Survey of the American College of Surgeons Committee on Trauma Members on Firearm Injury: Consensus and Opportunities


American College Of Surgeons Committee on Trauma Injury Prevention & Control Committee
Published in the Journal of Trauma and Acute Care Surgery

- COT survey findings published in June 2016; Volume 80, Issue 6

- “Firearm injury prevention: A consensus approach to reducing preventable deaths”

- Authors: Ronald M. Stewart, MD and Deborah A. Kuhls, MD
Current COT Approach to Firearm Injury Prevention

- Advocating for a public health/trauma system approach to firearm injury prevention

- Implementing evidence-based firearm violence prevention programs through our network of trauma centers

- Fostering and providing a forum for a civil, collegial and professional dialogue within the COT – goal of moving towards a consensus regarding interventions aimed at reducing firearm injuries and deaths
  - Host a Town Hall on Firearm Injury
  - In preparation, survey COT members
  - Actively avoiding discussions in forums or outlets which may lead to conflict and polarization
Background

- Personal liberty and personal safety – highly valued
- Polarized views on firearms:
  - Freedom & Safety
  - OR -
  - Limitation of Freedom & Violence
What patients do our trauma centers see?

Percentage of 2014 NTDB/TQIP Patients by Mechanism, N = 818,212

- Fall: 44%
- Traffic: 33.5%
- Firearms: 4%
What is the burden of death in the U.S. by mechanism of injury?

CDC National Center for Health Statistics, 1999-2014
Motor Vehicle versus Firearm Deaths

The Epidemiology of Firearm Violence in the Twenty-First Century US Garen J. Wintemute, 10.1146/annurev-publhealth-031914-122535
Adults - Firearm death all intents (Age 15-85+)

CDC Wonder 2014 Accessed February 2016, crude rates per 100,000
Children – Firearm death all intents (Ages 0-14)

CDC Wonder 2014 Accessed February 2016, crude rates per 100,000
As children age, and intentional mechanisms of injury become more prominent, the rate of firearm injuries increase.
Fatal injuries, ages 10-14 years, 2014

FIREARMS are the **second leading mechanism** of fatal injury in 10-14 year old children.
Incidence and intent of firearm fatalities by location

Homicide

Suicide

2004-2010, death rates per 100,000 population

High
Moderate
Low

Reports for All Ages include those of unknown age.
* Rates based on 5% of fewer deaths may be unstable. States with these rates are cross-hatched in the map (see legend above). Such rates have an asterisk.

Produced by the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
Data Sources: NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.

Ages include those of unknown age.
or fewer deaths may be unstable. States with these rates are cross-hatched in the map (see legend above). Such rates have an asterisk.

Produced by the Statistics, Programming & Economics Branch, National Center for Injury Prevention & Control, CDC
NCHS National Vital Statistics System for numbers of deaths; US Census Bureau for population estimates.
Cost of Firearm Injuries

Societal cost of firearm injury: 174.1 billion

Firearm-Related Injury and Death in the United States: A Call to Action From 8 Health Professional Organizations and the American Bar Association

Steven E. Weinberger, MD; David B. Hoyt, MD; Hal C. Lawrence III, MD; Saul Levin, MD, MPA; Douglas E. Henley, MD; Errol R. Alden, MD; Dean Wilkerson, JD, MBA; Georges C. Benjamin, MD; and William C. Hubbard, JD

Internists’ Attitudes Toward Prevention of Firearm Injury

Renee Butkus, BA, and Arlene Weissman, PhD

.organizational principles to guide and define the child health care system and/or improve the health of all children

Policy Statement

Firearm-Related Injuries Affecting the Pediatric Population

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN

American College of Surgeons
Inspiring Quality: Highest Standards, Better Outcomes

THE COMMITTEE ON TRAUMA
Addressing the Challenge

- COT Survey Goals:
  - Evaluate member opinions about firearm ownership, freedom, responsibility, and policy development
  - Identify areas of agreement and disagreement within COT
  - Develop consensus-based approach to decreasing firearms injuries and death leveraging trauma centers in collaboration with community organizations
  - Use survey results to guide firearm injury policy development
Methods

