



A Blueprint for a U.S. Firearms Data Infrastructure

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Final Recommendations of the Expert Panel
on Firearms Data Infrastructure

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Executive Summary

This report makes recommendations for priority changes to the U.S. firearms data infrastructure. The recommendations here include steps to improve existing data collections that can be implemented immediately and long-term changes in strategy to build a more robust and scalable infrastructure. The development of a rigorous empirical research base to inform both citizens and policymakers requires a robust and sustainable data infrastructure. The most enduring data infrastructure is one that is comprehensive, flexible, and nonpartisan. Nowhere is that data foundation more needed than in the realm of firearms violence—reliable data are a critical bridge to effective policymaking that improves public safety by reducing the number of firearm accidents, suicides, homicides, and assaults.

Beginning in the summer of 2019, NORC at the University of Chicago was commissioned by Arnold Ventures to construct and convene a panel of experts on public health and firearms violence. The Expert Panel on Firearms Data Infrastructure includes distinguished academics, government leaders, and trailblazing practitioners whose charge was to create a blueprint for a better firearms data infrastructure to be implemented in both the short- and long-term. The expert panel convened three times, in September 2019 and in January and June of 2020. Each panel meeting grappled with the vast problem of what to measure to inform research on firearms safety; how to create,



This paper is the third of three products generated by the Expert Panel on Firearms Data Infrastructure. Commissioned by Arnold Ventures and staffed at NORC at the University of Chicago, the expert panel convened for three meetings in 2019 and 2020. The panel organization and composition generally replicate the standard [National Research Council](#) model for expert panels and include subject matter scholars and policymakers who are both thought leaders and consumers of data and research and who can act as champions at the local, state, and federal levels. This diversity of perspectives was also reflected in the selection of witnesses who presented expert testimony to the panel. The three products from the expert panel are:

- [The State of Firearms Data in 2019](#). An assessment of the state of firearms data collection and infrastructure in key substantive domains (criminal justice, health, and public health), including both administrative and survey data as well as compilations and systems of data integration. The paper will consider the extant data within the framework of the six essential components of data infrastructure.
- [A Conceptual Framework for a Firearms Data Infrastructure](#). The paper developed a conceptual framework to guide the identification and adoption of theoretical, technical, and methodological advances in social science, data infrastructure development and architecture, mechanisms for sustainability of data infrastructure, implementation science of data systems adoption, and case studies in sustainable systems science.
- [A Blueprint for a U.S. Firearms Data Infrastructure](#). This paper synthesizes and distills the work of the expert panel, through a concise set of actionable recommendations. The report describes the current data environment and the limitations of those data today. Each recommendation includes specific action steps to remediate current problems, including implementation and sustainability, and designates a lead agency.

implement, and sustain priority data collections; whom to entrust with that measurement; and how to create accountability for rigorous, timely data dissemination.

The first expert panel convening led to the release of a report, [*The State of Firearms Data in 2019*](#),¹ which details the scope and sufficiency of the existing U.S. firearms data infrastructure. The report concluded that:

[W]hile there are numerous data sources describing particular elements of the relationship between firearms and accidental harm, suicides, and criminal violence, the current firearms data environment is disordered and highly segmented.... In summary, existing data are mainly useful only for narrow studies to inform national policy and for use in local operational decision-making.

The key problem to be solved through these recommendations is that firearms data are often difficult to access, collections are narrow in scope, public release of data can lag by years, and few datasets and systems can be integrated. Firearms data often cannot be accessed because of policy restrictions (ATF data and background check data) or firearms data can be accessed and do have valuable data but need a slight change in order to accurately identify firearm injury cases (such as the UCR, NIBRS, and hospital data systems) or firearms data are simply not collected (e.g., state-level data on firearm ownership rates). As a result, the number of critical research questions that can be asked and answered in the service of more effective policymaking is severely constrained.

The second convening of the expert panel was held in January 2020 in Bethesda, MD. The goal of that meeting was to develop a cohesive conceptual framework for a firearms data infrastructure. A useful conceptual framework can guide data collection, incorporate new information into the broader knowledge base, provide a basis for analysis, and observe changes in available information. The report developed through that convening, [*A Conceptual Framework for a Firearms Data Infrastructure*](#),² creates an overarching set of principles to guide the selection and prioritization of expert panel recommendations. The conceptual framework is deliberately broad and designed to help support future infrastructure developments and as a structure for developing new firearms research questions to inform policy and practice.

