OPEN

Eastern Association for the Surgery of Trauma Statement on Structural Racism, and the Deaths of George Floyd, Ahmaud Arbery, and Breonna Taylor

Mark H. Hoofnagle, MD, PhD,* Ronnie N. Mubang, MD,† D'Andrea K. Joseph, MD, FACS,‡ Bellal A. Joseph, MD, FACS, § Ashley Britton Christmas, MD, FACS, ¶ Tanya L. Zakrison, MD, MPH, FACS, FRCSC||, and the Equity, Quality, and Inclusion in Trauma Surgery Practice Ad Hoc Task Force of the Eastern Association for the Surgery of Trauma

he Eastern Association for the Surgery of Trauma (EAST) is a scientific society whose mission is to advance the surgery of trauma, to expand knowledge of how to prevent injury, and manage the injured. As doctors that seek to treat and prevent trauma, it is impossible to ignore the unequal burden of violent deaths experienced by African Americans, and deaths, including those of Mr. Ahmaud Arbery, Ms. Breonna Taylor, and Mr. George Floyd, which painfully expose both state and federal governments' failure to address the impact of both structural violence and structural racism on preventable death. The killing of George Floyd by police in Minneapolis has resulted in a national revolt against excessive violence from police, who disproportionately use deadly force on African Americans compared to other groups.^{1–7} Risk of death from police use of force generally is unacceptably high in the United States, and for African American men in particular the risk

From the *Department of Surgery, Section of Acute and Critical Care Surgery, Washington University in St. Louis, MO; †Department of Surgery, Vanderbilt University Medical Center, Nashville, TN; ‡Department of Surgery, NYU Langone Health - NYU Winthrop Hospital, NYU Long Island School of Medicine, Mineola, NY; \$Department of Surgery, Division of Trauma, Acute Care, Burns, and Emergency Surgery, University of Arizona Health Sciences, Tucson, AZ; Department of Surgery, Atrium Health, Charlotte, NC; and ||Department of Surgery, Division of Trauma and Critical Care, University of Chicago, Chicago, IL. ⊠hoofnaglem@wustl.edu.

Additional Equity, Quality, and Inclusion in Trauma Surgery Practice Ad Hoc Task Force (EAST4All) Members:
 Cristobal Barrios MD⁷, Stephanie Bonne MD⁸, Patricia M. Byers MD⁹, Lourdes Castanon MD¹⁰, Sandra R DiBrito MD PhD¹¹, Paula Ferrada MD¹², Shannon Marie Foster MD¹³, Jasmine Garces-King DNP RN CCRN TCRN ACNP-BC¹⁴, Rondi Gelbard MD¹⁵, Nicole D. Goulet MD¹⁶, Ronald I. Gross MD¹⁷, Elliott R. Haut MD PhD¹¹, Sharon M. Henry MD¹⁸, Christian Jones MD¹¹, Cathleen Khandelwal MD¹⁹, Elizabeth Kiselak MD²⁰, Kristina Z. Kramer MD²¹, Andrea Long MD²², Maureen McCunn MD¹⁸, April E. Mendoza MD MPH²³, Laurie J. Punch MD²⁴, Rishi Rattan MD²⁵, Keelin Roche MD MPH²⁶, Ayodele T. Sangosanya MD²⁷, Ariel Santos MD MPH²⁸, Carrie A. Sims MD PhD²⁹, Lily Tung MD³⁰, Jessica L. Weaver MD PhD³¹, Kenneth L Wilson MD³²

⁷University of California Irvine, Orange, CA

⁸Rutgers New Jersey Medical School, Newark, NJ

University of Miami School of Medicine, Miami, FL ¹⁰University of Arizona Health Sciences, Tucson, Arizona

¹¹Johns Hopkins University Hospital, Baltimore, MD ¹²Virginia Commonwealth University, Richmond, VA

¹³Reading Trauma Center, Tower Health in Reading, PA
¹⁴Robert Wood Johnson University Hospital, New Brunswick, NJ

