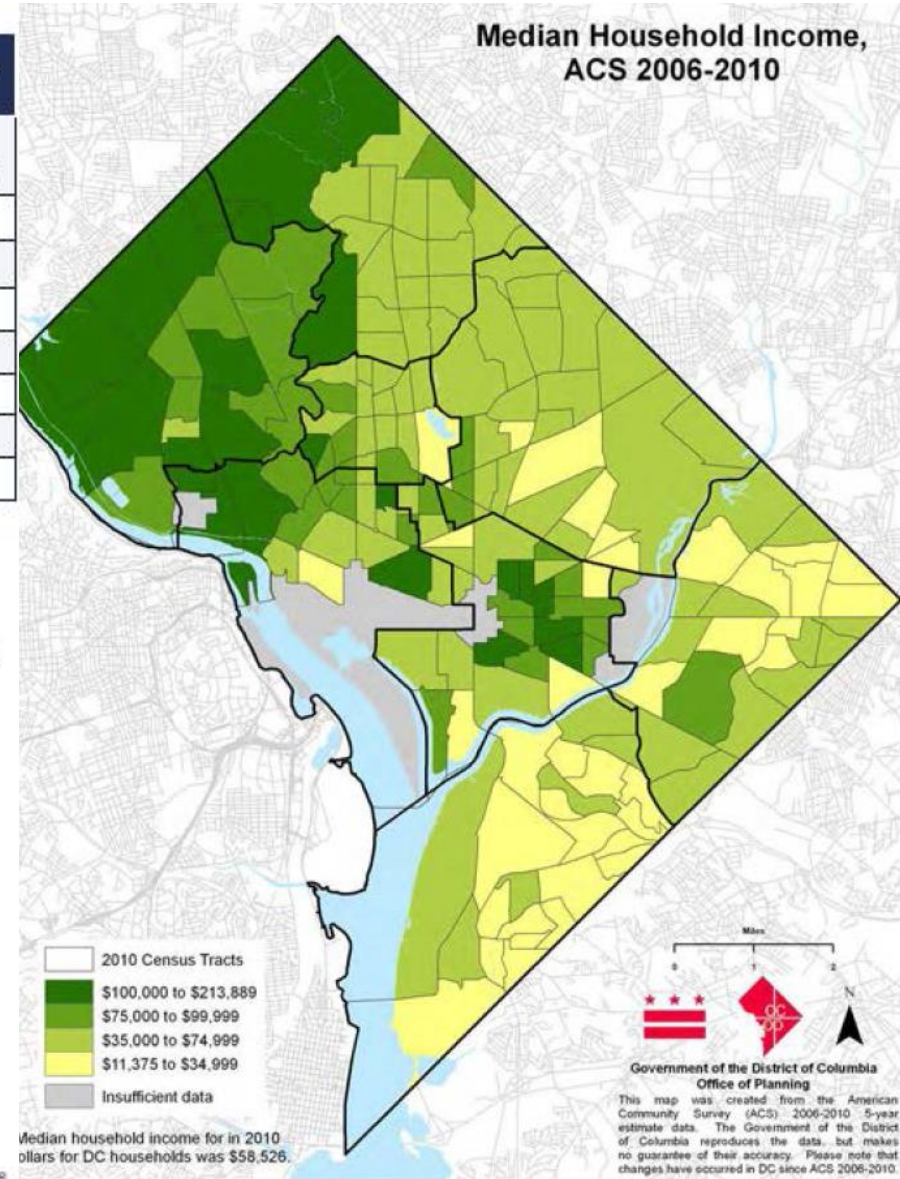


**ACCESS TO EDUCATION**



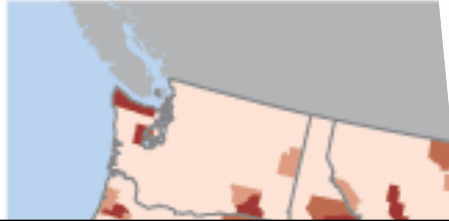


| Homicides by Jurisdiction of Residence |             |
|--|-------------|
| Jurisdiction                           | # of Deaths |
| DC                                     | 78          |
| MD                                     | 27          |
| Undomiciled                            | 3           |
| Unknown                                | 7           |
| VA                                     | 5           |
| Other                                  | 3           |
| <b>Total</b>                           | <b>123</b>  |



**ACCESS TO GOOD PAYING JOBS**

Percent Black



RESEARCH AND PRACTICE

## The Collateral Damage of Mass Incarceration: Risk of Psychiatric Morbidity Among Nonincarcerated Residents of High-Incarceration Neighborhoods

Mark A. Hatziboutatis, PhD, Katherine Keyes, PhD, Ava Hamilton, MS, Monica Uddin, PhD, and Sandro Galea, MD, DrPH

The United States leads the world in the per-

Objectives. We examined whether residence in neighborhoods with high levels of incarceration is associated with psychiatric morbidity among non-

County



# The Collateral Damage of Mass Incarceration: Risk of Psychiatric Morbidity Among Nonincarcerated Residents of High-Incarceration Neighborhoods

### % Black Incarcerated

- 0% - 5%
- 6% - 25%
- 26% - 50%
- 51% - 100%

disproportionately involved in the criminal justice system. Individual incarceration exposure is associated with adverse mental<sup>7-9</sup> and physical<sup>10</sup> health outcomes. A second line of inquiry has evaluated the broader health consequences of incarceration—what has been variously called the “long arm” of corrections,<sup>8</sup> the collateral consequences of mass incarceration,<sup>9</sup> and “spillover” effects related to incarceration.<sup>11</sup> For example, female partners of recently released male prisoners experience depression and anxiety symptoms,<sup>10,12</sup> and the children of incarcerated parents are at increased risk for behavioral and mental health problems.<sup>13,14</sup> The deleterious health effects of incarceration are not merely confined to the family members of incarcerated individuals, however. Nonincarcerated individuals living in the communities from which inmates are drawn also appear

Although this research provides some initial insights into some of the negative consequences of incarceration at the community level, it remains largely unknown whether incarceration influences the mental health of community members who reside in neighborhoods with high incarceration rates. How might incarceration affect community mental health? High levels of incarceration in neighborhoods can alter the social ecology of communities by eroding social capital and disrupting the kinds of social and family networks and relationships that are necessary for sustaining individuals’ mental health as well as the well-being of communities.<sup>15-22</sup>

We examined whether high levels of incarceration in neighborhoods affect the mental health of individuals living in these

incarceration rates. Rather than examining the mental health consequences of incarceration among those who have themselves been incarcerated or among their family members, we examined the mental health of individuals living in communities that have been exposed to elevated levels of incarceration.

### METHODS

We drew data from the Detroit Neighborhood Health Study (DNHS), a longitudinal cohort of predominantly Black adults (aged 18 years and older) living in Detroit, Michigan. We conducted waves 1 during 2008–2009. We selected participants using a dual-frame

## CASE EXAMPLE

- The decedent is a 35 yo BM who sustained multiple GSW.
- He was intubated w/an ETT in the field by medics and transported to a local hospital.
- He is reported to have a GSW of the back, just medial to the left scapula, and a GSW of the left neck.
- A left-sided thoracotomy revealed a massive hemothorax {approx. 2-3 L of blood}; no additional operative/surgical procedures done.







