A Public Health Approach for Firearm Injury Prevention

Association of American Medical Colleges Webinar, September 12, 2019

Ronald M. Stewart, MD
American College of Surgeons
UT Health San Antonio-University Health System
Disclosures

• Medical Director of Trauma Programs for the American College of Surgeons
Thank You to the AAMC and the Medical and Public Health Community
Introduction

• Overview
• Principles
• Philosophy ➔ Stories ➔ Frame the Facts
• Scale of the problem
• Surveys of surgeons on policy and priorities
• Opportunities to work together
Committee on Trauma

97th Year of the Committee on Trauma

- Committee on Trauma - 100 members
- 10 US regions
  - 57 Committees on Trauma
- 2 Canadian regions
  - 8 Provincial Committees
- 1 Military region
  - 5 Committees on Trauma
- 4 International regions
  - 13 committees on Trauma
- > 3,500 members total
ACS Firearm Injury Prevention

• COT Injury Prevention and Control Committee
• COT Executive Committee
• Board of Regents Liaisons
  – Beth H. Sutton, MD FACS
  – James K. Elsey, MD FACS
  – Henri Ford, MD FACS
  – Lenworth Jacobs, MD FACS
• Firearm Strategy Team (FAST) Workgroup
• Future Trauma Leaders
• RAS Liaisons
• COT Members
Comprehensive Overview of COT Strategy

- Injury Prevention
  - Violence intervention
  - Firearm ownership as safe as possible
- Turning bystanders into immediate responders
- Optimal prehospital care
- Optimal trauma center care
- Optimal rehabilitative and reintegrative care
- Trauma system framework for disaster & mass casualty response

Requires:

- Engagement
- Partnership
- Data
- Research
- Education
- Advocacy and Communication
COT Guiding Principles for Firearm Injury Prevention

1. A medical/public health problem—not a political problem
2. Search for evidenced based violence prevention programs to implement
   550 ACS verified trauma centers in US
3. Forum for civil, collegial and professional dialogue—
   • Centered on developing consensus regarding how best to reduce firearm injuries and deaths
   • Consciously avoid forums or outlets which may lead to polarization
   • Inclusive, engagement with stakeholder groups across spectrum
Philosophy

Stories

Facts
In these things and by the very nature of your daily routine you are compelled to be philosophers...Philosophers rule the world. They do this today and they always have done it. The person of action may not know that this proposition is true. But that is beside the point.

Now there is good philosophy and indifferent or bad philosophy. Of these you must choose. In other words, you must find and express thoughtfully the personal equation of your lives...

John G. Bowman, Director of the American College of Surgeons 1916, SG&O
Philosophy
Core of the Profession

• We dedicate ourselves to the service of humanity, and most importantly we place the needs of the patient above those of the doctor.

• We will base our knowledge and actions on objective scientific truth as best we can determine it.

Richard Moulton, 1999 Annual Meeting of the Trauma Association of Canada.
Facts and Stories

“...many organizations— and rightly so— want to be data-driven. A high premium is placed on facts and data but these “facts” are really made up stories...facts are not the cause of upset or drama. Facts don’t cause stress. Drama and stress are caused by stories...This is liberating...

Once you understand that you and others make up stories all the time, and then believe that your stories are actually facts, you are free to shift. The shift move is to choose to hold your story lightly. Holding your story lightly means acknowledging that your story is YOUR story. It is not fact; it is not true; and you don’t need to be right. It is simply the way you see the world.”

Facts and Stories

“...many organizations— and rightly so— want to be data-driven. A high premium is placed on facts and data but these “facts” are really made up stories...facts are not the cause of upset or drama. Facts don’t cause stress. Drama and stress are caused by stories...This is liberating...

Once you understand that you and others make up stories all the time, and then believe that your stories are actually facts, you are free to shift. The shift move is to choose to hold your story lightly. Holding your story lightly means acknowledging that your story is YOUR story. It is not fact; it is not true; and you don’t need to be right. It is simply the way you see the world.”