¹⁵University of Alabama, Birmingham, AL

¹⁶New York University Langone Health, New York, NY

- ¹⁷St. Francis Hospital & Medical Center, East Haddam, CT
- ¹⁸R Adams Cowley Shock Trauma Center, Baltimore, MD
- ¹⁹Cleveland Clinic Fairview Hospital, Cleveland, OH
- ²⁰Hackensack University Medical Center, Hackensack, NJ ²¹Baystate Medical Center, Springfield, MA
- ²²University of California San Francisco Fresno, Fresno, CA
- ²³Massachusetts General Hospital, Boston, MA
- ²⁴University of Washington School of Medicine, St. Louis, MO
- ²⁵University of Miami/Ryder Trauma Center, Miami, FL
- ²⁶Vanderbilt University Medical Center, Nashville, TN ²⁷University of Rochester, Rochester, NY

²⁸Texas Tech University Health Sciences Center, Lubbock, TX

²⁹The Ohio State University Wexner Medical Center, Columbus, OH

³⁰Vancouver General Hospital, Vancouver, BC

³¹University of California San Diego, San Diego, CA

³²University of Chicago, Chicago, IL

No funding was received for this work from the National Institutes of Health, Wellcome Trust, or the Howard Hughes Medical Institute (HHMI), or any other organization. The authors report no conflicts of interest.

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-No Derivatives License 4.0 (CCBY-NC-ND), where it is permissible to download and share the work provided it is properly cited. The work cannot be changed in any way or used commercially without permission from the journal.

Copyright © 2020 The Author(s). Published by Wolters Kluwer Health, Inc.

ISSN: 0003-4932/20/27206-0911

DOI: 10.1097/SLA.00000000004430

approaches an astounding 1:1000 lifetime risk of death from police, and is a leading cause of death in young African American men.² The United States stands apart from other OECD countries when it comes to police violence, with rates of death from police 5 times higher than Canada and 90 times higher than in the UK, with the likelihood that our current data underestimate these deaths.⁸⁻¹⁰ The excess death from police may stem from inconsistent and lax use-of-force policies with many departmental cultures allowing escalation of conflict, rather than minimization of use of violence. A recent survey of police policies of the 20 largest cities in the U.S. by the University of Chicago Law School found police departments' use-of-force policies were highly variable, none were compliant with established principles of international human rights law and all of them lacked a basis in state or federal legislation.^{11,12} Finally, increased police shootings correlate highly with areas of increased homicide rates and are inversely related to restrictive firearm legislation. This suggests, once again, that structural racist policies that increase homicides in African American communities doubly-victimize this population.3,13

Structural violence occurs when social structures harm people by causing the avoidable impairment of fundamental human needs through institutionalized discrimination.¹⁴ These structural barriers contribute to direct violence, such as firearm violence, and increased injury and health burdens in a population. Structural racism is an example of structural violence in the United States where many environmental, legal, and societal arrangements contribute to violence in populations and to maintain racial inequality.¹⁵ The American College of Surgeons (ACS) for years has held the consistent position that firearm violence is a public health crisis and that structural violence is a recognized risk factor for such violence. In concert with 45 medical and injury prevention organizations, including EAST, the ACS stated that a broad, national approach to firearm violence is warranted.^{16–18}

The absence of a national firearm policy, a worsening racial wealth gap and violent policing in areas of high homicide rates, inevitably serve to increase firearm deaths in African Americans. Although firearms are only present in less than half of policeinvolved shootings, deadly force is frequently justified based on the mere possibility of a firearm being present given their pervasive presence in our society.7 Historically, major changes in policy of police firearms use, in particular associated with the Garner decision of the US Supreme Court, have led to dramatic reductions in fatalities from police shootings in the 1970s and 1980s, without an increase in risk to police—in fact their injury and deaths decreased with more restrictive rules of engagement.¹⁹⁻²² More recently, the policing experience in Camden New Jersey, including an ethos of "minimizing harm," has decreased mortality from police shootings by half while violent crime has also decreased.²³ Conversely, evidence exists that police culture that protects out-of-control officers will increase shootings, as officers that show poor self-control are more likely to commit officer-involved shooting.²⁴ Excess police violence then damages the relationship with the community and trust in police such that it significantly inhibits efforts at crime reduction, further aggravating prevention of homicide in these communities.²⁵ Our knowledge of how to prevent deaths from excessive police violence suffer from a chronic lack of systematic reporting of police violence to allow for study of factors that contribute to excessive force, and analyses of existing databases show large heterogeneity between official reporting of police violence and unofficial data-bases.^{1,3,6,9,10,13,26–29} Furthermore, policy changes alone have previously been shown to be inadequate to induce change in police behavior with regards to shootings-broad cultural change with emphasis from leadership on fundamentally changing police behavior has been previously demonstrated to be necessary for change and