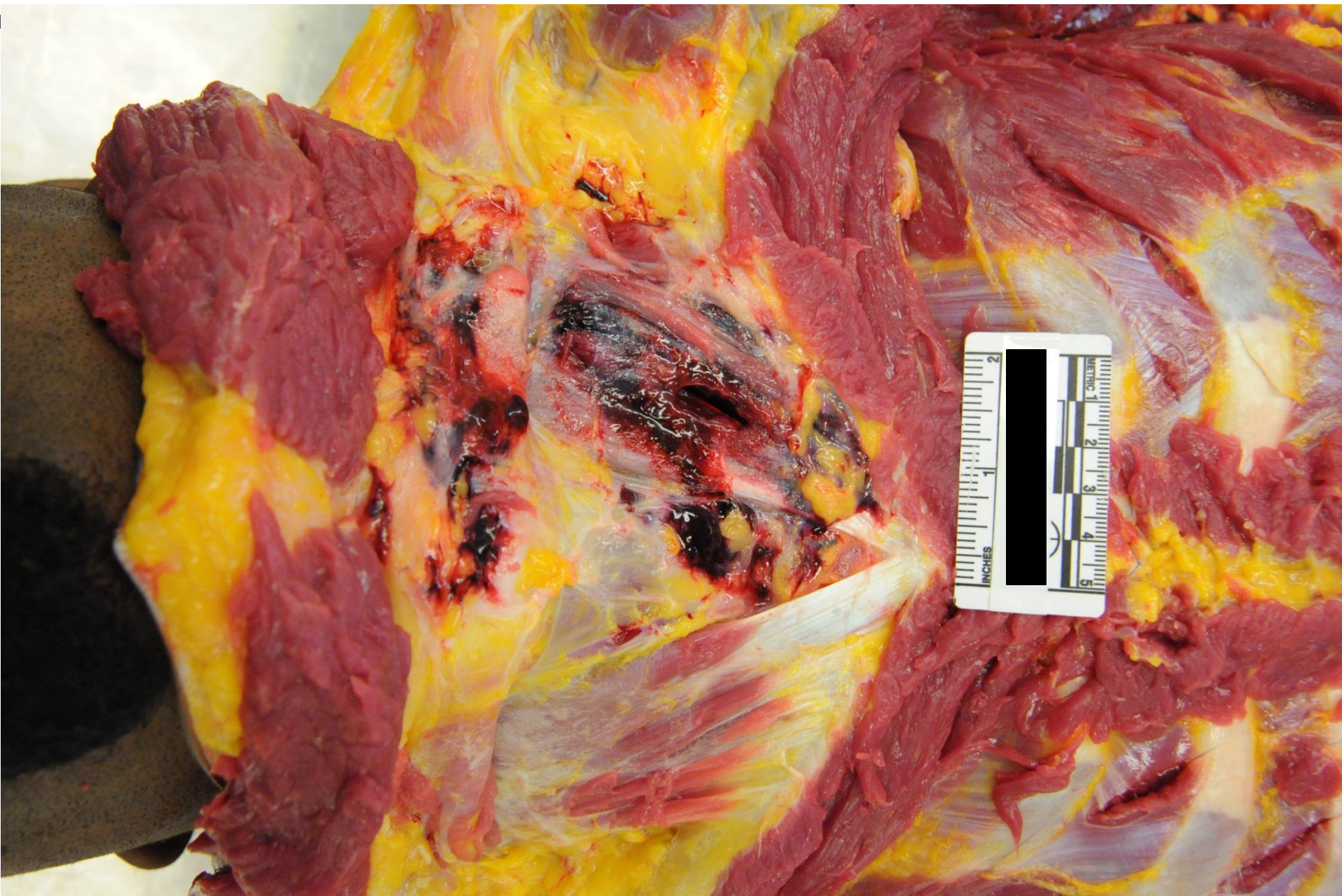








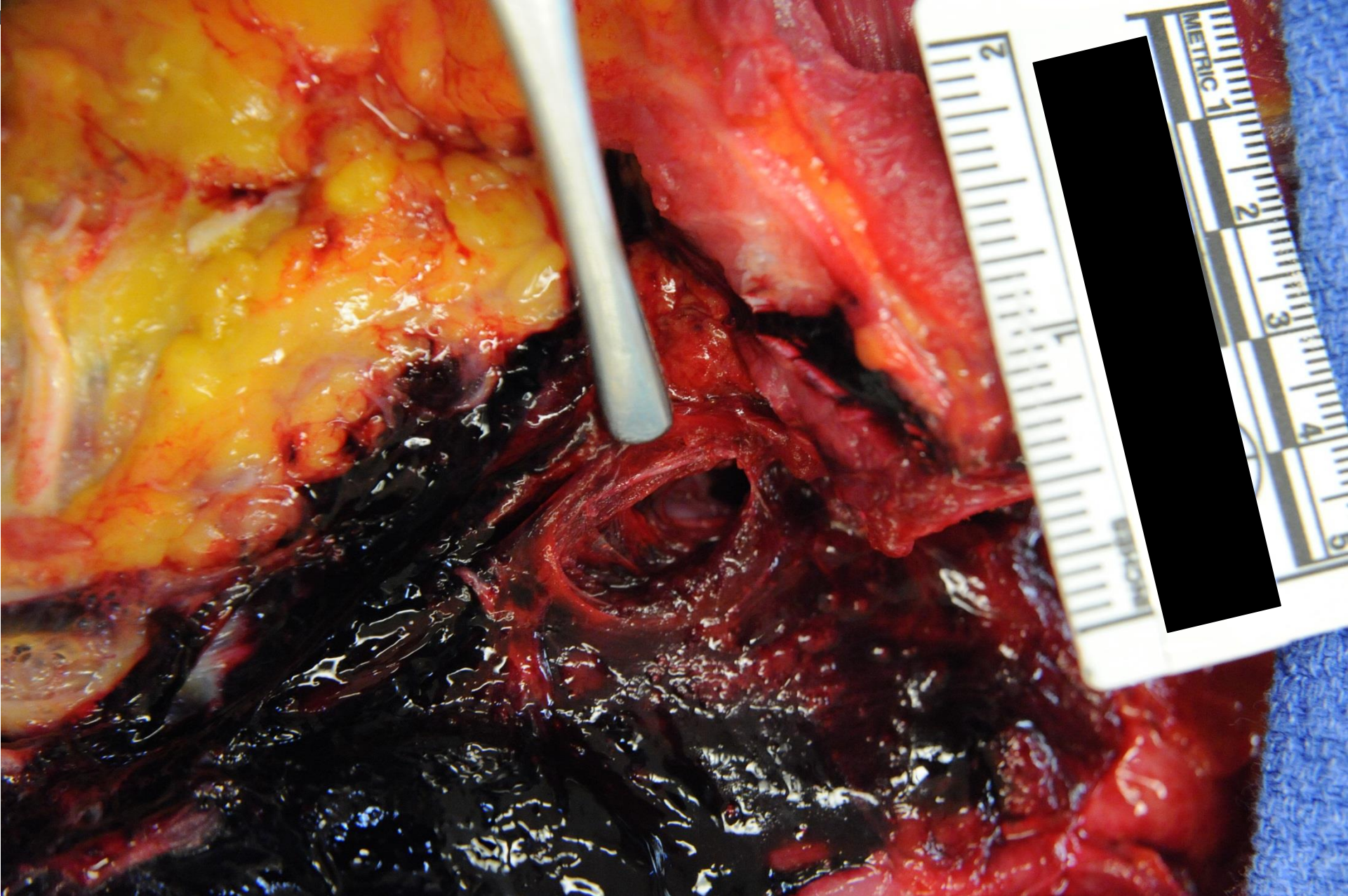








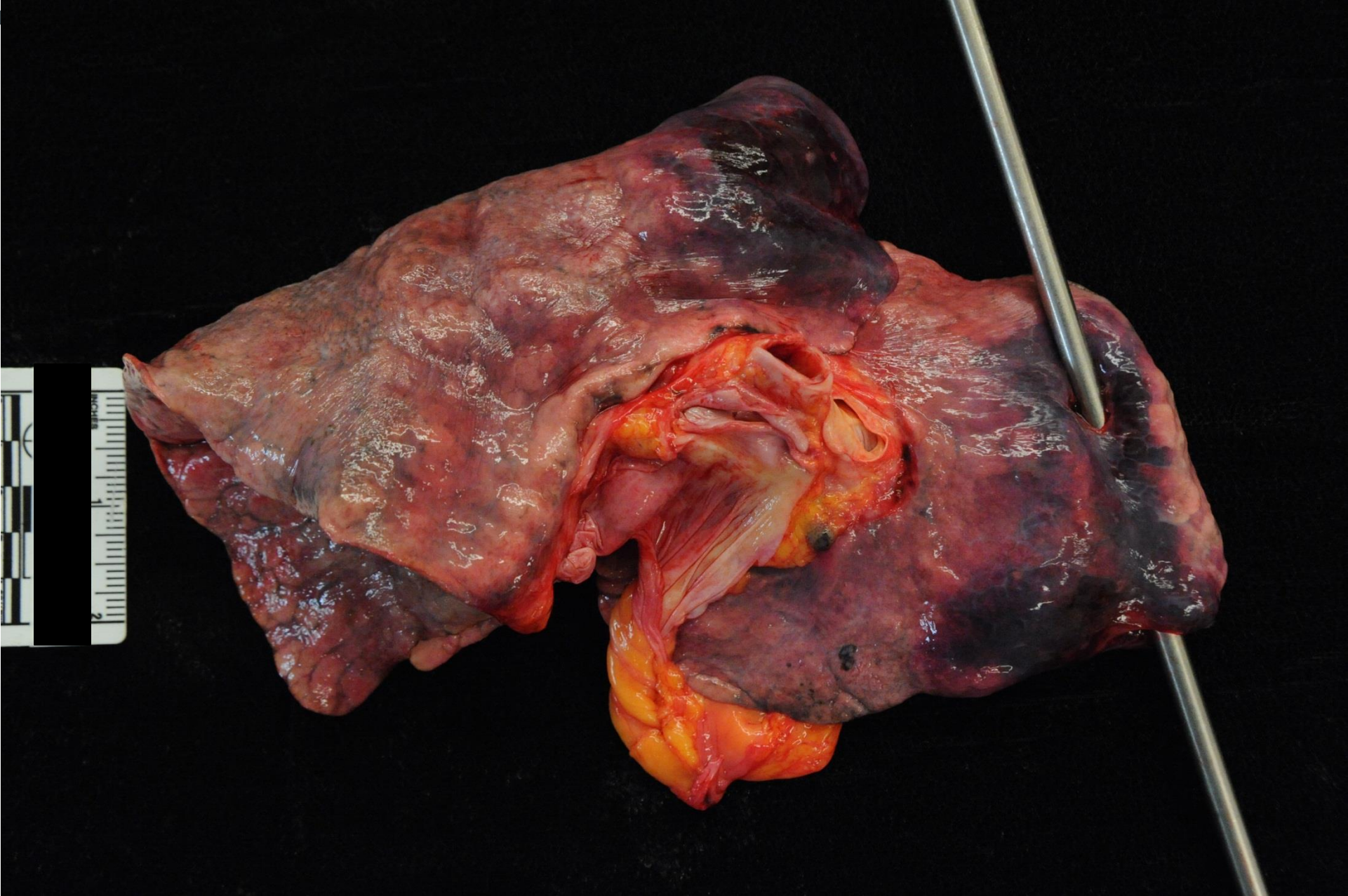




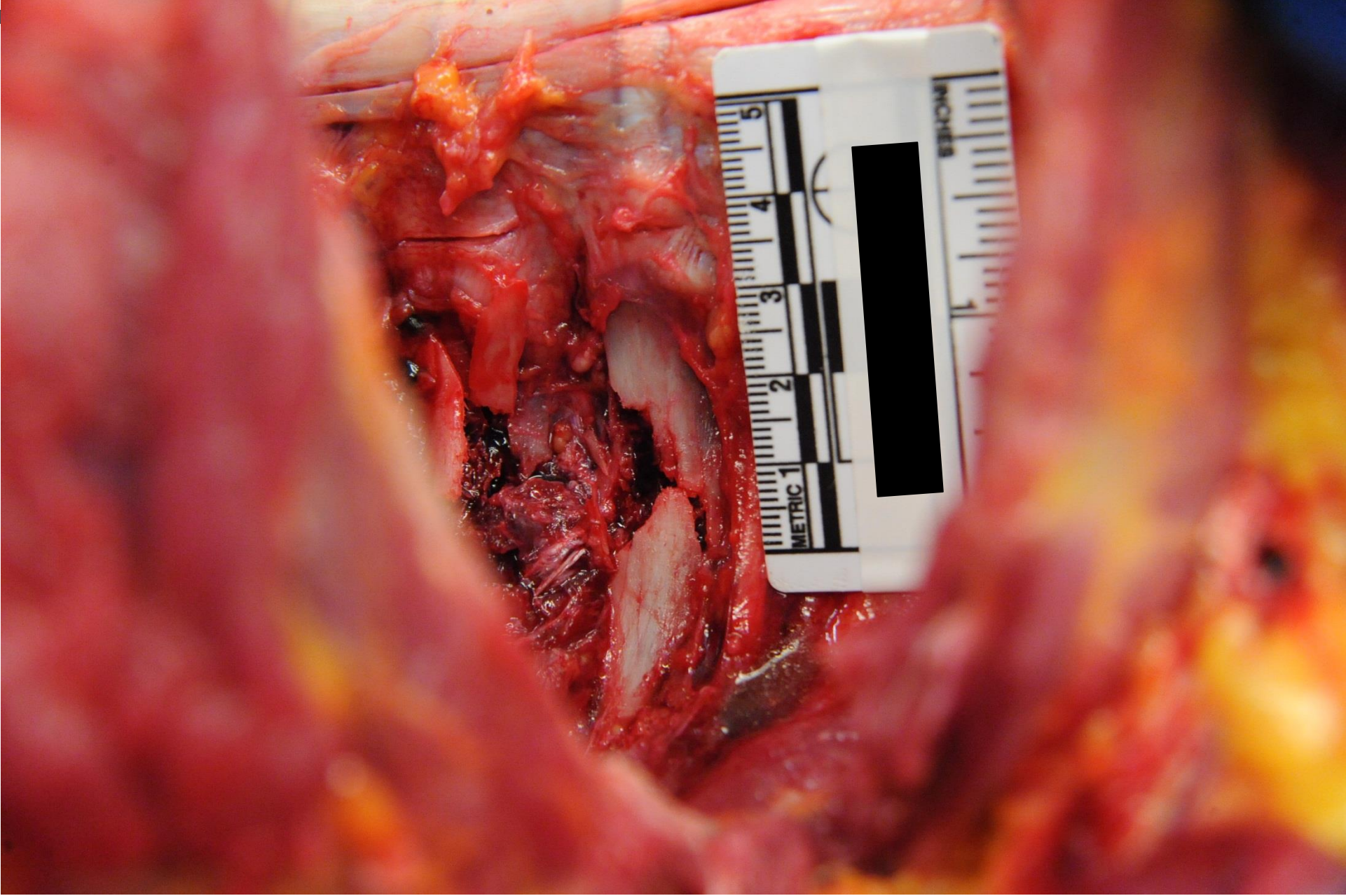




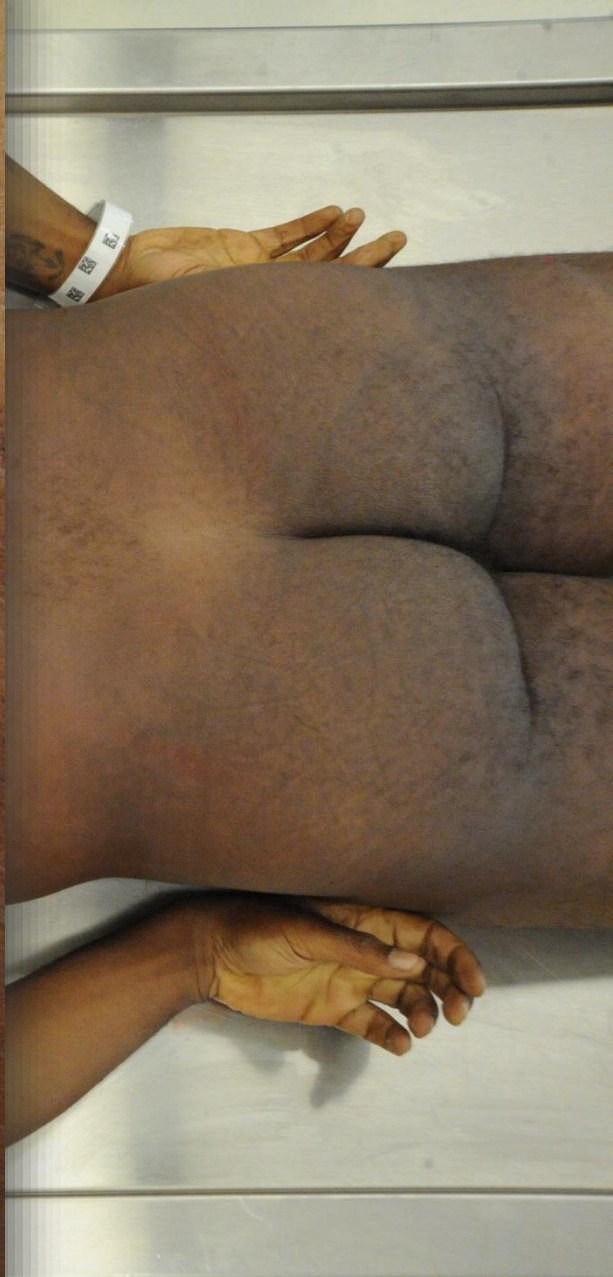




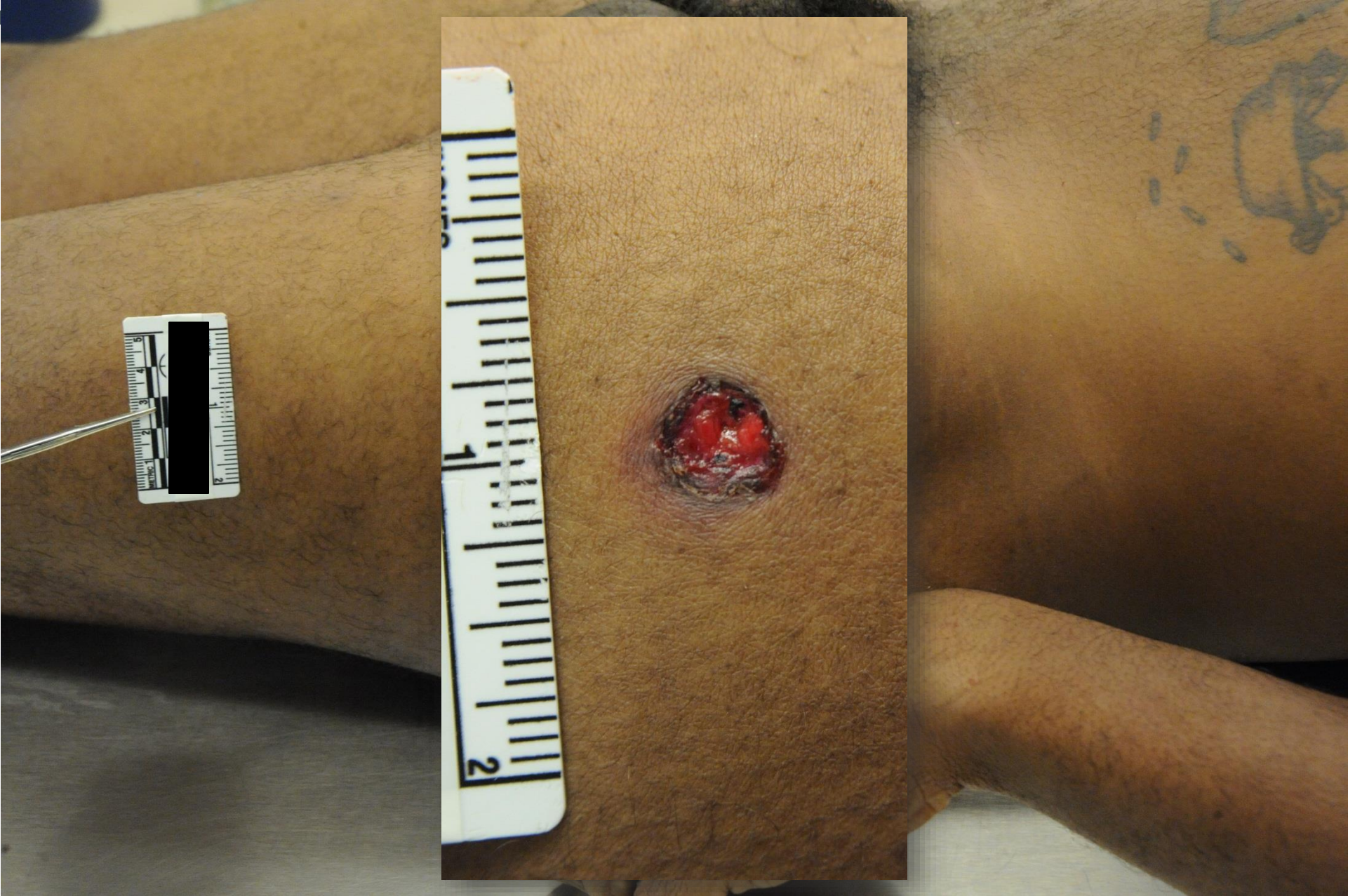




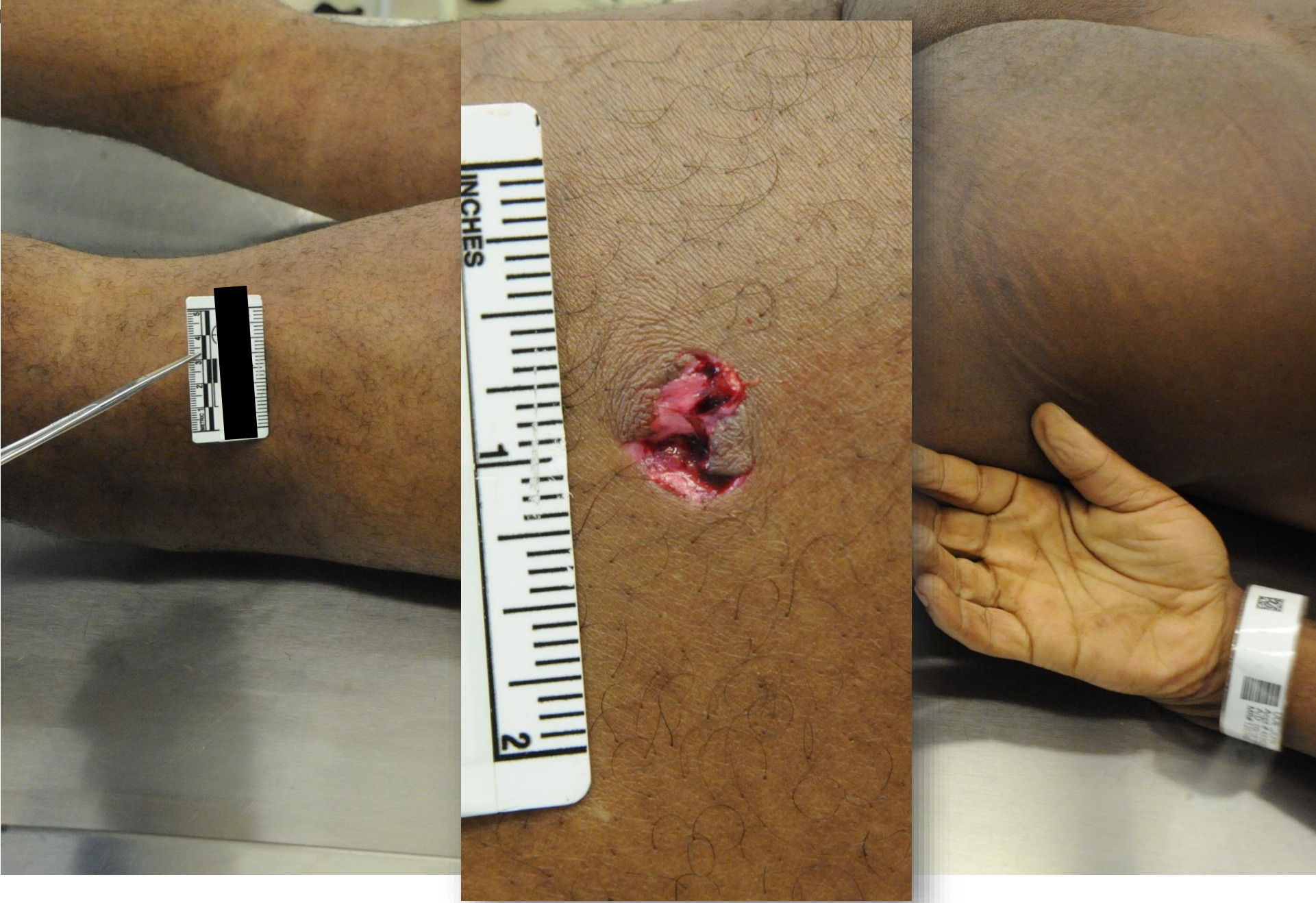














# CASE EXAMPLE

| CAUSE OF DEATH (See instructions and examples)   |  |
|--|--|
| 32. <b>PART I.</b> Enter the <u>chain of events</u> --diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary. |  |
| IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)   | a. <b>Gunshot Wounds of Neck, Torso, and Extremities</b> |