Conflicting Polar Stories

Freedom

- Two contrasting narratives regarding firearms
  - Guns = Protection & Freedom
  - Guns = Violence and Limitation of Freedom
Polar Beliefs Personal Ownership of Firearms (AAST/EAST Members 2018)

- 36% Beneficial/critical liberty/right
- 8% Generally beneficial/important liberty
- 20% No strong opinion/uncertain
- 26% Generally harmful/limits liberty
- 10% Harmful/critically limits liberty
Growing More Divided

Percent who say it is more important to protect the right of Americans to own guns than to control gun ownership, by party.

Source: Pew Research Center  •  By The New York Times
Violence

How big is the problem?
Intentional Violent Injury

- Intentional harm to another person
  - Assault related violence
    - Homicide
- Intentional Self harm
  - Suicide
- All mechanisms
Intentional Violence

• 66,376 People in US Die Each Year of Intentional Violence
  – 182 deaths every day
  – 47,107 (71%) suicides
    • 23,854 (51%) firearm related
  – 19,269 (29%) homicides
    • 14,542 (75%) firearm related

• 38,396 deaths of total (58%) involve firearm

• Burden of the disease much larger than deaths alone
All Intentional Injury (all mechanisms) vs. Traffic Related Injury vs. Intentional Firearm Injury (Age Adjusted)
By Mechanism: What patients do US trauma centers see? How Big Is the Problem for Most Hospitals/Physicians?

2014 NTDB/TQIP N = 818,212

- Falls: 44
- Traffic: 33.5
- Firearms: 4
What is the overall burden of death in the US by mechanism?

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Deaths per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Vehicle</td>
<td>10.6</td>
</tr>
<tr>
<td>Firearm</td>
<td>10.5</td>
</tr>
<tr>
<td>Falls</td>
<td>10.4</td>
</tr>
</tbody>
</table>
Firearm Deaths in US 1979-2017
All Intentions in Adults & Children

CDC Wonder 2017 Accessed September 2019, crude rates per 100,000
Motor Vehicle Deaths vs Firearm Deaths Since 1950

Death Rates from Motor Vehicle Traffic Events and Firearms, 1950-2017

The Epidemiology of Firearm Violence in the Twenty-First Century US
Garen J. Wintemute, 10.1146/annurev-publhealth-031914-122535
Facts

• Intentional violence
  – 182 deaths per day
  – 58% firearm related
  – 42% other mechanisms

• Major problem in children and adults

• Burden of disease larger than the deaths

• Intentional violence (firearm and other) has not had same improvement as traffic related injury deaths
Questions of the ACS COT Firearm Injury Prevention Program

• Why?

• How?

• What?

• Where do we agree?

• What can you do to help?
Is the American College of Surgeons Committee on Trauma Involved in Firearm Injury Prevention? Why?
Patients, Family Members, Colleagues and Friends, Communities and Neighbors
Why?

To eliminate needless death and suffering of our patients, our families, our neighbors and our communities at home and across the globe.
How?
Trauma and Emergency Health System Approach to Complex Problems

- Inclusive
- Dialogue and consensus centered upon: What is the right thing to do for the patient?
- Timely, Structured, Cooperation and Communication
- Bias for action
We believe that what pulls us apart today, whether in business, the military, or politics, is exclusion...

Here’s our bottom line. Inclusion is harder and can be slower, but it is a necessary precondition for achieving effective, efficient, and enduring solutions to complex problems.

Inclusive, Consensus Based Approach

We believe that what pulls us apart today, whether in business, the military, or politics, is exclusion...

Here’s our bottom line. Inclusion is harder and can be slower, but it is a necessary precondition for achieving effective, efficient, and enduring solutions to complex problems.

