

Supplementary Online Content

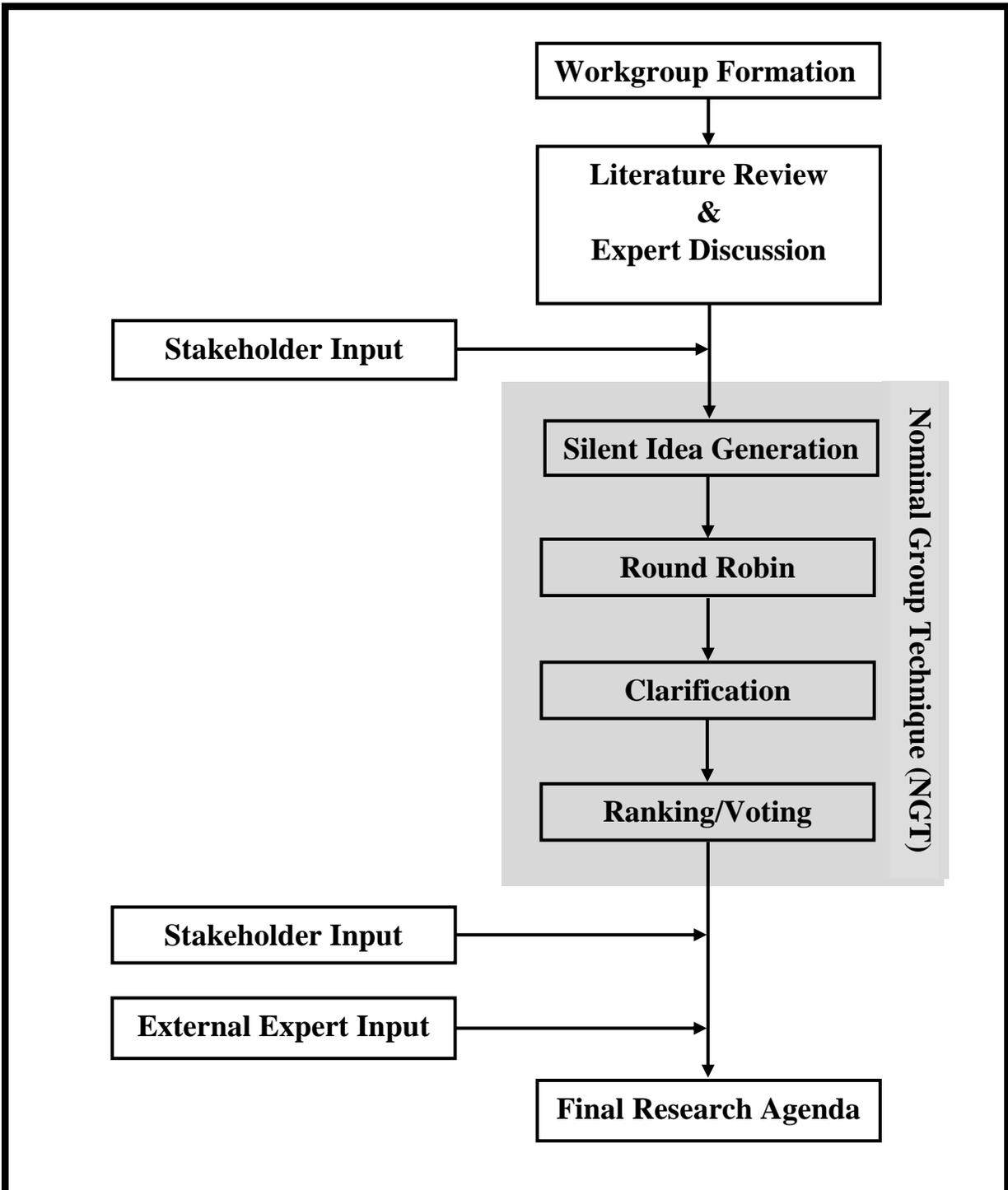
Cunningham RM, Carter PM, Ranney ML, et al. Prevention of firearm injuries among children and adolescents: consensus-driven research agenda from the Firearm Safety Among Children and Teens (FACTS) Consortium. *JAMA Pediatr.* Published online June 10, 2019. doi:10.1001/jamapediatrics.2019.1494

eFigure. Overview of Nominal Group Technique (NGT) Process

eAppendix. FACTS Consortium Expert Panel

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure. Overview of Nominal Group Technique (NGT) Process



eAppendix. FACTS Consortium Expert Panel

Rebecca Cunningham, MD is a Professor of Emergency Medicine and Health Behavior Health Education and the Associate Vice President for Research in the health sciences at the University of Michigan. Her expertise is in injury and violence prevention, particularly among children and adolescents, and the development and application of behavioral interventions in health care settings. She has led large longitudinal studies evaluating interventions, service utilization, and mental health outcomes among youth with assault-related injury, including firearm injury.