| Sequentially list conditions, if any, leading to the cause listed on line a. Enter the <b>UNDERLYING CAUSE</b> (disease or injury that initiated the events resulting in death) <b>LAST</b>  | Due to (or as a consequence of):                         |
|  | b. _____   |
|  | Due to (or as a consequence of):                         |
|  | c. _____   |
|  | Due to (or as a consequence of):                         |
|  | d. _____   |
| PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.   |  |
| 33. WAS AN AUTOPSY PERFORMED?  |  |

|                                   |  |
|-----------------------------------|--|
| 37. MANNER OF DEATH               |  |
| <input type="checkbox"/> Natural  | <input checked="" type="checkbox"/> Homicide     |
| <input type="checkbox"/> Accident | <input type="checkbox"/> Pending Investigation   |
| <input type="checkbox"/> Suicide  | <input type="checkbox"/> Could not be determined |

# The Violence Epidemic in the African American Community: A Call by the National Medical Association for Comprehensive Reform

Eva Frazer, M.D., Roger A. Mitchell, Jr., M.D., LaQuandra S. Nesbitt, M.D., M.P.H.,  
Mallory Williams, M.D., M.P.H., F.A.C.S., F.I.C.S., F.C.C.P., Edith P. Mitchell, M.D., F.A.C.P., F.C.P.P.,  
Richard Allen Williams, M.D., F.A.C.C., Doris Browne, M.D., M.P.H.