Inclusive, Consensus Approach

Requires:
Freedom with Responsibility

Generates
Trust

Leads to better teams and durable solutions
Is a common, inclusive American narrative possible?
Committee on Trauma

Stewart RM, Kuhls DA, Rotondo MF and Bulger EM
DOI: https://doi.org/10.1016/j.jamcollsurg.2018.04.006
What do we believe?
Where do we agree?
Policy.

Most difficult for people to agree.

Where do we agree?
Surveys of Surgical Groups

• ACS Committee on Trauma
• ACS Board of Governors
• American Association for the Surgery of Trauma
• Eastern Association for the Surgery of Trauma
• American College of Surgeons – All members
• Made survey tools available to other groups
All Respondents Importance of Supporting Legislation

Figure 2. Importance of ACS Supporting Firearm Legislation

Mean = 4.1

- Not at all important: 9.3%
- Slightly important: 5.1%
- Moderately important: 10.8%
- Very important: 17.3%
- Extremely important: 57.5%
All Respondents Benefit and Liberty

Figure 1. Whether or not Firearms are Beneficial and Protect/Limit Personal Liberty
Firearm Surveys: Policy Issues
Greatest Support and Respondents Not Divided

Preventing people with serious mental illness from purchasing firearms
90-95% Support

Increasing penalties for dealers or purchasers who sell firearms through illegal means or bypassing background checks
87-96% Support

Enhancing the National Instant Criminal Background Check System (NICS
85% Support

Committee on Trauma
Firearm Surveys: Background Checks
Support and Respondents Not Divided

Mandatory background checks using the FBI’s NICS conducted by private sales between individuals ----
74.3% - 89.9% Support

Mandatory background checks using the FBI’s NICS including those involving all transfers (e.g., gift or loan) of a firearm between private individuals ----
67% Support
Firearm Surveys: Policy Issues
Greatest Support and Respondents Not Divided

Enabling law enforcement to temporarily remove firearms from someone who is deemed to be an imminent threat to themselves or others, as long as due process is followed
85.5% Support

Mandatory prosecution of convicted felons who are unlawfully attempting to purchase a firearm or body armor
80.8% - 94.1%
Firearm Surveys: Policy Issues
Greatest Support and Respondents Not Divided

Improving mental health screening and treatment for Americans to help reduce firearm related injuries
84.1% - 96.8% Support

Advocating for unrestricted, non-partisan firearm injury and firearm injury prevention research by federal agencies (CDC, NIH, AHRQ, etc.) with the goal of better understanding and preventing firearm injury, death and disability.
77% - 92% Support
Challenges

• Large scope
• Complex
• Multifaceted
  – Self harm
  – Interpersonal violence
    • Intimate partner violence
  • Crime
    – Mass violence
• Structural Violence
• Political polarization
• Little to no funding
Concrete Steps We Can Do to Make Progress
Engage Firearm Owners as a Part of the Solution

Surgeons — many of them gun owners — recommend new gun-safety approaches

“People tend to change or moderate their position on a closely held belief when the prevailing argument comes from a trusted insider.”

Jeremy Faust MD,
Washington Post, November 14, 2018
Recommendations from the American College of Surgeons Committee on Trauma’s Firearm Strategy Team (FAST) Workgroup: Chicago Consensus I

Cynthia L Talley, MD, FACS, Brendan T Campbell, MD, FACS, Donald H Jenkins, MD, FACS, Stephen L Barnes, MD, FACS, Richard A Sidwell, MD, FACS, Gary Timmerman, MD, FACS, Ronald I Gross, MD, FACS, Michael Coburn, MD, FACS, Jeffrey A Bailey, MD, FACS, Alexander Eastman, MD, FACS, James Ficke, MD, FACS, Eric Kuncir, MD, FACS, Robert W Letton, MD, FACS, Brian J Eastridge, MD, FACS, Amy E Liepert, MD, FACS, Alison Wilson, MD, FACS, Danny Robinette, MD, FACS, James W Davis, MD, FACS, Christian Shalgian, BA, Holly Michaels, MPH, Mark C Weissler, MD, FACS, Deborah A Kuhls, MD, FACS, Eileen M Bulger, MD, FACS, Ronald M Stewart, MD, FACS
ACS COT FAST Workgroup Recommendations