The final convening was held remotely in May 2020. Using the *Conceptual Framework* as a guide, recommendations were developed with a national focus, with a primary audience of the federal government and national philanthropy and, separately, for local and state governments and local and regional foundations. The recommendations in *A Firearms Data Infrastructure to*

¹ Roman JK. 2020. *The State of Firearms Data in 2019*. Bethesda, MD: NORC at the University of Chicago.

² Roman JK. 2020. *A Conceptual Framework for a Firearms Data Infrastructure*. Bethesda, MD: NORC at the University of Chicago.

*Support 21st Century Policymaking*³ are not intended as a census of all possible improvements to firearms data infrastructure. Rather, they are focused on changes where there is both a substantial need for the change (because the data are foundational to a variety of research questions) and where there is a clear path to implementation. So, for instance, while an integrated data system incorporating both public health and criminal justice data generated locally and harmonized nationally may be the optimal solution to a national firearms data infrastructure, such a system is not feasible at this time and there is no clear path for such a product to become feasible in the foreseeable future.

The recommendations are organized as follows:

- Drawing on the data in *The State of Firearms Data in 2019*, each recommendation begins with a summary of the current status of data collection and organization within that subject area. This includes a clear statement of the limitations of the current data collection.
- A recommended approach follows. This describes the consensus of the expert panel of the preferred path to resolve the issues and limitations of the current structure. The recommendations describe the path and process for implementation.
- The recommendations in this report are intended to be actionable and to serve specific objectives. Thus, each recommendation includes a brief discussion of the potential impact to research, policy, and practice if the recommendation were fully implemented.
- For each recommendation, the expert panel is explicit in identifying a potential agency or institution that could have primary responsibility for implementation. Any meaningful data reform requires a champion, and one is designated for each recommendation, along with an estimate of the additional resources required for implementation.
- Finally, the timeline for each data recommendation is described. While the expert panel identified several important reforms that can commence more or less immediately, the recommendations also include many longer-term proposals. The key criteria for recommendations is that there is a pathway to implementation.

The report is divided into two sections. The first describes the priorities for the federal data policy agenda, and the second section describes a state and local policy agenda. Prioritizing the right level of government was an important task for the expert panel—many of the data collections described in these recommendations exist at both levels of government. For instance, many administrative data are primarily collected locally and then aggregated at the state level and disseminated by a federal agency. However, the lines of responsibility must be clear for

³ Roman JK. 2020. *A Blueprint for a U.S. Firearms Data Infrastructure*. Bethesda, MD: NORC at the University of Chicago.

actionable recommendations, and choices were made by the panel to focus on elements particular to one or the other level of government.

Any reasoned debate on firearms policy requires a widely shared set of facts. An objective and transparent data infrastructure creates a firm foundation for public discourse, and the proposed improvements to the U.S. firearms data infrastructure can help to establish those facts. Reducing the number of firearm suicides, homicides, accidents, and assaults in the United States requires answers to fundamental questions that cannot be answered with the data available today. The recommendations of the expert panel to improve the content, quality, and availability of the firearms data infrastructure each meet three criteria: there is a substantial need for the proposed change, there is clear path to implementation, and the data is a key mechanism to improve public health.

The Expert Panel Recommendations for the Federal Government are to:

1. Create valid and reliable administrative data systems for tracking nonfatal gunshot injuries.
2. Facilitate implementation of the National Incident-Based Reporting System (NIBRS) by creating a feasible, well-designed technical assistance and support system to law enforcement entities.
3. Conduct an annual survey of firearms ownership, acquisition, and storage practices.
4. Create a model firearms data sharing platform within the federal government.
5. Set up an interagency working group around data to create federal partnerships to address specific infrastructure gaps (that are not just reporting mechanisms).
6. Create specific guidance to improve timeliness of federal data.
7. Create specific guidance to improve consistency and timeliness of criminal justice history reporting for use in background checks.
8. Create specific guidance and recommended strategies for supporting the development and use of data collection/data use agreements based on best practice in implementation science.
9. Create resources and best practice guides for local and state governments to facilitate the integration of health, social service, criminal justice, and other data on victims and perpetrators of firearm injury and misuse.
10. Implement improvements to the firearm ownership and use datafiles.
11. Improve the Survey of Prison Inmates (SPI).
12. Increase federal data accessibility.
13. Integrate federal public health data and criminal justice data on firearms.

The Expert Panel Recommendations for Local and State Governments are to:

1. Create a climate of transparency around local and state firearms data.
2. Establish pilot projects linking public health and criminal justice data to show the feasibility of data sharing and data transparency initiatives.
3. Facilitate the development of regional working groups of violence prevention teams of health care professionals, public health, firearm owners, and law enforcement, with the goal of strategizing about eradicating data usage problems at the local level and to troubleshoot about implementation.