Eva Frazer, M.D., Roger A. Mitchell, Jr., M.D., LaQuandra S. Nesbitt, M.D., M.P.H.,  
Mallory Williams, M.D., M.P.H., F.A.C.S., F.I.C.S., F.C.C.P., Edith P. Mitchell, M.D., F.A.C.P., F.C.P.P.,  
Richard Allen Williams, M.D., F.A.C.C., Doris Browne, M.D., M.P.H.

providing information on the seemingly insurmountable, causes and effects of violence in the African American community of color. According to statistics from the Centers for Disease Control (CDC), the number one killer of black males ages 10–35 is homicide. Black females are indicating a higher rate of violence than any other group. Black females are four times more likely to be murdered by a boyfriend or girlfriend than their white counterparts, and although intimate partner violence has declined for both black and white females, black women are still disproportionately killed. In addition, anxiety and depression that can lead to suicide is on the rise among African American adolescents and adults. Through an examination of the role of racism in the perpetuation of the violent environment and an exploration of the effects of gang violence, intimate partner violence, child maltreatment and police use of excessive force, this work attempts to highlight the repercussions of violence in the African American community. The members of the National Medical Association have served the African American community since 1895 and have been advocates for the patient they serve for more than a century. This paper, while not intended to be a comprehensive literature review, has been written to reinforce the need to treat violence as a public health issue, to emphasize the effect of particular forms of violence in the African American community and to advocate for comprehensive policy reforms that can lead to the eradication of this epidemic. The community of African American physicians must play a vital role in the treatment and prevention of violence as well as advocating for our patients, family members and neighbors who suffer from the preventable effects of violence.

**Keywords:** Violence ■ Police use of force ■ Public health ■ Racism ■ Social determinants

**Author affiliations:** Eva Frazer, 1406 N. Kings Highway Suite 300, St. Louis, MO 63113, USA; Roger A. Mitchell, Office of the Chief Medical Examiner, District of Columbia, USA; George Washington Department of Pathology, USA; Howard University, Department of Surgery, Washington Department of Pathology, USA; LaQuandra S. Nesbitt, Department of Health, 401 E Street SW, Washington, DC 20004, USA; Mallory Williams, Division of Trauma, Critical Care & Surgical, USA; DC 20002, USA; Mallory Williams, Division of Trauma, Critical Care & Surgical, USA; Director of the Department of Surgery, Howard University Hospital, 2041 Georgia Ave NW, Washington, DC 20005, USA; Edith P. Mitchell, Medicine and Medical Oncology, Department of Medical Oncology, USA; Center to Eliminate Cancer Disparities, USA; Department of Medical Oncology, Sidney Kimmel Cancer Center at Jefferson, 1161<sup>st</sup> President National Diversity Affairs, 238 South 10th Street, B-5, Suite 302, Philadelphia, PA 19107, USA; Richard Allen Williams, 117<sup>th</sup> President National Medical Association, 3425 Clifton Pl, Endino, CA 91484, USA; Doris Browne, Browne and Associates Inc., 118<sup>th</sup> President National Medical Association, 6900 3rd Street NW, Washington, DC 20015, USA.

**Correspondence:** Roger A. Mitchell, Jr., M.D., Office of the Chief Medical Examiner, District of Columbia, USA, email: roger.mitchell@dc.gov

© 2017 by the National Medical Association. Published by Elsevier Inc. All rights reserved.  
<http://dx.doi.org/10.1016/j.jnma.2017.08.009>

Most recently, the NMA Statement on Police Use of Excessive and Unnecessary Force.<sup>1</sup> At the NMA 2015 Annual Convention & Scientific Assembly, in response to the killings of unarmed African American men, in particular, Eric Garner, Michael Brown and Freddie Gray, a resolution was passed by the House Delegates regarding lethal and sub-lethal injury resulting from law enforcement altercations. This resolution called for law enforcement agents to end the police practice of subjecting unarmed suspects to physical force that includes a 'chokehold' or placing the knees or body weight on a person's chest, neck or head, which can result in debilitating or deadly injury. In July 2016, the NMA Statement on Police Use of Force<sup>2</sup> was released in recognition of the continuing and growing number of killings of unarmed African Americans by police officers. The NMA further established the Working Group on Gun Violence and Police Use of Force, which was charged with advocating for a public health approach in addressing the broad topic of gun violence as well as confronting the ongoing problem of excessive and unnecessary use of force by police officers within communities of color. To facilitate these efforts, the NMA joined the Movement towards Violence as a Health Issue and endorses their recently released Framework for Action.<sup>3</sup>

Of equal importance is the continuing work to eradicate policies and social norms that create barriers for African Americans to achieve health equity in the United States. The paradigm, defined as the 'Social Determinants of Health', makes clear that understanding where one lives, works, plays and builds relationships will affect an



## NMA Position Paper on Violence

# Incidence and Cause of Potentially Preventable Death after Civilian Public Mass Shooting in the US

Check for updates

E Reed Smith, MD, Babak Sarani, MD, FACS, FCCM, Geoff Shapiro, NREMT-P, Stephen Gondek, MD, MPH, Lisbi Rivas, MD, Tammy Ju, MD, Bryce RH Robinson, MD, FACS, Jordan M Estroff, MD, FACS, John Fudenberg, MBA, Richard Amdur, PhD, Roger Mitchell, MD

**BACKGROUND:** The incidence and severity of civilian public mass shooting (CPMS) events continue to rise. Understanding the wounding pattern and incidence of potentially preventable death (PPD) after CPMS is key to updating prehospital response strategy.

**METHODS:** A retrospective study of autopsy reports after CPMS events identified via the Federal Bureau of Investigation CPMS database from December 1999 to December 31, 2017 was per-

# Incidence and Cause of Potentially Preventable Death after Civilian Public Mass Shooting in the US

Check for updates

E Reed Smith, MD, Babak Sarani, MD, FACS, FCCM, Geoff Shapiro, NREMT-P, Stephen Gondek, MD, MPH, Lisbi Rivas, MD, Tammy Ju, MD, Bryce RH Robinson, MD, FACS, Jordan M Estroff, MD, FACS, John Fudenberg, MBA, Richard Amdur, PhD, Roger Mitchell, MD

CME questions for this article available at <http://jacsme.facs.org>

Disclosure Information: Authors have nothing to disclose. Timothy J Eberlein, Editor-in-Chief, has nothing to disclose.

Drs Smith and Sarani contributed equally to this work.

Presented at the 2019 Annual Meeting of the Academic Surgical Congress, Houston, TX, February 2019.

Received January 5, 2019; Revised April 7, 2019; Accepted April 15, 2019.

From the Department of Emergency Medicine (Smith), Center for Trauma and Critical Care, Department of Surgery (Sarani, Gondek, Rivas, Ju, Estroff, Amdur), Emergency Medical Services Program (Shapiro), Department of Pathology (Mitchell), George Washington University, Office of Chief Medical Examiner (Mitchell), Washington, DC, Department of Surgery, Harborview Medical Center, University of Washington, Seattle, WA (Robinson), and Clark County Coroner, Las Vegas, NV (Fudenberg).