- IRB Approval
- 32 item anonymous survey, Qualtrics
- 254 US COT members
- December 2015 - February 2016
- Results extracted by ACS Staff
- De-identified
  - State information removed; coded to CDC Region
Data Analysis

- SPSS for Descriptive Statistics
  - $\chi^2$, Fisher’s exact test (categorical)
  - Nonparametric test (ordinal)
  - Statistical significance <.05

- Qualitative analysis of open-ended question
  - Two independent reviewers
Results

- Response rate 93% (237 of 254)
  - 88% Male; Mean age 52
  - 85% White
  - 88% Married
  - 58% Children in home
  - 29% Military experience
  - 88% Acute Care, Trauma, General or Pediatric Surgery
  - 43% Firearm(s) in home
  - 33% Personal experience with family or friend injured or killed from firearm injury
### Demographic Characteristics of COT Members with Firearms in the Home

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Firearm in Home (n)</th>
<th>Firearm in Home (%)</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>90/207</td>
<td>43.5%</td>
</tr>
<tr>
<td>Female</td>
<td>11/29</td>
<td>37.9%</td>
</tr>
<tr>
<td>White</td>
<td>91/201</td>
<td>45.3%</td>
</tr>
<tr>
<td>Black</td>
<td>2/10</td>
<td>20%</td>
</tr>
<tr>
<td>Asian</td>
<td>3/13</td>
<td>23.1%</td>
</tr>
<tr>
<td>Other race</td>
<td>5/13</td>
<td>38.4%</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>0/8*</td>
<td>0%*</td>
</tr>
<tr>
<td>Not Hispanic/Latino</td>
<td>94/213*</td>
<td>44.1%*</td>
</tr>
<tr>
<td>Married</td>
<td>90/209</td>
<td>43.1%</td>
</tr>
<tr>
<td>Not Married</td>
<td>10/23</td>
<td>43.5%</td>
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<tr>
<td>No Military Experience</td>
<td>62/168**</td>
<td>36.9%**</td>
</tr>
<tr>
<td>Military Experience</td>
<td>39/69**</td>
<td>56.5%**</td>
</tr>
<tr>
<td>Northeast</td>
<td>5/35***</td>
<td>14.3%***</td>
</tr>
<tr>
<td>South</td>
<td>44/78***</td>
<td>56.4%***</td>
</tr>
<tr>
<td>Midwest</td>
<td>27/56***</td>
<td>48.2%***</td>
</tr>
<tr>
<td>West</td>
<td>25/66***</td>
<td>37.9%***</td>
</tr>
<tr>
<td>Experience Firearm Injury/Death</td>
<td>41/78*</td>
<td>32.9%*</td>
</tr>
<tr>
<td>No Experience Firearm Injury/Death</td>
<td>60/159*</td>
<td>59.4%*</td>
</tr>
</tbody>
</table>

* *p<.05, **p<.01, ***p<.001, comparing No to Yes. Red text indicates where p was significant.*
Level of Priority ACS Should Give to Reducing Firearm Injuries

- **88%** indicated *High or Highest Level*
  - Varied by Military Experience (77.9%)
  - Varied by Firearms in the Home (74.7%)
Private Ownership of Firearms

- **28.7%** Beneficial/critical liberty/right
- **24.3%** Generally beneficial/important liberty
- **16.5%** No opinion
- **22.6%** Generally harmful/limits liberty
- **7.8%** Harmful/critically limits liberty

53% + 30% = 83%

- Varied by Military Experience
- Varied by Firearms in the Home
Healthcare Professional Right to Counsel Patients

- Should healthcare professionals be allowed to counsel patients (or parents of patients) about how to prevent gun-related injuries?
  - **95% YES**
  - No difference when analyzed by gender, military experience, or firearm in the home
Research Funding

Should the NIH, CDC, and other sources of research funding be allowed to fund research on the epidemiology and prevention of gun-related injuries?