reduction in mortality from officer involved shootings while novel approaches to community safety are entertained.²¹

In 2016 EAST systematically reviewed the literature on firearm policy and concluded that there is an association between more restrictive laws, such as universal background checks, and lower firearm injury rates. Additionally, it concluded that there are no good data that demonstrate that concealed carry legislation has protective effects.³⁰ Our knowledge of the risk of permissive laws has since been enhanced by recent independent analysis of available evidence by the RAND Corporation. They found that states that have passed "Stand Your Ground" laws experience higher rates of violent crimes and unjustified homicides.³¹ These injuries, as shown by researchers at the University of Pennsylvania examining 462,000 firearm deaths, disproportionately affect African American men, and most firearm legislation to date has shown no beneficial impact on this population.³² Although new evidence that firearm laws like universal background checks have been shown to decrease rates of firearm homicides in African American men by 19%,³³ evidence is mounting that the recent expansion of laws loosening restrictions on possession and use of firearms, such as "shall-issue" conceal permit laws and "Stand Your Ground" laws, may actually serve to worsen homicide rates and contribute to excess mortality in this already vulnerable population.^{34–37} Efforts to address firearm homicide through restrictive measures are stymied by the patchwork of state legislation, as the persistent pattern is that firearms are transported across state lines from states with lax legislation and subsequently used in crime.³⁸⁻⁴¹

Significant evidence is mounting that lax firearm regulation may further worsen racial inequity and increase structural racism: part of a pervasive pattern of inequity experienced by African Americans in health and firearm policy. A 2015 National Task Force on "Stand Your Ground" laws commissioned by the American Bar Association reported that these laws lead to increased racial disparities in the criminal justice system.⁴² This Task Force also reported on uneven application of the law with implicit racial bias in the application of "Stand Your Ground" against African Americans. We already know that violence in African American communities tracks with historical and structurally racist policies such as redlining, which is the systematic denial of various services (like health care or bank loans) by government or private agencies to black people.^{43,44} Finally, racist attitudes themselves correlate with support for firearm possession and hostility to gun control measures which would likely decrease African American homicide.41

The oft-stated "protective" justification for ownership and carrying of firearms is outweighed by their use to threaten, maim, and kill, which far exceeds their dubious protective benefit.⁴⁵ Studies have shown for decades that a firearm in the home increases the risk of both homicide and suicide.^{46–48} We know that those who conceal carry a firearm, rather than experiencing a protective benefit, are 4 to 5 times more likely to die of homicide compared to their demographically matched cohorts.⁴⁹ Despite allegations from industry groups of millions of defensive firearm uses each year, this assertion has been widely discredited.^{50–52} Firearms are far more likely to be used to threaten others inside and outside the home.^{53,54} Far more damning, when evaluated by legal experts, most of the self-reported "defensive use" in surveys were actually unlawful assaults resulting from the escalation of violence.⁵⁵ Indeed, the shooting of Ahmaud Arbery was initially dismissed as defensive until video evidence emerged.

The lack of a national firearm policy acts as a persistent element of structural racism and violence in the United States. Firearms continue to traffic into our cities, resulting in the disproportionate deaths of African American men, whereas concealed carry and "Stand Your Ground" laws combined with more violent policing in areas of higher homicide serve to further aggravate African American mortality. Policies that permit the steady supply of illegal firearms, the routine carrying of firearms, and the escalation of conflict rather than deescalation create excess preventable homicides and do not reflect a culture that respects life.

