

A FRAMEWORK FOR ADVANCING FIREARM SAFETY AND INJURY PREVENTION THROUGH PRIMARY CARE

Injuries and deaths due to firearms, with the majority of them being suicides and homicides, have been increasing in Texas. According to the Centers for Disease Control and Prevention¹, firearm-related deaths are at an all-time high since the mid-1990s.

Firearms are now a leading cause of death among children and teens in Texas.² Prior to 2020, the leading cause of death among children ages 1-17 was motor vehicle accidents.² In 2020, more children died from firearm injuries (260) than by motor vehicle accidents (245).²

Texas has the 28th-highest societal cost of firearm-related deaths and injuries in the United States at \$1,769 per resident each year.³ Firearm deaths and injuries cost Texas \$51.3 billion each year, of which \$1.1 billion is paid by taxpayers.³

Beyond Texas, firearm-related injuries and deaths are recognized as a public health crisis in the United States and reduction of firearm-related deaths is a Healthy People 2030 goal. To meet this goal in the United States and Texas, we must openly acknowledge the scope of the problem and promote strategies to equip health providers with appropriate guidance and resources.

Firearm injuries and deaths are preventable⁴ and there are many steps we can take as individuals and organizations to reverse the current trends. The Texas Primary Care Consortium (TPCC) is the only multisectoral network focused on primary care in Texas with a mission of advancing equitable, comprehensive, and sustainable primary care for all Texans. TPCC engaged a group of community members and leaders with expertise in firearm injury to examine Texas-specific data on firearm injuries and deaths as well as to gain a better understanding of the existing programs and services that focus on prevention of firearm injuries. [Examine our Firearm Injuries in Texas Data Portrait](#). Successful strategies leverage the patient-provider relationship to build trust, normalize the conversation, and engage in shared-decision making that honors and respects the patient's perspectives on firearm ownership and safety.

FIREARM SAFETY STAKEHOLDER GROUP

Dr. Louis Appel,
Texas Pediatric Society

Dr. Emily Briggs,
Texas Academy of Family Physicians

Michael Darrouzet,
Texas Medical Association

**Krista Del Gallo, Mikisha Hooper,
Molly Voyles,**
Texas Council on Family Violence

Nicole Golden,
Texas Gun Sense

Dr. Daniel Guzman,
Cook Children's Medical Center

**Dr. Tarek Naguib, Dr. Alejandro
Moreno,**
*Texas Chapter of American College
of Physicians*

Dr. Sandy McKay,
*UT Houston McGovern School
of Medicine*

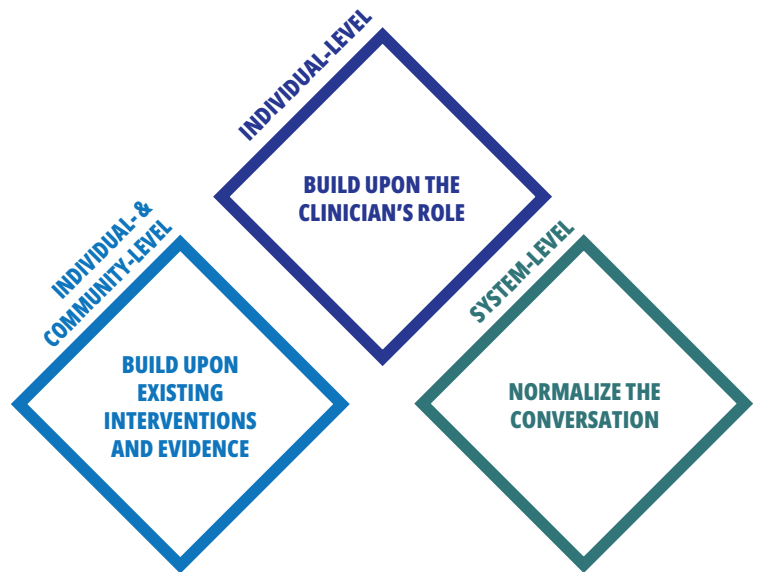
Dr. Ronald Stewart,
UT Health San Antonio

TPCC—led by Ankit Sanghavi, MPH, BDS, Texas Health Institute, and Sue Bornstein, MD, MACP, Texas Medical Home Initiative—is thankful to our partners for their support of our efforts and members of our statewide firearm safety stakeholder group for their time and expertise in identifying our framework of solutions. Please contact TPCC if you would like to get involved in the efforts by emailing Nishi Singhal at nsinghal@texashealthinstitute.org.