4. Support the adoption of state equivalents to the federal Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act).

The recommendations presented here are the measures and data collections that are critical to answering key research questions to inform policy as expeditiously as possible and that are reasonably likely to be implemented. The recommendations are, however, not comprehensive—the panel considered dozens of other recommendations that did not meet one of these two strict standards. There is much more work to be done to improve U.S. firearms data, and many more data needs to fill in order for important research questions to be asked and answered.

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Establishing Priorities for a Federal Firearms Data Agenda

Overview of the Federal Data System and Current Limitations

There are deep deficiencies in our federal system of data for understanding firearm violence. Reducing the number of firearms suicides, homicides, unintentional injuries, and assaults requires the answer to basic questions that cannot be answered today, such as:

- How many people are shot in firearm assaults each year and survive? Of those gunshot survivors, how many fully recover and how many survive with significant morbidity? At present, there is no reliable data on nonfatal gunshot victims and their injuries.
- How are crime guns that are used in criminal events obtained by the offender? What is the nature of the illegal firearm marketplace? Survey data items that could help to answer these questions were included in the [2016 Bureau of Justice Statistics Survey of State Inmates](#), which has not yet been released (the latest data available is the 2004 survey).
- How many firearms are sold by state by date? Which dealers have the highest number of crime guns per guns sold? Data to answer these critical questions are either currently collected but not available for research, or, have been available in the past but the data are no longer collected or the data have been made inaccessible. On the firearms supply side, every firearms sale that involves a licensed dealer (about 78% of the total transactions⁴) generates a form that is kept on the dealer's premises, but in most states is not reported to any authority. The [National Instant Background Check System](#) generates state and monthly counts that are at best a rough approximation to sales by dealers.

While none of these questions can be directly answered with data available today, all of these questions could be answered with **a change in priorities** within the federal government. The first step in creating a more comprehensive firearms infrastructure is to prioritize structural changes that facilitate objective data collection, including both an increase in the breadth of data and the precision of the data at the federal and state level. These structural changes include:

- Providing information to state and local governments to improve their collections
- Funding local and state data improvements and technical assistance and implementation supports to sustain those improvements

⁴ Miller M, Hepburn L, and Azrael D. (2017). Firearm acquisition without background checks. *Annals of Internal Medicine*, 166(4), 233-239.

- Careful monitoring of federal data to ensure that the most important data elements are being collected in ongoing administrative and survey data and to hold LEAs accountable for delayed or inadequate data collection and reporting
- Timely dissemination of key data
- Strategic communication about the purpose and use of data to federal agencies and to the general public

The Foundations for Evidence-Based Policymaking Act of 2018 (the [Evidence Act](#)) provides a foundation for the implementation of the recommendations in this *Blueprint*. At its core are two rules that change the nature of federal use of data and create a mechanism for the implementation of these recommendations:

- That each federal agency appoint a chief data officer
- That all federal statistical data are to be shared with statistical agencies unless specifically and proactively prohibited

The Evidence Act expands federal capacity and capabilities around data collection and analysis. These resources can be leveraged to dramatically improve the firearms data infrastructure. Firearms data infrastructure should be prioritized as a key policy goal, open data and transparency should be prominent features, and transfer of knowledge to state and local governments, agencies, and, ultimately, citizens should be a critical part of the charter.

Expert Panel Recommendations for a Federal Data Agenda

In this section, we present recommendations by the expert panel for the federal government to improve firearms data collection. These recommendations are generally at the agency level. In each recommendation, we describe:

- the nature of the problem to be addressed and the need for a solution
- a recommended approach and the potential impact on policy and practice
- where the effort should be located, i.e., which federal agency should have responsibility
- the timing of implementation

The priorities described here should be accompanied by federal budget support to facilitate implementation, provide transparency, and promote sustainability.

Create valid and reliable administrative data systems for tracking nonfatal gunshot injuries.

What we know. Today, we don't know basic information about firearms injuries, from how often they occur to the circumstances of the shooting. For example, while the Centers for Disease Control and Prevention's ([CDC](#)) National Violent Death Reporting System ([NVDRS](#)) compiles detailed, individual-level data on homicides and suicides, the system does not extend to nonfatal

injuries. The CDC's National Electronic Injury Surveillance System ([NEISS](#)) produces estimates of hospital-treated, nonfatal injuries, including firearm injuries, but only in the aggregate at the national level, and recent research suggests that these national estimates are unreliable because of sampling and classification issues.⁵ Each state currently maintains its own statewide hospital discharge dataset for inpatients, and most maintain statewide emergency department datasets as well. These datasets are capable of capturing a census of hospital-treated injuries, and the universal coding system that they use (International Classification of Disease, [ICD](#)) does specifically identify firearm injuries; but the classification of intent is problematic. The systems appear to grossly overestimate unintentional injury and underestimate assault—a problem that must be fixed if this otherwise valuable system is to be useful.