Correspondence address: Babak Sarani, MD, FACS, FCCM, Department of Emergency Medicine, George Washington University, 2150 Pennsylvania Ave NW, Suite 6B, Washington, DC 20037. email: [bsarani@mf.gwu.edu](mailto:bsarani@mf.gwu.edu)

The rising frequency of civilian public mass shooting (CPMS) events is a significant public health concern across the US.<sup>1-6</sup> The need to revise traditional police/fire/emergency medical services response paradigms first gained significant support after the Columbine High School shooting in 1999 and was re-invigorated after events such as the Century 16 Movie Theater shooting in Aurora, CO and the Sandy Hook Elementary School shooting.<sup>7</sup> Guidelines and procedures aimed at decreasing civilian deaths after mass casualty events were developed based on medical strategies that had been implemented successfully by the military on the battlefield.<sup>8</sup> These strategies were centered on rapid care at or near the point of wounding.<sup>9,10</sup> The push for immediate medical care, starting with non-medical personnel, and for rapid extrication to definitive trauma care has been championed nationally by professional and volunteer organizations.<sup>11,12</sup> It is furthered by

---

## CASE EXAMPLE

- 23 yo BM encountered police during the commission of armed robbery of a convenience store
- Witness state that he pointed a weapon at police while in pursuit.