STAKEHOLDER OBJECTIVES:

- Establish and share an objective, evidence-informed, data-driven understanding of firearm injuries and deaths as a public health issue.
- Understand the factors that contribute to firearm injuries and deaths.
- Learn and share real-world examples that demonstrate the successful integration of firearm safety into clinical and community settings.
- Discuss and share long-term comprehensive strategies for firearm safety education and prevention.

The group's discussion led to a three-pronged framework for solutions:



BUILD UPON THE CLINICIAN'S ROLE

The stakeholder group emphasized the value of integrating discussion on firearm injury prevention as part of routine primary care, like asking about substance use and smoking. Unfortunately, studies⁵ show that a very small percentage of patients surveyed report that a physician has ever talked to them about firearms. There are several reasons for this, including time constraints, clinician unfamiliarity with firearms, and concern that such discussion might alienate patients. But in surveys of firearm owners, 66% say it's at least sometimes appropriate for a physician to discuss firearm safety with them.⁶ There is a clear practice gap that primary care can fill.

Many high-quality resources are available to clinicians who want to become more knowledgeable about how to best discuss firearm safety. The University of California at Davis School of Medicine's BulletPoints Project⁷ offers a free online CME for clinicians to learn the basics of firearms and counseling on firearm safety. Clinicians at all levels who are initially uncomfortable with counseling on firearm safety can become more confident and comfortable initiating these discussions with their patients with focused training.⁸

Pediatricians have a unique opportunity to promote firearm safety with their patients and by extension, their families. For example, anticipatory guidance during well-child visits offers a time to assess safety and engage in shared decision making around firearm safety and storage in the household. This serves as an essential opportunity to not only promote firearm safety and injury prevention, but to build trust and normalize the conversation. Furthermore, promoting firearm safety during pediatric visits is essential given firearm-related deaths are now the leading cause of death for children and teens.

BUILD UPON EXISTING INTERVENTIONS AND EVIDENCE

Secondly, firearm injury prevention is a complex and multifaceted issue that requires interventions at both the individual and community levels. Building upon existing interventions and evidence is crucial for developing comprehensive strategies to address firearm injuries.

Cook Children's Medical Center in Fort Worth, Texas, launched a program⁹ which educates parents and children about firearm safety to curb unintentional injuries and deaths. The program encourages the use of secure storage, especially in homes with children, adolescents, or individuals with risk of self-harm. Through community events, school talks, and public appearances, they share best practices for firearm safety such as storing firearms and ammunition in two separate safety boxes. Building upon this intervention and continually evaluating the effectiveness through research and data analysis will contribute to the development of evidence-based strategies for firearm injury prevention.

A comprehensive community approach recognizes that no single program is sufficient, and there are many opportunities for effective prevention as depicted in the model illustrated below. No single layer of intervention can be considered flawless. To effectively minimize the risk of failure, employing multiple layers of interventions is crucial.

REDUCING FIREARM DEATHS IN THE U.S.

