Gun violence in the United States: Evidence and action

CLASS SESSIONS
Asynchronous, pre-recorded lecture: 60- to 90-min., viewed before each week’s synchronous period
Synchronous period engaging together: Wednesdays, 3:30pm – 5:00pm (Eastern Time)

INSTRUCTOR
Primary Instructor:
Ted Alcorn, MHS, MA

Additional Instructor:
Charles Branas, PhD

TEACHING ASSISTANT
Paul Reeping, MS

COURSE DESCRIPTION
More U.S. residents have been killed with guns since 1968 than died in all the wars since the country’s founding. Addressing this crisis means solving tenacious public health problems in the realms of science and of politics. In this course we will review the epidemiology of gun violence and the empirical foundations of efforts to address it through policy, study design, programmatic interventions, and environmental/physical design. We will consider obstacles to the rigorous study of gun violence as well as the innovative approaches researchers have adopted to overcome them, whether in the fields of epidemiology, medicine, criminology, or economics. And we will place all of this in the political and legal context that shapes our collective actions. Through lectures and discussion, students will become familiar with the main factors connected with firearm injury, the study of gun violence, the policy actors that have influenced the U.S. response to date, and the underlying beliefs and behaviors that define the U.S. relationship with guns. By reviewing both new and canonical research throughout the course, students will learn how diverse study designs are well-suited to shed light on different aspects of this subject.

ADAPTATION FOR REMOTE LEARNING
During the COVID-19 pandemic, for the safety of students, faculty, and other members of the university community, this course will be offered entirely online. Each week will be divided into a pre-recorded lecture of 60 to 90 minutes, which students can view asynchronously on their own time, and a 90-minute period of online engagement, in which students will convene synchronously to discuss questions raised by the lecture and readings.

PREREQUISITES
Completion of the MPH Core or permission of instructor

COURSE LEARNING OBJECTIVES
Students who successfully complete this course will be able to:

• Describe the epidemiology of gun violence in the U.S. including etiologies of domestic violence, community gun violence, suicide, mass shootings, and so-called “justifiable” homicides.
• Analyze the connections between gun culture (beliefs, behaviors), the epidemiology of firearm injuries, and interest groups’ goals and strategies.
• Describe leading approaches for reducing gun violence, the role different stakeholders play in their successful implementation, and the strength of evidence supporting them.
• Assess campaigns to enact gun violence prevention laws or implement non-legislative gun violence prevention programs.
• Critique studies of gun violence and of measures to prevent it, cognizant of obstacles that circumscribe the data available and approaches that are feasible.

ASSESSMENT AND GRADING POLICY
Student grades will be based on:

• Reading responses and engagement ....................... 30%
• Group data exercise........................................ 20%
• Final paper..................................................... 50%

Reading responses and engagement: By noon the day before our synchronous period together, students must prepare a brief, informal response to that week’s readings and post it to Canvas. These responses can be as little as 150 words and no more than 400 words and can adopt any format: drawing connections between readings, critiquing them, or articulating questions. They will not be graded on content or prose, but may be referenced during class. In the synchronous period together, students are expected to listen actively and offer their viewpoints. Disengagement will result in a reduction from the overall grade, whereas students who prepare reading responses and make active contributions in class showing mastery of concepts and methods will receive full points for engagement. A detailed rubric detailing the expectations around course citizenship and engagement will be distributed during the first discussion-period. If you have concerns, please contact an instructor early in the semester.

Group data exercise: Working in groups of 3–4, students will obtain and analyze epidemiological data related to gun violence morbidity and mortality from CDC’s Web-based Injury Statistics Query and Reporting System (WISQARS) or Wide-ranging Online Data for Epidemiologic Research (WONDER), which are portals to national data on gun-related fatalities. Students will receive a problem-set by the 4th week of class, and will then identify, acquire, and analyze data appropriate for answering the questions, producing analyses and visualizations of their findings. The finished product should be a brief written document with an explanation of the analyses pursued, documentation of the analyses themselves, and results yielded (with figures visualized). The final product is due by the 7th week of class. Assignments will be graded on thoughtfulness of analysis, accurate interpretation of data, organization and clarity of writing and visualizations, and attention to detail (including accurate spelling and grammar).