Based on the best available data we may conclude:

- 1. More restrictive firearms legislation, such as universal background check laws, will likely decrease firearm homicide, particularly in vulnerable populations such as African American men.
- 2. Violence from police results in an unacceptably high number of preventable deaths, and this disproportionately affects African American men who carry a 1:1000 lifetime risk of death at the hands of police.
- Policies which emphasize de-escalation of violence, and discourage routine carry and possession of firearms will decrease homicide.

In keeping with previous firearm recommendations issued by EAST, the ACS, the American Association for the Surgery of Trauma, and the broad consensus of members of the ACS Committee on Trauma, EAST proposes the following recommendations:^{18,56–58}

- 1. We recommend a PICO analysis/generation of a formal injury prevention guideline on restrictive firearm legislation and its potential reduction of African American homicide as a way to address both structural violence and structural racism.
- 2. We recommend a PICO analysis/generation of a formal injury prevention guideline on policies that may decrease trafficking and supply of firearms used in crime, as well as an analysis of existing federal policies that prevent investigation of firearms traffickers and dealers who sell firearms into black markets which then are trafficked for use in firearm homicide.
- 3. We recommend a PICO analysis/generation of a formal injury prevention guideline on police violence as a source of preventable death, exploring fundamental changes to the culture and practice of policing with an emphasis on creation of a national database of police violence, policies and culture of harm reduction and elimination of structurally racist practices.
- 4. We recommend a national commission to investigate the prevalence of implicit racial bias in application of firearms legislation and structural racism as an urgent public health crisis.
- 5. We recommend that all professional societies which support the care of the injured patient should continue to prioritize research and educational resources toward the goal of zero preventable deaths for all, with particular focus on those at greatest risk of violence.
- 6. We recommend the reassessment of all firearm legislation, to include "Stand Your Ground" laws and "shall issue" concealed carry laws, that have been shown to be detrimental to public health.

ACKNOWLEDGMENT

The members would like to thank the members of the EAST Board for their support.

REFERENCES

- Chang DC, Williams M, Sangji NF, et al. Pattern of law enforcement-related injuries in the United States. J Trauma Acute Care Surg. 2016;80:870–876.
- Edwards F, Lee H, Esposito M. Risk of being killed by police use of force in the United States by age, race-ethnicity, and sex. *Proc Natl Acad Sci.* 2019;116:16793–16798.
- Klinger D, Rosenfeld R, Isom D, et al. Race, crime, and the micro-ecology of deadly force. *Criminology & Public Policy*. 2016;15:193–222.
- Shane JM, Lawton B, Swenson Z. The prevalence of fatal police shootings by US police, 2015–2016: patterns and answers from a new data set. J Crim Just. 2017;52:101–111.
- © 2020 The Author(s). Published by Wolters Kluwer Health, Inc.