The FBI's Uniform Crime Reporting ([UCR](#)) Program reports aggregate numbers on state-level totals of firearms-related crime (but not other types of firearm injury) through the Summary Reporting System ([SRS](#)) but offers no details about firearms injuries (e.g., the number of victims actually wounded, the precipitating circumstances, relationship of victim to shooter, and broad type of firearm used). These details are only available nationally for fatal shootings, through the UCR Supplementary Homicide Report ([SHR](#)) and (in the near future) the NVDRS. Several police departments participate in the National Incident-Based Reporting System ([NIBRS](#)), which collects much detail at the incident level on individual crimes; however, many of the nation's largest police agencies have not participated in the system. As discussed in much greater detail below, in 2021 the FBI is fully transitioning from the state-level monthly UCR aggregates to NIBRS. While a truly national NIBRS in 2021 promises broader data collection, including information on victims and circumstances, there is widespread concern that many agencies will fail to make the transition. Clearly, there is an opportunity for the federal government, states, and local jurisdictions to better coordinate to collect consistent and comparable data, across sites and over time, including firearms injuries and detailed descriptions of the circumstances of the event. These are data that clinicians, police, and others are already painstakingly documenting at the local level. Making this important information retrievable in state and national databases enables researchers to better understand the characteristics of assault and self-harm by any method, understand the special role of firearms in these events, characterize unintentional shootings, and evaluate which interventions are effective in reducing these different types of violence.

Recommended approach. The expert panel recommends additional investments in both NIBRS and hospital and emergency department discharge data. Both systems require key improvements. The hospital data systems described above provide a census of emergency department and inpatient hospital utilization, including diagnoses, procedures, charges, and payer type at the individual level. Many states submit these datasets to a central federal data collection, the Health

⁵ See: <https://fivethirtyeight.com/features/the-cdc-is-publishing-unreliable-data-on-gun-injuries-people-are-using-it-anyway/>. Also, Cook PJ, Rivera-Aguirre AE, Cerdá M, and Wintemute G. 2017. Constant lethality of gunshot injuries from firearm assault: United States, 2003-2012. *American Journal of Public Health*, 107, 1324-1328. [doi:10.2105/AJPH.2017.303837](https://doi.org/10.2105/AJPH.2017.303837)

Care Utilization Project ([HCUP](#)), which makes the state datasets available and creates datasets from which national estimates can be drawn. HCUP is a sustainable system built around nonpolitical, nonpartisan data collection—hospital billing data—which enhances the prospect for sustainability. The major limitation that HCUP, and the state-level datasets on which it is based, pose for firearm injury surveillance is the apparent misclassification of many firearm assaults as unintentional injury. This problem (which appears to result not from clinicians misunderstanding the nature of the cases they are seeing but rather from peculiarities of the coding system) needs to be investigated and resolved before these otherwise valuable state and national data systems can truly be harnessed for firearm injury tracking.

As is discussed in the next recommendation, additional investments are needed across the board to ensure that the 2021 national launch of NIBRS succeeds. A relatively minor change to the system—identifying whether victims of firearm crimes sustained an actual gunshot wound—would dramatically improve NIBRS’ utility for tracking firearm injury. In the longer term, NIBRS data can potentially be integrated with HCUP data at the local level to allow for a robust local integrated data system (discussed in a later recommendation in the state and local section) to create a richer data narrative about all the information related to a shooting with injury, including the offenders criminal history. Currently, NVDRS includes a similar data integration process at the local level—investment in research is needed to model a local HCUP-NIBRS data integration after the NVDRS process.

Potential impact. Nonfatal firearms injuries have long-term consequences, not only because they are far more common than fatal firearm homicides and because of the direct consequences, including disability and trauma, but also because they provide critical information about trends in the criminal use of firearms and in how effectively law enforcement and the medical system respond. People who have been shot often have long recovery times and permanent disabilities, both physical and psychological. The effects of nonfatal shootings on families and communities are also often understated and understudied. Better data on nonfatal injuries can not only help to inform ongoing prevention policies and programs intended to reduce the number of injuries, but also to quickly identify when new trends emerge.