Final paper: Students will choose a topic for a final paper that draws on a topic or topics covered during the span of the course. Students might review one or some of their reading responses for a starting point, and then rely on required and optional course readings to support their arguments. The final product should be 2,000-3,000 words and could take several forms: It could be a policy brief, addressed to a specific policymaker of their choice, explaining the benefits or drawbacks of a particular approach to gun violence prevention, or an array of approaches to address a particular facet of gun violence. Or it could be an exploration of how a
particular epidemiological method or study design has been applied to gun violence, highlighting canonical papers where it has been employed and their limitations. The paper should cite sources (citations will not count towards word-count). Students must submit a <100-word statement of topic by the 9th week of class and the final paper by the 13th week of class. Assignments will be graded on clarity of writing, accurate and thoughtful employment of supporting evidence, relevance to content covered during the course, and quality of argument.

Grading
A+ Reserved for highly exceptional achievement.
A Excellent. Outstanding achievement.
A- Excellent work, close to outstanding.
B+ Very good. Solid achievement expected of most graduate students.
B Good. Acceptable achievement.
B- Acceptable achievement, but below what is generally expected of graduate students.
C+ Fair achievement, above minimally acceptable level.
C Fair achievement, but only minimally acceptable.
C- Very low performance.
F Failure.

COURSE REQUIREMENTS
Students are expected to complete all readings, to view asynchronous lecture materials, and to participate in the synchronous period together.

A majority of a student’s grade will be determined by their writing assignments, and those will be held to a high standard. They will be graded on clarity of writing, accurate and thoughtful employment of supporting evidence, relevance to content covered during the course, and degree to which they satisfy their specific form.

Late assignments will be penalized 10% per day late.

COURSE STRUCTURE
The course is organized in three sections. First it introduces the science of gun violence, to establish the scope of the topic from a public health perspective, challenges that epidemiologists will face in assessing it empirically, and the intersection of behaviors that heighten risk of injury but also codify cultural identities. Second, because “gun violence” is not one but a group of related problems all involving guns, the course reviews the epidemiology of major causes of firearm related injury and distinct empirical methods that have been applied to the study of each. Third, the course reviews strategies for addressing gun violence including the evidence supporting them and major outstanding questions for epidemiologists to tackle.

CUIMC/MSPH RESOURCES
There are potential topics in this class that may be troubling for some students. If you find yourself struggling with a topic, please feel free to reach out to the Instructors, the TA, and/or the following list of resources:

MSPH Office of Student Affairs
Marlyn Delva, Dean of Students
Eric Ratner, Director of Student Affairs
(emr2211)

Sarah Tooley, Associate Director of Student Support (st3146)
Office Location: ARB 1014
msph-osa@columbia.edu
212-342-3128

**Student Health Services**
Phone Number: (212) 305-3400
Hours: Monday & Tuesday: 8am-7pm, Wednesday & Thursday: 8am-4pm, and Friday: 9am-4pm
Address: 60 Haven Avenue, Tower 1, Lobby Level, Suite B234
Please visit the [Medical Services webpage](#).

**Mental Health Services**
Phone Number: (212) 305-3400
Hours: by appointment
Address: 60 Haven Avenue, Tower 1, First Floor, Suite 1D

**Emergencies**
If you or a friend have an immediate concern about suicide, call 212-305-3400 and request to speak with the on call clinician. You may also call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255) or walk yourself or friend to the nearest Emergency Room.
Please visit the [website](#).

**Center for Student Wellness**
Phone Number: (212) 305-3400
Hours: Monday - Wednesday: 10am to 7pm, Thursday: 10am to 6pm, and Friday: 10am to 5pm
Address: 50 Haven Avenue, Bard Hall, Suite 107 & Rm 101
Please visit the [website](#).