- Siegel M. Racial Disparities in Fatal Police Shootings: An Empirical Analysis Informed by Critical Race Theory. *Boston University Law Review*. 2020;100:1069–1092.
- 6. Tate J, Jenkins J, Rich S. *Fatal Force: 1,024 People Have Been Shot and Killed By Police in the Past Year.* The Washington Post; 2020.
- 7. Zimring FE. When Police Kill. Harvard University Press; 2017.
- List of killings by law enforcement officers by country. Available at: [https:// en.wikipedia.org/w/index.php?title=List_of_killings_by_law_enforcement_officers_by_country&oldid=963508501].
- Apuzzo M, Cohen S. Data on use of force by police across U.S. proves almost useless. The New York Times; 2005, 9 https://www.nytimes.com/2015/08/12/ us/data-on-use-of-force-by-police-across-us-proves-almost-useless.html.
- Williams HE, Bowman SW, Jung JT. The limitations of government databases for analyzing fatal officer-involved shootings in the United States. *Criminal Justice Policy Review*. 2019;30:201–222.
- Deadly discretion: the failure of police use of force policies to meet Fundamental International Human Rights Law and Standards. University of Chicago Law School— International Human Rights Clinic; 2020, 14: 6–9.
- Terrill W, Paoline EA. Police use of less lethal force: does administrative policy matter? Justice Quarterly. 2017;34:193–216.
- Kivisto AJ, Ray B, Phalen PL. Firearm legislation and fatal police shootings in the United States. Am J Public Health. 2017;107:1068–1075.
- 14. Galtung J. Violence, peace, and peace research. J Peace Res. 1969;6:167-191.
- Lawrence K, Keleher T. Structural racism. In: Race and Public Policy Conference, Berkeley Retrieved from https://www.racialequitytoolsorg/resourcefiles/Definitions-of%20Racismpdf 2004; 2004.
- American College of Surgeons comments on the continual occurrence of firearm deaths and injuries in the United States [https://www.facs.org/media/ press-releases/2019/firearm080719].
- 17. Bulger EM, Kuhls DA, Campbell BT, et al. Proceedings from the Medical Summit on firearm injury prevention: a public health approach to reduce death and disability in the US. *J Am Coll Surg.* 2019;229. 415-430.e412.
- Talley CL, Campbell BT, Jenkins DH, et al. Recommendations from the American College of Surgeons Committee on Trauma's Firearm Strategy Team (FAST) Workgroup: Chicago Consensus I. J Am Coll Surg. 2019;228: 198–206.
- Sherman LW, Cohn EG, Gartin PR. *Citizens Killed By Big City Police*, 1974-84. Washington, DC: Crime Control Institute; 1986.
- Tennenbaum AN. The influence of the Garner decision on police use of deadly force. J Crim L & Criminology. 1994;85:241.
- White MD. Controlling police decisions to use deadly force: Reexamining the importance of administrative policy. *Crime & Delinquency*. 2001;47:131– 151. ##DeleteExtraTag##https://doi.org/10.1177/0011128701047001006.
- Sherman LW. Reducing Fatal Police Shootings as System Crashes: Research, Theory, and Practice. Annual Review of Criminology. 2018;1:421–449.
- Goldstein J. Changes in policing take hold in one of the nation's most dangerous cities. *The New York Times Retrieved from* https://www nytimes com/2017/04/02/nyregion/camden-nj-police-shootings html 2017.
- Donner CM, Maskaly J, Piquero AR, et al. Quick on the draw: assessing the relationship between low self-control and officer-involved police shootings. *Police Quarterly*. 2017;20:213–234.
- Desmond M, Papachristos AV, Kirk DS. Police violence and citizen crime reporting in the black community. *American Sociological Review*. 2016;81:857–876.
- Alpert GP. Toward a national database of officer-involved shootings: A long and winding road. *Criminology & Public Policy*. 2016;15:237–242.
- Feldman JM, Gruskin S, Coull BA, et al. Quantifying underreporting of lawenforcement-related deaths in United States vital statistics and news-mediabased data sources: a capture – recapture analysis. *PLoS Med.* 2017;14:e1002399.
- Kaufman E, Holena DN, Yang WP, et al. Firearm assault in Philadelphia, 2005-2014: a comparison of police and trauma registry data. *Trauma Surg Acute Care Open*. 2019;4:e000316.
- White MD. Transactional encounters, crisis-driven reform, and the potential for a national police deadly force database. *Criminology & Public Policy*. 2016;15:223–235.
- Crandall M, Eastman A, Violano P, et al. Prevention of firearm-related injuries with restrictive licensing and concealed carry laws: An Eastern Association for the Surgery of Trauma systematic review. J Trauma Acute Care Surg. 2016;81:952–960.
- 31. Smart R, Morral AR, Smucker S, et al. The science of gun policy: a critical synthesis of research evidence on the effects of gun policies in the United States. Santa Monica, CA: RAND Corporation, 2018. https://www.rand.org/ pubs/research_reports/RR2088.html. Also available in print form.