1) Robust background check for all purchases and all transfers of firearms

2) Support firearm registration and implementation of an electronic database for all registered firearms

3) Reassessment of the firearms designated within each of the NFA classifications...with consideration given to reclassification of high capacity, magazine-fed, semi-automatic, high velocity firearms

4) Formal gun safety training for all new gun owners

5) Direct adult supervision in the use of firearms for children younger than 12 years and indirect supervision for children between the age of 12 and 18 years, where not already state-regulated.

6) Requirement for safe and controlled firearm storage. Owners not providing reasonable, safe firearm storage are responsible for adverse events related to discharge of their firearm(s)

7) Individuals deemed an imminent threat to themselves or others should have ownership temporarily or permanently restricted based on due process
8) Development of firearm technology that would significantly reduce the risk of self-harm, prevent unintentional discharge, and prevent unintended use.

9) Recommend treating mass shootings as terrorism and support and encourage domestic law-enforcement efforts and strategies (within the limits of Fourth Amendment protections) to predict, detect, and deter future mass firearm violence.

10) Firearm ownership should be made safer through the use of innovative technology such as that used in automobile safety.

11) Non-partisan research for firearm injury, including prevention, must be federally funded.

12) The public, professionals in law enforcement, and the press should take steps to eliminate notoriety of the shooter.

13) Recognition of mental health warning signs with early referral.
Committee on Trauma

Improve Firearm Safety

Gun Safety and Your Health

A proactive guide to protect you and those around you

Disposing of an unwanted gun

Who is at a higher risk for injury with a gun?

STORING AMMUNITION (Bullets) away from guns

Storage at a safe, remote location

Safe gun storage

Safe gun handling

American College of Surgeons

Inspiring quality, highest standards, better outcomes

100+ years
Organizations with a Mission to Increase Research Funding

- AFFIRM
- NTI/CNTR
Research

• Advocacy for funding to match burden of the disease
• Violence control research
  – Understanding fundamental cause
  – Develop evidenced based strategies to reduce violence & firearm injury
  – Needs your expertise, leadership and advocacy
• Firearm safety research
Address Structural Violence

• *Structural violence* refers to the ways that our social structures put individuals and populations in harms way.

Structural Violence and Trauma Outcomes: An Ethical Framework for Practical Solutions

Philip H. Sossenheimer, BA, Michael J. Andersen Jr., BS, Max H. Clermont, MPH, Claire V. Hoppenot, MD, Alejandro A. Palma, MD, Selwyn O. Rogers Jr., MD, MPH, FACS

DOI: [https://doi.org/10.1016/j.jamcollsurgen.2018.08.185](https://doi.org/10.1016/j.jamcollsurgen.2018.08.185)
Improving Social determinants of health to Attenuate Violence ISAVE

Poverty  🧺 🧶
Inequity  ⬅️
Low social capital  🤝
Hopelessness
Violence intervention programs: A primer for developing a comprehensive program for trauma centers

by Rochelle A. Dicker, MD, FACS; Barbara A. Gaines, MD, FACS; Stephanie Bonne, MD, FACS; Thomas Duncan, DO, FACS; Pina Violano, PhD, MSPH, RN-BC, CCRN, CPS-T; Michel Aboutanos, MD, MPH, FACS; Lisa Allee, MSW, LICSW; Peter A. Burke, MD, FACS; Peter Masiakos, MD, FACS; Ashley Hink, MD; Deborah A. Kuhls, MD, FACS, FCCM; and David Shapiro, MD, FACS
Forty-seven Organizations Support Nine Consensus Recommendations