**Addiction Information & Management Strategies**
Phone Number: (212) 305-3400
Hours: Monday - Thursday: 9:30 am - 5:30 pm
Address: 50 Haven Avenue, Bard Hall, Suite 102
Please visit the [website](#).

**Sexual Violence Response**
Phone Number: (212) 854-4357 for 24/7/365 support
CUMC Location: 60 Haven Avenue, 206 Bard Hall, New York, NY 10032
Please visit the [website](#).

**Office of the University Chaplain**
Jewelnel Davis
University Chaplain and Associate Provost
Address: W710 Lerner Hall
Mailing Address: 2980 Broadway, MC 2008, NY, NY 10027
Phone Number: (212) 854-1493
Fax Number: (212) 854-5899
Email: chaplain@columbia.edu
Please visit the [website](#).

**Ombuds Office**
Medical Center
Address: 154 Haven Avenue, Room 412
Phone Number: (212) 304-7026
Please visit the [website](#)

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**MAILMAN SCHOOL POLICIES AND EXPECTATIONS**
Students and faculty have a shared commitment to the School’s mission, values and oath.
[mailman.columbia.edu/about/mission-history](http://mailman.columbia.edu/about/mission-history)

**Academic Integrity**
Students are required to adhere to the Mailman School Honor Code in the student handbook.
Disability Access
In order to receive disability-related academic accommodations, students must first be registered with the Office of Disability Services (ODS). Students who have, or think they may have a disability are invited to contact ODS for a confidential discussion at 212.854.2388 (V) 212.854.2378 (TTY), or by email at disability@columbia.edu. If you have already registered with ODS, please speak to your instructor to ensure that s/he has been notified of your recommended accommodations by Lillian Morales (lm31@columbia.edu), the School’s liaison to the Office of Disability Services.

COURSE SCHEDULE
Please see the lecture section of Canvas to download the readings and lecture slides.

<table>
<thead>
<tr>
<th>Session 1 – The science of gun violence: Asking better questions</th>
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<td><strong>9/9/20</strong></td>
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**Learning Objectives:**
1. Describe the epidemiology of firearm injury in the U.S.

**Readings:**


View this 9-minute video about basic study designs: https://pct.libguides.com/nhs/ebm/levels-of-evidence

**Optional readings:**

Everytown for Gun Safety. “Firearm Technology and Vocabulary.” Available at: https://every.tw/2H8H5y8


**Session 2 – The science of gun violence: measuring “gun culture” with surveys and ethnographic research**

**9/16/20**  
Gun violence and gun politics in the U.S. are preceded by a prevalent and durable culture of gun ownership and use.

**Learning Objectives:**

1. Describe patterns in firearm ownership, behaviors, and beliefs across demography and geography and over time, highlighting measurement error and gaps in research
2. Examine synergistic connections between gun behaviors possession, cultural identity, and political beliefs
3. Consider the ways in which surveys and qualitative research inform firearm-related research.

**Guest Participant:** Jennifer Carlson, associate professor of sociology and Government & Public Policy at the University of Arizona

**Assignments:** Interview a gun-owner

**Readings:**


**Optional readings:**

Pew Research Center. June 2017. “America’s Complex Relationship with Guns.” Available at: https://pewrsr.ch/2xfG4h7


Session 3 – Violence in focus: mass shootings

9/23/20 Mass shootings account for just 1% to 2% of total gun homicides but play a disproportionate role in the public’s understanding of gun violence and the policy responses to it.

Learning Objectives:
1. Compare different definitions of ‘mass shootings’, the societal responses to them (panic-buying, contagion), and consider the meaning these events have for policymakers.
2. Acquire and analyze CDC data on violent deaths.

Guest Participant: Jonathan Metzl, director of the Center for Medicine, Health and Society at Vanderbilt University

Readings:


Optional readings:
Film: Kim Snyder, *Newtown*, 2016. [Available for rental on Amazon/iTunes/Netflix; a screener can be provided on request.]


### Session 4 – Violence in focus: Gun violence in cities – risk and guns

**9/30/20** Cities bear a disproportionate burden of gun violence — together the 25 largest cities in the U.S. account for one in five of the nation’s gun homicides — and reflect deep racial disparities.