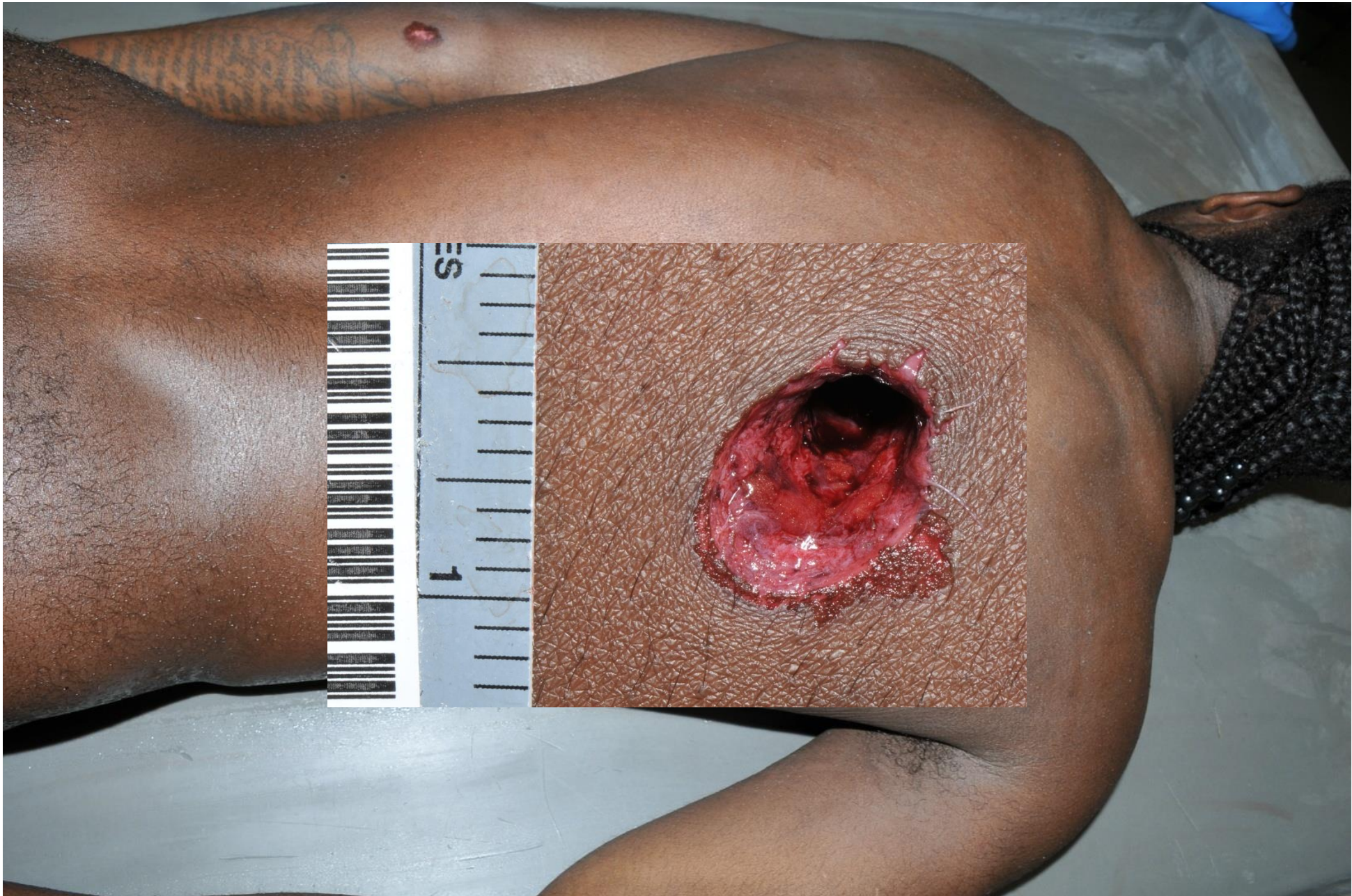




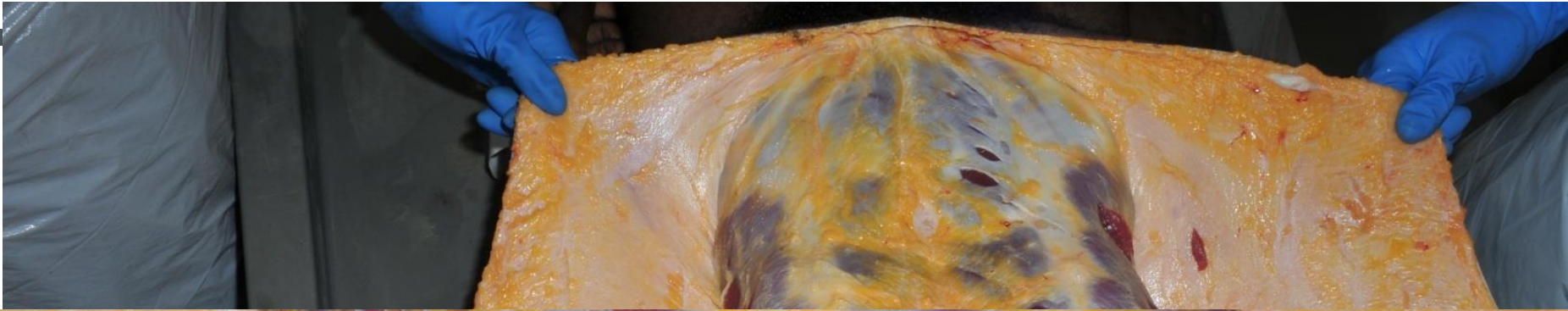




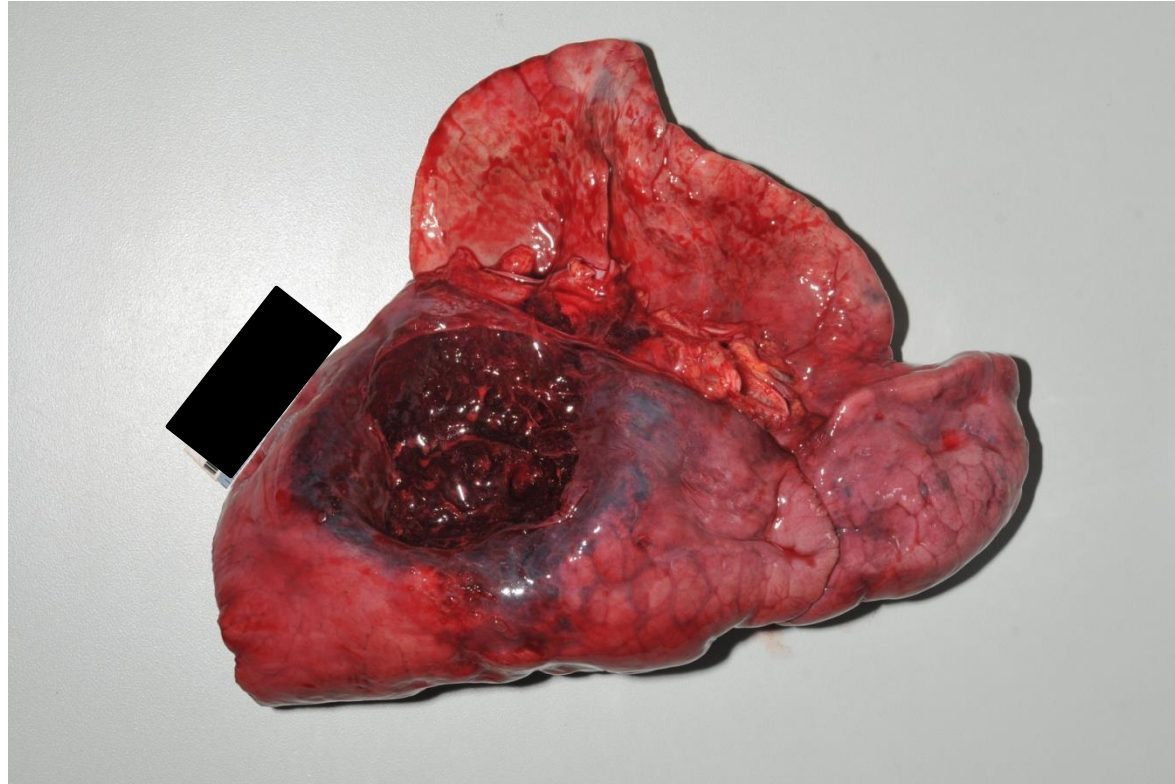
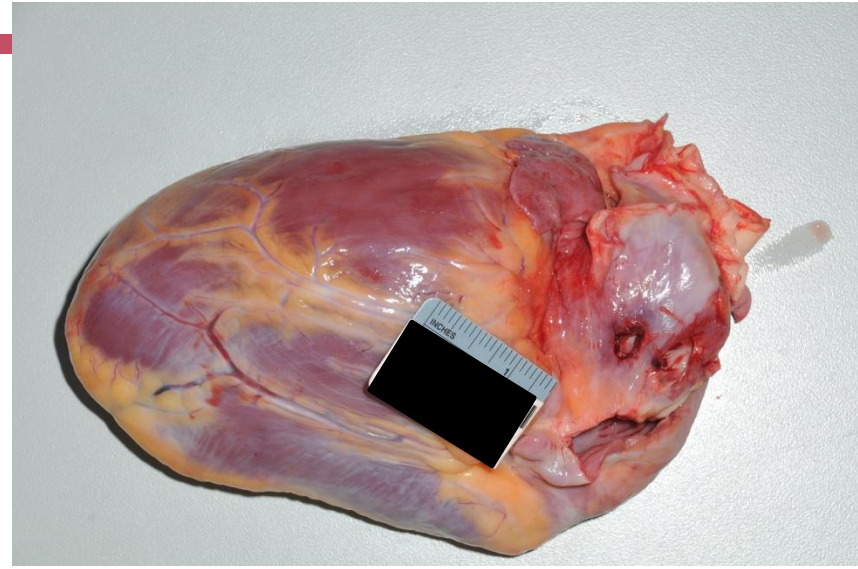
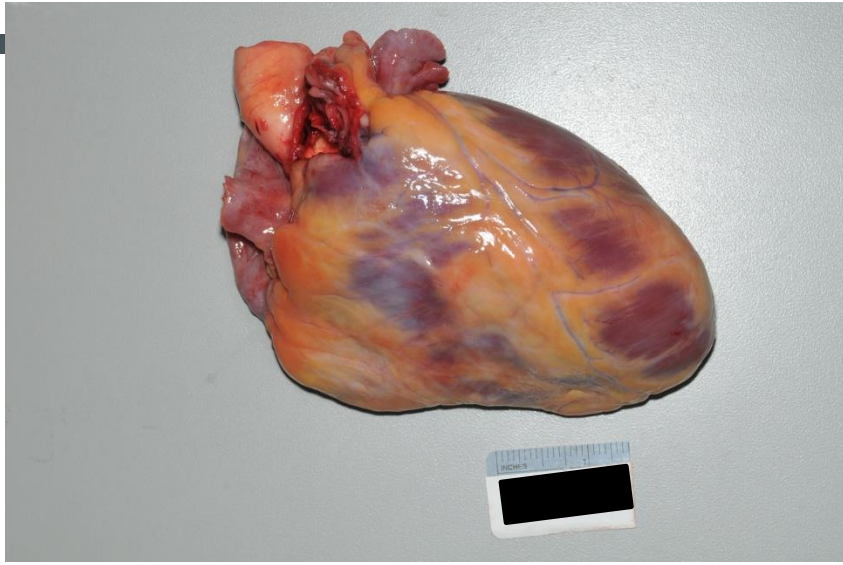




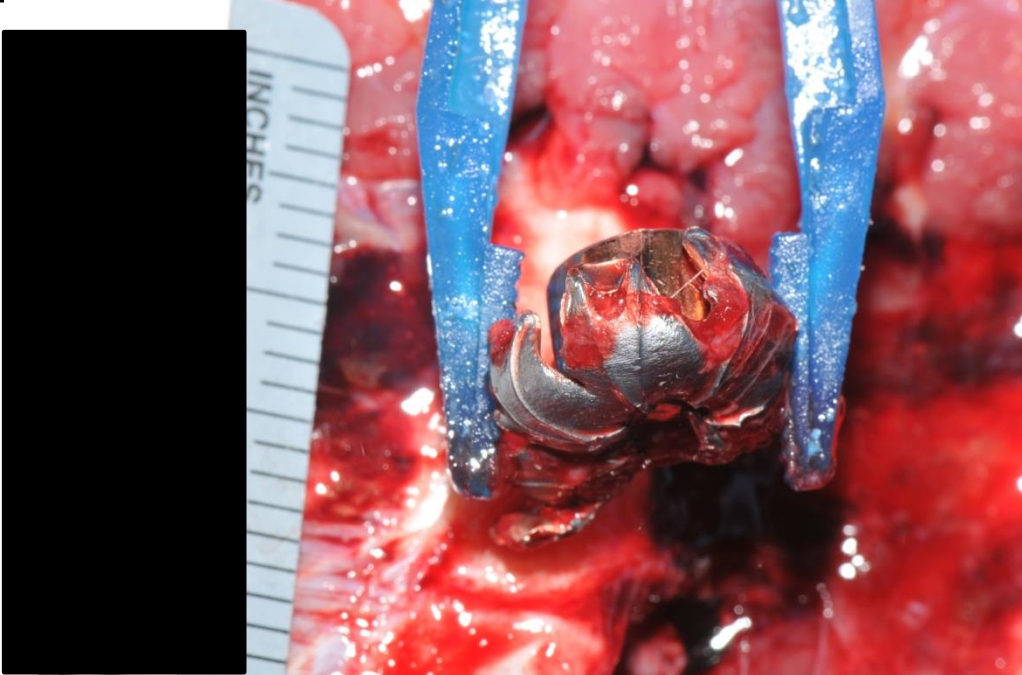












# CASE EXAMPLE

| CAUSE OF DEATH (See instructions and examples)   |                                  |
|--|----------------------------------|
| 32. <b>PART I.</b> Enter the chain of events--diseases, injuries, or complications--that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT ABBREVIATE. Enter only one cause on a line. Add additional lines if necessary. |                                  |
| IMMEDIATE CAUSE (Final disease or condition -----> resulting in death)   | a. <b>Gunshot Wound of Torso</b> |
|  | Due to (or as a consequence of): |
| Sequentially list conditions, if any, leading to the cause listed on line a. Enter the <b>UNDERLYING CAUSE</b> (disease or injury that initiated the events resulting in death) <b>LAST</b>  | b. _____                         |
|  | Due to (or as a consequence of): |
|  | c. _____                         |
|  | Due to (or as a consequence of): |
|  | d. _____                         |
| PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.   |                                  |
| 33. WAS AN AUTOPSY PERFORMED?  |                                  |

## 37. MANNER OF DEATH

- |                                   |  |
|-----------------------------------|--|
| <input type="checkbox"/> Natural  | <input checked="" type="checkbox"/> Homicide     |
| <input type="checkbox"/> Accident | <input type="checkbox"/> Pending Investigation   |
| <input type="checkbox"/> Suicide  | <input type="checkbox"/> Could not be determined |

What In-Custody Phase did this Death Occur?