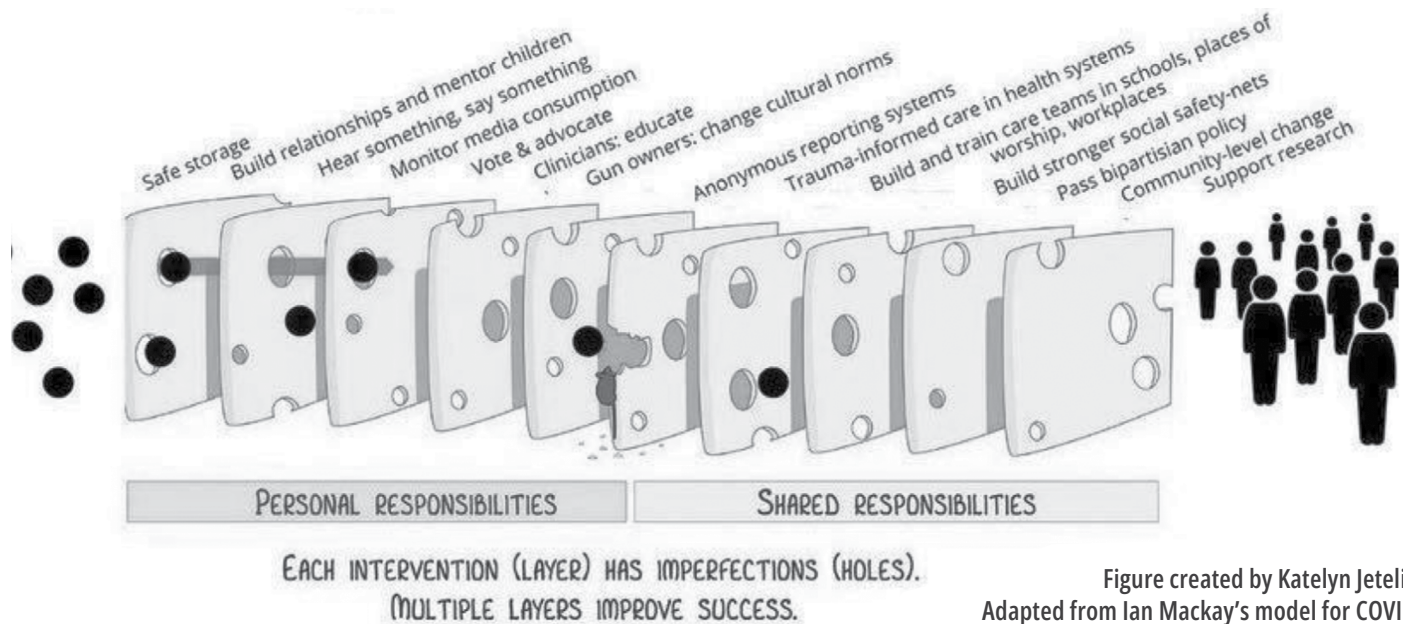


Figure created by Katelyn Jetelina
Adapted from Ian Mackay's model for COVID¹⁷

NORMALIZE THE CONVERSATION

Lastly, the group discussed the importance of normalizing the conversation on the potential underlying contributors to firearm injuries and deaths. This includes normalizing the conversation around mental health, trauma, intimate partner violence, anger, and the lack of social and emotional support with all populations, especially with groups of people who historically did not receive or have access to high-quality, culturally competent, coordinated, social, emotional, and mental health supports.

The Prevention Institute found that through its national initiative, Making Connections for Mental Health and Wellbeing Among Men and Boys¹⁰, the practices that promote wellbeing – belonging and connectedness, control of destiny, dignity, hope and aspiration, safety, and trust – also prevent forms of violence, including suicide. By normalizing conversations about mental health to promote wellbeing, we will be able to better understand the linkages between individual and community trauma, and firearm injuries and deaths.

Since more than half of firearm deaths in Texas are due to suicide¹¹, normalizing conversations about mental health between primary care clinicians and patients is also crucial for fostering open communication and early intervention. It is important to note that firearms extend the risk of harm beyond the suicidal individual to family and community members. Individuals experiencing suicidality with histories of family violence can pose greater risk to family and community members particularly when they have access to firearms.¹² According to a study using data from the NIMH-funded Mental Health Research Network¹³, 38% of patients made some type of healthcare visit within a week before attempting suicide, 64% of patients made a visit within a month before the suicide attempt, and nearly 95% within a year.

Resources exist to help both clinicians and patients feel more comfortable around firearm safety counseling. The 5 A's model¹⁴ in counseling patients on complex health behaviors has been shown to improve patient behaviors such as in quitting smoking, changing diet behaviors, and losing weight. The 5 A's for Firearm Safety Counseling¹⁵ is a helpful educational tool when delivering patient-centered counseling on firearm injury prevention.

The BulletPoints project¹⁶, as cited in the section on *building upon the clinician's role*, offers clinical tools that use culturally appropriate, non-stigmatizing, and respectful language when counseling patients on firearm safety and evidence-based recommendations.

MOVING FORWARD

This is a complex and multi-faceted challenge that requires sustained and coordinated efforts to prevent this issue at the root cause. However, like many public health challenges in the past, we know that we can do better.

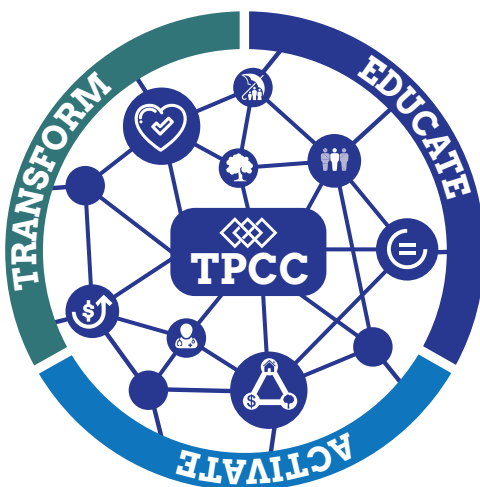
By using a comprehensive public health approach to car safety, the United States reduced per-mile driving deaths by nearly 80% from 1967 to 2017.¹⁷ This approach prevented more than 3.5 million deaths over these fifty years. We can learn from this example and apply these lessons to preventing firearm injuries and deaths.