Marc Zimmerman, PhD is the Marshall H Becker Collegiate Professor of Public Health at the University of Michigan. His research focuses on adolescent health, resiliency and empowerment, with particular attention to substance use and youth violence prevention. He conducts community-engaged translational and intervention research to prevent and reduce youth and community-level violence, including firearm behavior and injury. Most of his work has been done in Flint, Michigan. He is editor of *Youth & Society*.

Patrick Carter, MD is an Assistant Professor of Emergency Medicine at the University of Michigan School of Medicine. His current research focuses on firearm injury prevention, specifically the development and implementation of emergency department based interventions to decrease firearm violence and associated risk behaviors, such as substance use among high-risk populations. He also has a line of research focusing on understanding the epidemiological and contextual factors that characterize firearm violence among urban youth and minority populations.

Elizabeth Alpern, MD, MSCE is a pediatric emergency physician, clinical epidemiologist, and Professor of Pediatrics at the Center for Healthcare Studies at Northwestern University. Dr. Alpern's research is focused on the use of large databases within a research network, such as PECARN, to improve the quality of emergent care delivered to children. Her work investigates the epidemiology of injuries and illness in children and seeks to improve the quality of evidence-based firearm emergent care.

Rinad Beidas, PhD is an Associate Professor of Psychology in Psychiatry at the University of Pennsylvania and Director of Implementation Research. As an implementation scientist and clinical psychologist, her research focuses on implementing evidence-based firearm safety promotion approaches in pediatric primary care settings to reduce unintentional and intentional firearm injuries in youth. She partners with a diverse set of stakeholders, including gun owner constituents, to understand how best to realize this goal.

Charlie Branas, PhD, MS is Professor and Chair of Epidemiology at the Mailman School of Public Health at Columbia University. He has an extensive background conducting research that examines an array of risk factors for firearm-related injuries among children at the individual and community level. Much of his research has focused on place-based spatially-oriented risk factors for firearm carriage and use among children and youth populations.

Peter Ehrlich, MD, MSc is a Pediatric Surgeon at the University of Michigan who has studied preventive care delivery after traumatic injuries, and is nationally recognized in pediatric trauma research. He is particularly interested in interventions related to substance abuse and injury. Seeing firearm injury in children at the front lines, Dr. Ehrlich takes a clinical perspective back to the bench to develop interventions and make them translatable.

Quyen Ngo, PhD, LP is a Clinical Psychologist at the University of Michigan Department of Emergency Medicine. Her research interests include intimate partner violence in families and the safety and well-being of children exposed to violence in homes with access to firearms. Her work is trauma focused and trauma

informed and uses contemplative practice-based approaches and technology as means of intervention delivery.

Jason Goldstick, PhD is a statistician in the Department of Emergency Medicine at the University of Michigan. His research focuses on the epidemiology of firearm violence. In particular, he is interested in optimal screening and prediction for future firearm injury. A recurring theme in his research is the analysis of how contextual information such as spatially/temporally proximate conditions modulate individual-level outcomes.

Monika Goyal, MD, MSCE is a Pediatric Emergency Physician whose research focuses around the epidemiology of firearm-injury among children. Dr. Goyal has evaluated the impact of gun laws on firearm-related morbidity and mortality among children.

Stephen Hargarten, MD, MPH is an Emergency Medicine Physician and has published extensively on injury control, most recently on firearms and alcohol-related trauma. Dr. Hargarten served on the IOM report on firearm injury and was instrumental in the development of the National Firearm Death Reporting System. He is interested in linking information that furthers our understanding of gun violence, and advancing our understanding of gun violence as a complex biopsychosocial disease.

David Hemenway, PhD is a Professor of Public Health at Harvard University, has written widely on injury prevention, including articles on firearms, violence, and suicide. He headed the pilot for the National Violent Death Reporting System, which provides detailed and comparable information on suicide and homicide. His firearm research focuses on a range of issues, including gun training, gun storage, gun theft, self-defensive gun use, gun accidents, gun suicide, gun homicide, and police killings.