American Academy of Family Physicians (AAFP)
American Academy of Orthopaedic Surgeons (AAOS)
American Academy of Pediatrics (AAP)
American Association for the Surgery of Trauma (AAST)
American Association of Neurological Surgeons (AANS)
American College of Emergency Physicians (ACEP)
American College of Obstetrics and Gynecology (ACOG)
American College of Physicians (ACP)
American College of Radiology (ACR)
American College of Surgeons (ACS)
American Congress of Rehabilitation Medicine (ACRM)
American Foundation for Firearm Injury Reduction (AFFIRM)
American Geriatrics Society (AGS)
American Medical Association (AMA)
American Medical Women’s Association (AMWA)
American Public Health Association (APHA)
American Pediatric Surgical Association (APSA)
American Psychiatric Association (APA)
American Psychological Association (APA)
American Society of Plastic Surgeons (ASPS)
American Surgical Association (ASA)
American Spinal Injury Association (ASIA)
American Trauma Society (ATS)
Association of American Medical Colleges
Association of Academic Chairs of Emergency Medicine (AACEM)
Association for Academic Surgery (AAS)
Council of Medical Specialty Societies (CMSS)
Cure Violence
The Eastern Association for the Surgery of Trauma (EAST)
Emergency Nurses Association (ENA)
Injury Free Coalition for Kids (IFCK)
National Association of Emergency Medical Technicians (NAEMT)
National Medical Association (NMA)
National Network of Hospital-based Violence Intervention Programs (NNHVIP)
National Trauma Institute (NTI)
Orthopaedic Trauma Association (OTA)
Pediatric Trauma Society (PTS)
Safe States Alliance
Society for Academic Emergency Medicine (SAEM)
Society for American Gastrointestinal and Endoscopic Surgeons (SAGES)
Society for the Advancement of Violence and Injury Research (SAVIR)
Society of Black Academic Surgeons (SBAS)
Society of Critical Care Medicine (SCCM)
Society of Trauma Nurses (STN)
Trauma Center Association of America (TCAA)
ThinkFirst National Injury Prevention Foundation
Western Trauma Association (WTA)
Committee on Trauma


Power of Collaboration
- Leading Professional Organizations in US
- Unity of Purpose
  - Reducing firearm injuries, disabilities and deaths
  - Sharing best practices
  - Implementation of Interventions
  - Building consensus

47 Organizations Support All Statements:
- Firearm injury in the US is a public health crisis
- Public health & medical approach is required
- Research needed to better understand the root causes of violence, identify people at risk, and determine the most effective strategies for firearm injury prevention
- Federal & philanthropic research funding must match disease burden
- Engaging firearm owners & populations at risk is critical in developing programs & policies
- Healthcare providers should be encouraged to counsel patients & families regarding firearm safety & safe storage
- Screening for the risk of depression, suicide, intimate partner violence, & interpersonal violence should be conducted across all healthcare settings
- Healthcare systems must engage the community in addressing social determinants of disease, which contribute to structural violence
- Our professional organizations commit to working together and continuing to meet in order to ensure the health and well-being of our fellow Americans

*Abbreviated version of consensus statements (see document)

Public Health Interventions
- Firearm Safety
- Research Funding
- Lethal Means Safety
- Safe Storage
- Counseling
- Social Determinants of Health
- Violence Intervention
- Mental Health
- Health Policy


DOI: https://doi.org/10.1016/j.jamcollsurg.2019.05.018
Summary

• **Violent Intentional Injury is the most neglected public health problem in America.**

• Immediate Opportunities:
  – Commit to *responsibility with action*
  – Advocate for a public health approach
  – *Work together* to reduce firearm injury
    - Understanding and reducing violence
    - Firearm ownership as safe as possible
  – Advocate for *research funding to match burden of the disease*
  – Address SDH/Structural Violence—Violence intervention programs
  – Policy development—Engage firearm owners and vulnerable communities as a part of solution

Requires Building Bridges and Partnerships

Common American narrative
Discussion