- 32. Resnick S, Smith RN, Beard JH, et al. Firearm deaths in America: can we learn from 462,000 lives lost? *Ann Surg.* 2017;266:432–440.
- Kaufman EJ, Morrison CN, Olson EJ, et al. Universal background checks for handgun purchases can reduce homicide rates of African Americans. *J Trauma Acute Care Surg.* 2020;88:825–831.
- Donohue JJ, Aneja A, Weber KD. Right-to-carry laws and violent crime: a comprehensive assessment using panel data and a state-level synthetic control analysis. *Journal of Empirical Legal Studies*. 2019;16:198–247.
- Siegel M, Solomon B, Knopov A, et al. The Impact of State Firearm Laws on Homicide Rates in Suburban and Rural Areas Compared to Large Cities in the United States, 1991-2016. J Rural Health. 2020;36:255–265.
- Degli Esposti M, Wiebe DJ, Gravel J, et al. Increasing adolescent firearm homicides and racial disparities following Florida's 'Stand Your Ground'selfdefence law. *Inj Prevent*. 2020;26:187–190.
- Ackermann N, Goodman MS, Gilbert K, et al. Race, law, and health: Examination of 'Stand Your Ground'and defendant convictions in Florida. Soc Sci Med. 2015;142:194–201.
- Andrade EG, Hoofnagle MH, Kaufman E, et al. Firearm laws and illegal firearm flow between US states. J Trauma Acute Care Surg. 2020;88:752–759.
- Olson EJ, Hoofnagle M, Kaufman EJ, et al. American firearm homicides: the impact of your neighbors. J Trauma Acute Care Surg. 2019;86:797–802.
- 40. Wintemute GJ. Where the guns come from: the gun industry and gun commerce. *Future Child*. 2002;12:55–71.
- O'Brien K, Forrest W, Lynott D, et al. Racism, gun ownership and gun control: biased attitudes in us whites may influence policy decisions. *PLoS One*. 2013;8:e77552.
- Association AB. National task force on stand your ground laws. Final report and recommendations. 2015;25–27.
- Beard JH, Morrison CN, Jacoby SF, et al. Quantifying disparities in urban firearm violence by race and place in Philadelphia, Pennsylvania: a cartographic study. Am J Public Health. 2017;107:371–373.
- Jacoby SF, Dong B, Beard JH, et al. The enduring impact of historical and structural racism on urban violence in Philadelphia. Soc Sci Med. 2018;199:87–95.

- 45. Hemenway D. Private Guns, Public Health. University of Michigan Press; 2010.
- Kellermann AL, Rivara FP, Rushforth NB, et al. Gun ownership as a risk factor for homicide in the home. N Engl J Med. 1993;329:1084– 1091.
- 47. Hemenway D. Risks and benefits of a gun in the home. American Journal of Lifestyle Medicine. 2011;5:502–511.
- Kellermann AL, Rivara FP, Somes G, et al. Suicide in the home in relation to gun ownership. N Engl J Med. 1992;327:467–472.
- Branas CC, Richmond TS, Culhane DP, et al. Investigating the link between gun possession and gun assault. Am J Public Health. 2009;99: 2034–2040.
- Hemenway D. Survey research and self-defense gun use: an explanation of extreme overestimates. *The Journal of Criminal Law and Criminology*. 1997;87:1430–1445.
- 51. Hemenway D. The myth of millions of annual self-defense gun uses: a case study of survey overestimates of rare events. *Chance*. 1997;10:6–10.
- Cook PJ, Ludwig J, Hemenway D. The gun debate's new mythical number: How many defensive uses per year? J Policy Analysis and Management. 1997;16:463-469.
- Hemenway D, Azrael D. The relative frequency of offensive and defensive gun uses: results from a national survey. *Violence Vict.* 2000;15:257– 272.
- 54. Azrael D, Hemenway D. 'In the safety of your own home': results from a national survey on gun use at home. *Soc Sci Med.* 2000;50:285–291.
- 55. Hemenway D, Azrael D, Miller M. Gun use in the United States: results from two national surveys. *Inj Prevent*. 2000;6:263–267.
- Kuhls DA, Campbell BT, Burke PA, et al. Survey of American College of Surgeons Committee on trauma members on firearm injury: Consensus and opportunities. *J Trauma Acute Care Surg.* 2017;82:877–886.
- 57. Eastern Association for the Surgery of Trauma Firearm Injury Prevention Statement. *J Trauma Acute Care Surg.* 2019;86:e000294.
- American Association for the Surgery of Trauma. AAST statement on firearm injury. Trauma Surg Amp Acute Care Open. 2018;3:e000204.