Cheryl King, PhD is a clinical child and adolescent psychologist and Professor at the University of Michigan Department of Psychiatry and Psychology. She has longstanding research focus on improving screening, risk assessment, and preventive intervention strategies for adolescents at elevated risk for suicide. She has conducted multiple research studies focused in the area of adolescent suicide prevention and consulted with community groups on lethal means access.

Jesenia Pizarro, PhD is an Associate Professor of Criminology and Criminal Justice at Arizona State University. Her research examines firearm violence from a situational theories of crime lens and emphasizes the importance of understanding the incident level characteristics and facilitators (e.g. access to firearms) that result in a homicide event. More specifically, the main question underlying Dr. Pizarro's work is what creates opportunities for violence to occur.

Lynn Massey, MSW is a Licensed Social Worker and Senior Project Manager for the FACTS consortium. She has over two decades of experience coordinating federally-funded research studies focused on substance use and injury prevention, including firearm injury.

Lisa Prosser, PhD, MS is Professor of Pediatrics and Communicable Disease at The University of Michigan and Director of the Child Health Evaluation Research (CHEAR) Center. Her research focuses on measuring the comparative effectiveness and cost-effectiveness of childhood health interventions using methods of decision sciences and economics.

Megan Ranney, MD, MPH is a practicing emergency physician and researcher at Brown University, focusing on the intersection between digital technology and violence prevention. Her primary firearm research interests are in the prevention of long-term consequences of firearm injury (for example, PTSD and depression); and in the analysis and use of digital media to both predict and reduce firearm injury.

Frederick Rivara, MD, MPH is a Professor of Pediatrics at the University of Washington. He has worked in the area of violence and injury control for the last 30 years, with many studies focused in the area of firearm injury prevention. He was instrumental in studies demonstrating the correlation between safe storage of firearms and lower rates of unintentional injury. Dr. Rivara has published analyses examining the barriers to safe storage counseling among healthcare providers and has evaluated both community and health care setting based safe storage interventions.

Ali Rowhani-Rahbar, MD, PhD, MPH is an epidemiologist and Associate Professor at the University of Washington School of Public Health. His research on self-directed firearm violence is focused on means safety to understand the determinants and consequences of unsafe firearm storage practices and to develop approaches to promote safe storage. His research on interpersonal firearm violence focuses on the nexus of trauma and crime to inform interventions that prevent firearm violence, promote healing, and reduce recidivism. He leads and contributes to several studies on causes, correlates, and consequences of firearm injury and death.

Laney Rupp, MPH is a Research Associate at the University of Michigan and project manager with the FACTS consortium. She has managed multiple community-level evaluations of youth violence and injury prevention interventions in Flint, Michigan. She is interested in interventions that engage community members in environmental design approaches to reducing child firearm injury.

Jukka Savolainen, PhD, MA is a sociologically trained criminologist with expertise in studies of crime and violence with an emphasis on homicide, cross-national comparisons, and the link between alcohol and violence. His major contributions are in homicide research, alcohol effects, childhood behavioral disorders, and life course research on etiology of antisocial behavior. He is particularly interested in the role of firearms in violent encounters, including how firearms may influence the lethality of violence.

Eric Sigel, MD is a pediatrician with specialty training in adolescent medicine at the University of Colorado. He is interested in making the primary health care setting a place to address and decrease firearm access for adolescents, and determining which factors lead to safer storage. He has developed, implemented, and evaluated violence risk screening tools in school and primary health settings, including a tool to detect risk for future serious violence perpetration.

Maureen Walton, PhD, MPH is a community psychologist whose research focuses on development of early interventions for adolescents and emerging adults to address multiple risk behaviors, such as substance use and aggression, which can increase risk for firearm outcomes. She has a particular interest in developing technology-based (web, social media) strategies to increase intervention impact.

April Zeoli, PhD, MPH is an Associate Professor of criminology at Michigan State University. Her research focuses on the impact of state-level firearm laws on homicide and the implementation of those policies at the local level. She is primarily interested in firearm policies that restrict high-risk individuals from purchase and possession of guns and those that facilitate the implementation of firearm restriction policies.

External Expert Panel

Emmy Betz, MD, MPH is an Associate Professor of Emergency Medicine and board certified emergency physician at the University of Colorado School of Medicine. She is the Co-Founder of the Colorado Firearm Safety Coalition, which works to educate firearm retailers, range employees, and the general public about suicide prevention. Her firearm research and advocacy examines lethal means restriction for suicide prevention.