**END GUN  
VIOLENCE**

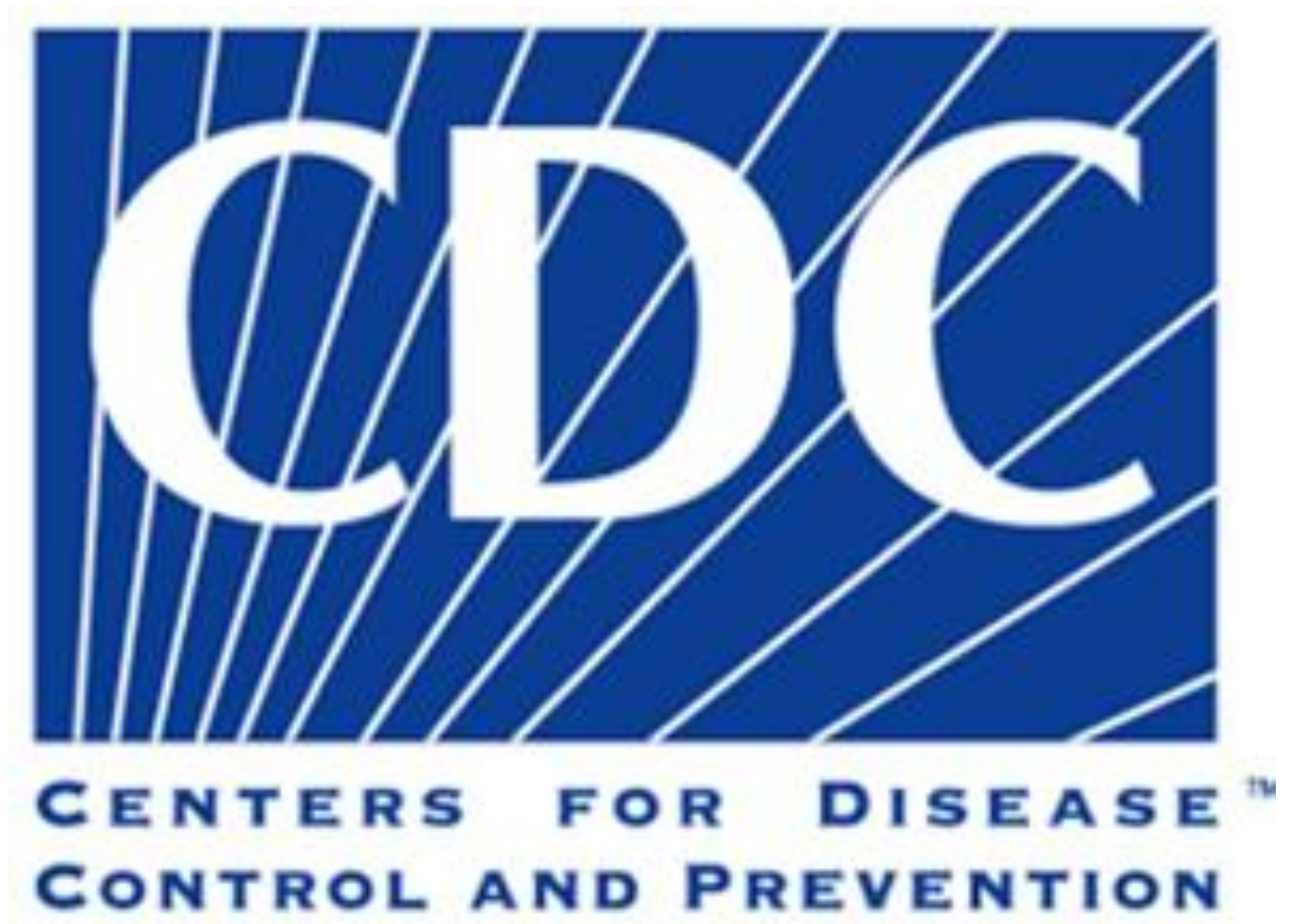


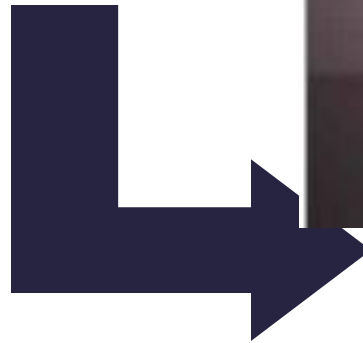


# BE AN ADVOCATE

## Message

- Specific federal appropriations **MUST be reinstated** to the Centers for Disease Control and Prevention for basic research into the public health effects of gun violence.



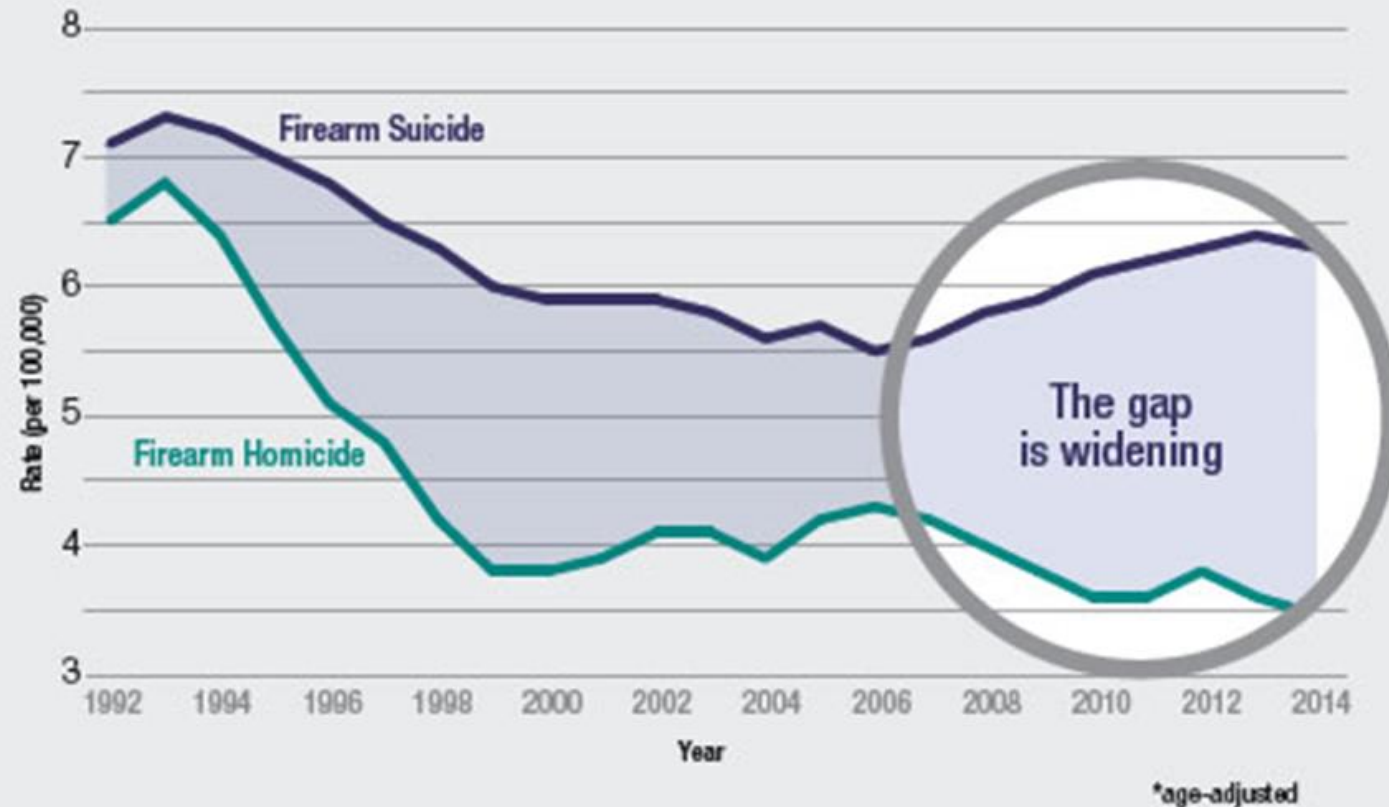




BE AN ADVOCATE

THERE ARE MORE  
FIREARM SUICIDES  
THAN FIREARM  
HOMICIDES

Trends in Firearm-Related Death Rates 1992–2014\*



# BE AN ADVOCATE

- 40% of all guns in the US are sold by private sellers and require no background check
- 30% of illegal guns are connected to gun shows

## Message

- Close Gun show loopholes
  - Require Mandatory Universal Background Checks w/ improved Mental Health exclusions criteria
    - Require Biannual Check

# BE AN ADVOCATE

## Message

- Require individuals to be 21 and older to purchase a firearm of any sort
- Require individuals to obtain a license or permit to purchase and possess a firearm
- Require mandatory training on handling and storage of the firearm
- Require Federal, State, and Local oversight of licensed and regulated gun dealers
- Ban high capacity magazines, assault rifles, and bump stocks





# RED FLAG LAWS

## BE AN ADVOCATE

- Make Violence Prevention a priority in your school
- Learn about Violence Prevention
- Become well versed in Social Determinants of Health
- Incorporate violence prevention concepts into your school projects
- Speak to your peers about the risk and protective factors of violence
- Ask your leadership representatives to convene a program/assembly on Violence Prevention
- Post Anti-Violence messaging on Social Media