Building upon this, TPCC will continue to work with the Firearm Safety Stakeholder Group to promote firearm safety and injury prevention through its three-pronged approach – building upon the clinician’s role, building upon existing interventions and evidence, and normalizing the conversation. Furthermore, through our many educational and training opportunities, we seek to identify, share, and advance data and literature on this issue and possible solutions. Lastly, if there is an intervention or effort you are leading, we welcome the opportunity to share and support your efforts.

References

- 1 Centers for Disease Control and Prevention, U.S. Census Bureau.
- 2 CDC WONDER Online Database. *Underlying Cause of Death*. 2018-2021. <https://wonder.cdc.gov/ucd-icd10-expanded.html>.
- 3 Miller, T.R., Lawrence B. (2019). *Cost of gun violence: Ted R. Miller and Bruce Lawrence analysis of CDC fatal injury: 2019 and HCUP nonfatal injury: 2019*.
- 4 Patel J, Leach-Kemon K, Curry G, Naghavi M, Sridhar D. (2022). *Firearm injury—a preventable public health issue*. The Lancet. <https://pubmed.ncbi.nlm.nih.gov/36334611/>.
- 5 Tolat, N. D., Naik-Mathuria, B. J., & McGuire, A. L. (2020). *Physician Involvement in Promoting Gun Safety*. Annals of family medicine, 18(3), 262–264. <https://doi.org/10.1370/afm.2516>.
- 6 Betz M.E., Azrael D, Barber C, Miller M. (2016). *Public Opinion Regarding Whether Speaking With Patients About Firearms Is Appropriate*. Annals of Internal Medicine. <https://doi.org/10.7326/M16-0739>.
- 7 The BulletPoints Project. <https://www.bulletpointsproject.org/>.
- 8 Hoops K, McCourt A, Crifasi C.K. (2022). *The 5 A's of firearm safety counseling: Validating a clinical counseling methodology for firearms in a simulation-based randomized controlled trial*. Preventive Medicine Reports. <https://doi.org/10.1016/j.pmedr.2022.101811>.
- 9 Cook Children's. *Gun Safety*. <https://www.cookchildrenscommunity.org/injury-prevention/gun/>.
- 10 Prevention Institute. *Making Connections for Mental Health and Wellbeing Among Men and Boys*. <https://www.preventioninstitute.org/projects/making-connections-mental-health-and-wellbeing-among-men-and-boys>.
- 11 Davis, A., Kim, R., & Crifasi, C. K. (2023). *A Year in Review: 2021 Gun Deaths in the U.S.* Johns Hopkins Center for Gun Violence Solutions. Johns Hopkins Bloomberg School of Public Health.
- 12 Koziol-McLain, J., Webster, D., McFarlane, J., Block, C.R., Ulrich, Y., Glass, N. and Campbell, J., *Risk Factors for Femicide-Suicide in Abusive Relationships: Results from a Multisite Case Control Study*, Violence and Victims 21 (February 2006): 3-21.
- 13 Ahmedani, B. K., Stewart, C., Simon, G. E., Lynch, F., Lu, C. Y., Waitzfelder, B. E., Solberg, L. I., Owen-Smith, A. A., Beck, A., Copeland, L. A., Hunkeler, E. M., Rossom, R. C., & Williams, K. (2015). Racial/Ethnic differences in health care visits made before suicide attempt across the United States. Medical care, 53(5), 430–435. <https://doi.org/10.1097/MLR.0000000000000335>
- 14 Quinn V.P., Hollis J.F., Smith K.S., Rigotti N.A., Solberg L.I., Hu W., Stevens V.J. *Effectiveness of the 5-As tobacco cessation treatments in nine HMOs*. J. Gen. Intern. Med. 2009;24(2):149–154.
- 15 Hoops K, McCourt A, Crifasi C.K. (2022). *The 5 A's of firearm safety counseling: Validating a clinical counseling methodology for firearms in a simulation-based randomized controlled trial*. Preventive Medicine Reports. <https://doi.org/10.1016/j.pmedr.2022.101811>.
- 16 The BulletPoints Project. *How to Counsel*. <https://www.bulletpointsproject.org/how-to-counsel/>.
- 17 National Highway Traffic Safety Administration. (2020). *Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data*. Annual Report Tables.
- 18 Mackay, I. (2020). *The Swiss Cheese Respiratory Virus Pandemic Defense*. Based on the Swiss Cheese Model of Accident Causation by James T Reason, 1990.

TX-PCC.ORG



Texas Primary Care Consortium, co-led by Texas Medical Home Initiative and Texas Health Institute, advances equitable, comprehensive, and sustainable primary care for all Texans.