Joel A. Fein, MD, MPH is a Professor of Pediatrics and Emergency Medicine at the Perelman School of Medicine at the University of Pennsylvania. He is the Co-Director for the National Network of Hospital-based Violence Intervention Programs (NNHVIP) and the Children’s Hospital of Philadelphia’s Violence Prevention Initiative. His research examines traumatic stress in violently injured adolescents and emergency department interventions, including screening for firearm injury risk.

Shannon Frattaroli, PhD, MPH is an Associate Professor of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health. Her research and practice efforts are focused on encouraging implementation of the firearm dispossession provisions of domestic violence restraining orders and emerging Extreme Risk Protection Orders (ERPOS) across the U.S.

Jesus Ramirez-Valles, PhD, MPH is the director of the Health Equity Institute (HEI) at San Francisco State University. He is also Co-Principal Investigator for the Center for Health Equity Research at the University of Illinois-Chicago, an NIH funded center that examines the role of structural violence in health inequities among racial, ethnic, sex and gender minorities.

Daniel Webster, ScD is a Professor of Health Policy and Management at the Johns Hopkins Bloomberg School of Public Health. He is the Director of the Johns Hopkins Center for Gun Policy Research and Co-Director of the Johns Hopkins Center for Youth Violence Prevention. His research examines the effects of firearm policies and school and community-based interventions on firearm injury and fatality.

Doug Wiebe, PhD is a Professor of Biostatistics and Epidemiology at the Perelman School of Medicine. He is the Director of the SpaceTimeEpi Group and CDC-funded Penn Injury Science Center. His research explores environmental and situational risks associated with firearm injury across ecological levels.

Practitioner Stakeholders

Adelyn Allchin, MPH is the Director of Public Health Research at the Educational Fund to Stop Gun Violence. Her work focuses on the implementation and evaluation of risk-based firearm removal policies such as Extreme Risk Protection Orders (ERPOS).

Brigadier General James Anderson PhD was an Assistant Adjutant General with the Michigan National Guard and Deputy Director of the Michigan Department of Military and Veteran’s affairs. He is interested in the primary prevention of firearm injury through firearm safety training.

James Berlin is a 38 year law enforcement veteran and former Chief of Police in Roseville, Michigan. Berlin has served as chief firearm instructor for handgun, shotgun and rifle proficiencies and has written numerous policy and procedure guidelines focused on firearm safety.

Vicka Chaplin, MA, MPH is the Director of Public Health Programs at the Educational Fund to Stop Gun Violence. She focuses on evidence-based policy and programmatic approaches to gun violence prevention, including research translation, policy development, advocacy, and implementation.

Rochelle A. Dicker, MD is a surgeon, Vice Chair of Critical Care, and Associate Trauma Director at UCLA. She is the founder of the Wraparound Project, a hospital-based violence intervention program and has conducted extensive research on the effectiveness and cost-effectiveness of violence interventions.

Joseph V. Erardi Jr. PhD was an executive board member of the American Association of School Administrators (AASA). He served as a school superintendent for 20 years and spent the last 4 years of his career leading the rebuild and recovery of Newton, CT School District. He consults on best practices for school climate and safety.

Greg Dorfman is the Supervising Attorney of the gang and gun prosecution section with the Los Angeles City Attorney’s office and serves as the Gun Violence Prevention Coordinator.

Pastor Chris Harris leads Bright Star Church in Chicago and is the founder of Bright Star Community Outreach, a 501c3 dedicated to youth and family anti-violence programs that utilize faith and community leaders as trauma counselors and mentors.

Geraldine Hills, MNpS, CPM is the founder of Arizonans for Gun Safety and serves on the injury prevention task force with the Arizona Department of Health. She is a nationally recognized organizer, speaker, and gun violence prevention advocate.

Ben Hoffman, MD is a general pediatrician and medical director of the Tom Sargent Safety Center at the Doernbecher Children's Hospital at Oregon Health and Science University. He has focused on behavioral economics as a tool to understand decision-making around firearm locks.

Joneigh Khaldun, MD is the Director and Health Officer for the Detroit Health Department and a practicing emergency physician at Henry Ford Hospital. She executes Detroit's health agenda through collaborative partnerships, evidence-based programs, and a social justice lens.

Tom O'Connor is the founding board member at Gun Owners for Responsible Ownership, a non-profit organization that empowers firearm owners to take the lead in reducing gun violence. An avid hunter and fisherman in his youth, O'Connor has completed several firearm safety training programs.

Lokman Sung, MD is a board certified forensic pathologist and Assistant Professor of Pathology at the University of Michigan. He is the Medical Examiner for Wayne County, and has expertise in investigation, autopsy, and expert testimony of firearm deaths.