- **96% Yes**
  - Varied by Firearm in the Home (90.7%, p<.001)
  - Did not vary by gender or military experience
Rate Opinion on the ACS Initiating Efforts to Advocate for or Support Legislation in 15 Areas:

- Analyzed Results by:
  - Firearms in Home
  - Gender
  - Military Experience

- Mann Whitney U Test where significance is p<.05
## Advocacy Initiatives and Agreement among COT Members Across Demographic Groups

<table>
<thead>
<tr>
<th>% COT members who strongly agree/agree with advocacy in the following areas</th>
<th>All COT Members</th>
<th>No Home Firearm</th>
<th>Yes Home Firearm</th>
<th>No Military</th>
<th>Yes Military</th>
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<tbody>
<tr>
<td>Improve mental health screening &amp; treatment to reduce suicides &amp; gun violence</td>
<td>93%</td>
<td>95%</td>
<td>91%</td>
<td>95%</td>
<td>89%</td>
<td>94%</td>
<td>90%</td>
</tr>
<tr>
<td>Identify &amp; implement evidence-based injury prevention programs</td>
<td>93%</td>
<td>97%*</td>
<td>87%*</td>
<td>99%</td>
<td>85%</td>
<td>92%</td>
<td>96%</td>
</tr>
<tr>
<td>Mandatory prosecution of convicted felons who attempt to purchase a firearm</td>
<td>92%</td>
<td>93%</td>
<td>91%</td>
<td>93%</td>
<td>90%</td>
<td>92%</td>
<td>93%</td>
</tr>
<tr>
<td>Increase penalties when guns provided to others illegally including dealers</td>
<td>92%</td>
<td>98%*</td>
<td>85%*</td>
<td>95%</td>
<td>86%</td>
<td>92%</td>
<td>93%</td>
</tr>
<tr>
<td>Prevent people with mental health illness from purchasing Firearms</td>
<td>92%</td>
<td>96%*</td>
<td>87%*</td>
<td>93%</td>
<td>88%</td>
<td>93%</td>
<td>86%</td>
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*p < .05: *Firearm vs No Firearm in Home; **Military vs No Military Experience; ***Male versus Female. Red text indicates areas where p was significant.*
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<tr>
<td>Make funds available for research to understand and prevent gun violence</td>
<td>92%</td>
<td>99%*</td>
<td>82%*</td>
<td>92%</td>
<td>91%</td>
<td>91%</td>
<td>93%</td>
</tr>
<tr>
<td>Preserve the right of health care providers to counsel patients on safe Firearm ownership</td>
<td>90%</td>
<td>95%*</td>
<td>84%*</td>
<td>92%</td>
<td>85%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>Background checks &amp; license/permit for purchases including shows &amp; private sales</td>
<td>86%</td>
<td>96%*</td>
<td>72%*</td>
<td>87%</td>
<td>83%</td>
<td>85%***</td>
<td>93%***</td>
</tr>
<tr>
<td>Prevent people who are on the US No Fly list from purchasing Firearms</td>
<td>84%</td>
<td>88%*</td>
<td>79%*</td>
<td>83%</td>
<td>90%</td>
<td>82%</td>
<td>90%</td>
</tr>
<tr>
<td>Require safety features, including child-proof locks &amp; “smart gun” technology</td>
<td>83%</td>
<td>96%*</td>
<td>66%*</td>
<td>92%</td>
<td>86%</td>
<td>81%</td>
<td>93%</td>
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<td>Limit civilian access to ammunition designed for military or law enforcement use</td>
<td>76%</td>
<td>93%*</td>
<td>54%*</td>
<td>80%**</td>
<td>68%**</td>
<td>74%</td>
<td>90%</td>
</tr>
<tr>
<td>Encourage development/use of technology that identifies ammunition purchaser</td>
<td>75%</td>
<td>90%*</td>
<td>55%*</td>
<td>71%**</td>
<td>67%**</td>
<td>74%</td>
<td>79%</td>
</tr>
<tr>
<td>Restrict civilian access to assault rifles (magazine fed, semi-automatic, i.e. AR-15)</td>
<td>70%</td>
<td>90%*</td>
<td>44%*</td>
<td>76%**</td>
<td>55%**</td>
<td>67%***</td>
<td>90%***</td>
</tr>
<tr>
<td>Create a federal database to track firearm sales</td>
<td>70%</td>
<td>83%*</td>
<td>52%*</td>
<td>71%</td>
<td>85%</td>
<td>69%</td>
<td>72%</td>
</tr>
<tr>
<td>Require firearms owners to be 21 years of age or older</td>
<td>58%</td>
<td>71%*</td>
<td>41%*</td>
<td>59%</td>
<td>55%</td>
<td>57%</td>
<td>52%</td>
</tr>
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Most Common Themes