**Learning Objectives:**

1. Describe the etiology of gun violence in cities, and consider how durable patterns of violence are shaped by institutional racism.
2. Assess what is currently understood about the function of urban gun markets, and the contribution of network analysis to gun violence-related research.

**Guest Participant:** Shani Buggs, postdoctoral fellow at UC Davis Violence Prevention Research Program

**Readings:**


Optional readings:


Session 5 – Violence in focus: domestic violence with guns

10/7/20 More than half of women murdered in the United States are killed by intimate partners or family members — and more than half of intimate partner homicides of women are committed with guns.

Learning Objectives:

1. Examine the epidemiology of firearm violence by intimate partners or family members and the interplay with mass shootings and murder-suicides
2. Discuss how case-control study designs inform the study of risk factors for relatively rare outcomes like domestic violence gun homicide
3. Introduce state and federal legal framework for restricting access to guns by high-risk groups.
Readings:


Everytown for Gun Safety. 2015. “Domestic Abuse Protective Orders and Firearm Access in Rhode Island.” Available at: https://every.tw/2y8cKz1

Optional readings:


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Session 6 – Violence in focus: gun suicide and unintentional injury

10/14/20  The majority of gun deaths in the US are not homicides but suicides and many of them are committed by legal possessors, necessitating unique measures to reduce them — as well as rarer but equally tragic unintentional gun injuries.

Learning Objectives:

1. Explain the epidemiology of gun suicide deaths and the role lethal means play in suicide fatality.
2. Weigh the evidence around legislative and non-legislative measures for addressing them (including point of sale interventions, safe storage requirements, gun violence restraining orders, and lethal means counseling).
3. Describe the epidemiology of unintentional firearm injuries.
Guest Participant: Matt Miller, professor of public health, Northeastern University

Readings:


Optional readings:


**Session 7 – Violence in focus: Public carry, justifiable homicides, and Stand Your Ground laws**

10/21/20 The predominant reason Americans give for owning firearms has shifted from hunting and sportsmanship to self-defense. Beliefs about defensive gun use, and laws that tailor the justice system to it, have major implications for gun violence and the politics of preventing it.

**Learning Objectives:**
1. Review epidemiological research on defensive gun use and its limitations
2. Appreciate the rhetorical role of this research in gun politics, the expansion of ‘Stand Your Ground’ laws, and their impact on justifiable homicides by civilians

**Guest Participant:** Harel Shapira, associate professor of sociology, UT Austin

**Assignment:** Group data exercise due

**Readings:**


**Optional readings:**

Film: Abigail Disney, Kathleen Hughes, The Armor of Light, 2015. [Available for rental on Amazon/iTunes/Netflix; a screener can be provided on request.]


### Session 8 – Evidence into action: how public health research shapes and is shaped by gun politics

**10/28/20** Generating new knowledge is never apolitical, so impactful public health scientists must understand how their work is likely to be employed.

**Learning Objectives:**

1. Identify major “gun rights” and gun violence prevention groups and how they shape understanding of the issue by the public and policymakers.
2. Examine how interest groups have influenced how gun violence research is conducted and history and jurisprudence are interpreted.

**Guest Participant:** Kristin Goss, professor of public policy and political science, Duke University

**Readings:**


**Optional readings:**


Siegel, Reva B., "Dead or Alive: Originalism as Popular Constitutionalism in Heller" (2008). Faculty Scholarship Series. 1133. Available at: https://bit.ly/2LSy6Tx


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**Session 9 – Evidence into action: laws to keep guns out of “dangerous” hands**

**11/4/20** Legislative change is prominent among efforts to address gun violence. This session will consider its possibilities and limitations.

**Guest Participant:** Cassandra Crifasi, assistant professor of public health, Johns Hopkins Bloomberg School of Public Health

**Learning Objectives:**

1. Summarize the present risk-factor-based paradigm of U.S. gun laws.
2. Assess the existing criminal background check system and its shortcomings (abusive boyfriends, unlicensed sales).
3. Explain how time-series study designs and cohort studies have been employed to evaluate significant legislative interventions.
Readings:


Readings by group for in-class analysis and presentation:

- **Group 1**: Webster, Crifasi Vernick. n.d. “Effects of the Repeal of Missouri’s Handgun Purchaser Licensing Law on Homicides.” (See response by CPRC)

- **Group 2**: Crifasi et al "Effects of changes in permit-to-purchase handgun laws in Connecticut and Missouri on suicide rates"


Assignments: Submit topic for final paper

Optional readings:


**Session 10 – Police and policed: law enforcement responses to gun violence**

11/11/20

In the U.S., the preeminent (and best-funded) response to gun violence is policing, and law enforcement often view addressing gun violence as their top priority. In this session we will examine the evidence of the positive impact police can have on violence, and the harm their reaction to it can cause.

**Guest Participant:** Rod Brunson, professor of criminology, Northeastern University

**Learning Objectives:**

1. Examine the role that law enforcement play in solving gun crimes, preventing violence through proactive techniques, and gun-focused investigations and interventions.

2. Review the harms that the criminal justice system can cause, the epidemiology of law-enforcement involved shootings, and the relationship between police-community trust and violence prevention.

**Readings:**


**Optional readings:**


Session 11 – Evidence into action: Behavioral interventions to reduce gun violence in cities
11/18/20

Among the most evidence-based interventions for reducing gun violence are those seeking to directly reshape the norms of those at highest-risk of victimization and perpetration.

**Guest Participant:** Iesha Sekou, director, Street Corner Resources

**Learning Objectives:**
1. Compare interventions to reduce urban gun violence through shifts in social norms—including focused deterrence, violence interruption, and cognitive-behavioral therapy—highlighting challenges to implementing and replicating them.
2. Explain how quasi-experimental and natural experiments are used in gun violence research.

**Readings:**
Rose G (Department of Epidemiology, London School of Hygiene and Tropical Medicine, Keppel Street, London WC1E 7HT, UK). Sick individuals and sick populations. International Journal of Epidemiology 1985;14: 32–38.


Optional readings:
David Kennedy, Don’t Shoot: One Man, a Street Fellowship, and the End of Violence in Inner-City America (2012).


Film: Steve James, The Interrupters, 2011. Available online at: https://to.pbs.org/2EvelAT


**Session 12 – Evidence into action: Place-based interventions and gun violence**

12/2/20 Just as changes in the places, space, and environment have proven crucial in reducing motor vehicle accidents and addressing infectious disease, a growing body of research suggests place-based interventions have a leading role in preventing gun violence.

**Guest Participant:** Keith Green, director of LandCare, Pennsylvania Horticultural Society

**Assignments:** Take a 15-minute walk in your local park and note 3 things that you would change to improve health and safety for people there
Learning Objectives:

1. Understand and summarize research and programs on place-based change and gun violence.

2. Understand how randomized control trials can be used to study gun violence.

Readings:


Optional readings:


Session 13 – New frontiers of gun violence prevention

12/9/20 Although effective interventions for reducing gun violence exist, no researcher or policymaker believes we yet employ all the interventions necessary to eliminate gun violence as a serious public health concern. Drawing on the foundation of
knowledge built during the course, we will review new and emerging avenues for violence reduction, thinking critically about their feasibility from scientific and political standpoints.

**Learning Objectives:**

1. Examine vanguard policies for gun violence prevention such as gun licensing and registration, or expansive prohibitors on gun ownership including violent misdemeanors and alcohol-related crimes.
2. Describe the firearm manufacturing and retail industry and examine the role it might play in injury prevention, with historical context from car manufacturers and others.
3. Review advances in firearm related technology, including distributed manufacturing and personalized firearms and locking devices, and consider how they could shift the paradigm for gun violence prevention.

**Readings:**


Kaufman E., Morrison C.N., Branas C.C. “Never use alcohol, over-the-counter drugs or prescription drugs before or while shooting”. *JAMA Internal Medicine*, (in press), 2019.


**Assignments: Submit final paper**

Optional readings