- **Political**
  - Support: 2
  - Oppose: 14
  - Neutral: 2

- **Improve Data**
  - Support: 4
  - Oppose: 3
  - Neutral: 6

- **Responsible Ownership**
  - Support: 2
  - Oppose: 5
  - Neutral: 5

- **Important Role for Trauma Surgeons**
  - Support: 12
  - Oppose: 4
  - Neutral: 2

- **Complex Issue**
  - Support: 5
  - Oppose: 6
  - Neutral: 2

- **Enforcement**
  - Support: 6
  - Oppose: 5
  - Neutral: 2

- **More Restrictions**
  - Support: 2
  - Oppose: 1
  - Neutral: 5
Qualitative Analysis of Responses

- **Other common themes (>4 responses):**
  - We should focus on *mental health, suicide prevention*
  - Guns don’t kill people – people kill people
  - We should *address our country’s propensity for violence*
  - This will be *divisive* amongst the ACS members
  - These efforts seem more about gun control

- **Notable comments:**
  - Gun ownership ("rights") and the regulation of firearms is a *political issue, not a medical one.*
  - We have an *obligation to research* this area that affects the health of our patients and families.
  - I believe that *gun ownership is a constitutional right* but also believe that it critically *hinders personal safety and liberty in today’s society.*
Conclusions

- 88% indicated High or Highest Level of Priority

Support for Policy Initiatives:

- >90% support – 7 of 15
- 80%-90% support – 3 of 15
- 70%-80% support – 4 of 15
- Less than 70% support – 1 of 15
Limitations and Next Steps

- Limitations: survey; initial step
- Survey ACS BOG, International Committee
- Implementation plan that leverages consensus in four pillars: advocacy, quality, systems, education
- Partner with others to develop concrete action steps
- Disseminate the information – publish, ACS Clinical Congress
- Continue the conversation
## COT Injury Prevention Committee, Special Guests and ACS Staff

<table>
<thead>
<tr>
<th>Deborah A Kuhls</th>
<th>Fernando Joglar</th>
<th>Jim Elsey – Regent Representative</th>
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<tbody>
<tr>
<td>Michel Aboutanos</td>
<td>Bob Letton</td>
<td>Beth Sutton – Regent Representative</td>
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<tr>
<td>Roxie M Albrecht</td>
<td>Peter Masiakos</td>
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<tr>
<td>Darrell C Boone</td>
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<td>Dr. Michael Rotondo</td>
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<tr>
<td>Peter Burke</td>
<td>Leon Moores</td>
<td>Dr. Ronald Stewart</td>
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<td>Brendan Campbell</td>
<td>Tina Palmieri</td>
<td>Katie Wiggins – RAS Liaison</td>
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<td>Mark Cipolle</td>
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<td>Ronald Gross</td>
<td>Don Van Boerum</td>
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<tr>
<td>Ashley Hink (RAS)</td>
<td>Sonlee West</td>
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<td>Babak Sarani</td>
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**Guests:**
- Lisa Allee
- Trudy Lerer

**ACS Staff:**
- Tamara Kozyckyj
- Holly Michaels
- Maria Alvi
- Justin Rosen
- Matt Coffron
Questions?

- Please direct any questions related to the presentation content to the ACS Committee on Trauma: COT@facs.org