Location. The Agency for Healthcare Research and Quality collects HCUP data, which in turn is created by individual hospitals and aggregated by state public/private agencies. FBI collects NIBRS data, which similarly, is produced by local LEAs and (in most places) aggregated by state crime reporting agencies. Research funding and other supports should be directed to those agencies (we note that once the HCUP coding issue is resolved, no additional funding for HCUP is necessary).

Timing. Investments in improved data collections could begin in the next federal budget cycle. Improvements in data collection should be observable within a year or two.

Facilitate the implementation of NIBRS, creating a feasible, well-designed technical assistance and support system to law enforcement entities.

What we know. Since 1929, national law enforcement data have been collected from local law enforcement data and maintained by the FBI in the UCR Program. Because the data are aggregated by month and aggregated in overly broad crime categories, they have limited value for research. Beginning in January 1989, local law enforcement could voluntarily submit information about victims, offenders, and context of each crime through NIBRS. Beginning in January 2021, NIBRS will fully replace the UCR Program as the only national crime reporting data source. The challenge is that NIBRS is far more resource-intensive for local law enforcement, and reporting is spotty to date. As of 2017, only about 40% of law enforcement agencies (LEA) reported to NIBRS, covering about one-third of the U.S. population. Notably, few major U.S. cities, where the majority of shootings occur, participate.⁶ If successful, NIBRS expansion will provide a sound basis for improving research on the use of firearms in criminal events. However, the now 20-year-long history of NIBRS suggests that many LEAs will be unable or unwilling to comply with the substantial increase in reporting resources required for NIBRS compliance.

Recommended approach. Many local LEAs will require substantial implementation support to meet the 2021 NIBRS requirements. The nature of that support is currently unknown, and the expert panel recommends a survey of law enforcement needs. It is reasonable to anticipate that a broad range of support will be necessary, including technical support, implementation support, and financial assistance. Expert panelists also express concerns that many LEAs report difficulties with existing vendors, where the LEAs do not have sufficient capability to evaluate the quality of vendors that supply the hardware and software necessary to meet NIBRS reporting requirements. The expert panel recommends that surveys of LEAs also ask respondents about their broader needs for technical support and begin development of a support program. The expert panel recommends that ongoing support for LEAs is built into the NIBRS program to monitor and improve the quality of data. Finally, the expert panel recommends that ongoing support survey data be used to construct a technical assistance and implementation support system that creates the usable, feasible (cost, human resources, etc.) infrastructure necessary for full NIBRS implementation. The FBI and the Bureau of Justice Statistics (BJS) should consider linking with an external intermediary organization (new or existing) to facilitate implementation design, technical assistance strategies, aligning needs with budget, and using ongoing best practices to enable the climate for full NIBRS implementation success.

In light of these recommendations, the expert panel also recommends that the NIBRS replacement of the SRS be delayed at least one year.

⁶ For example, New York and California do not report NIBRS data.

Potential impact. When the UCR Program is discontinued at the end of 2020, NIBRS will be the sole source of national crime data. These data are used for macro policymaking—determining how many police are needed, whether criminal sentences are appropriate, and how to divide budgets between public safety and social services. A disruption in national crime data would have profound implications for governance, particularly in the wake of widespread protests about police behavior.

Location. The FBI and the BJS are the lead agencies for the NIBRS program.

Timing. Preparations for a successful transition from UCR to NIBRS must begin immediately.

Create specific guidance to improve timeliness of federal data.

What we know. In order for data to be useful to the public and policymakers, those data must be collected on a regular, frequent basis and released in a timely manner. Federal data collection is often irregular, with occasional collections occurring every few years. When data are collected, the lag between the completion of data collection and public release is often many months or more than a year. These lags and irregular schedules limit the value of data for policymaking and for public education.

Recommended approach. The expert panel recommends that guidance is established by the Office of Management and Budget’s Office of Information and Regulatory Affairs (OIRA) and the Statistical and Science Policy (SSP) Office headed by the chief statistician. This guidance should establish a regular cadence for firearms data collections—both survey and administrative data collections—and requirements that data are released to the public within six months of the end of survey data collection or the final filing date for administrative data.

Potential impact. Early intervention of growing problems is critical to the prevention of widespread harms, and access to routine, sustained, and timely data would allow trends in firearms violence and injury to be observed and mitigated before widespread problems emerge. The rapid changes in firearm purchasing behavior, firearm ownership, and firearm-related crime during the COVID-19 pandemic are an example of an instance where effective public health would be better achieved by the use of timely data. This would not only benefit policymakers seeking legislative or regulatory remedies to new problems, but would benefit the general public when education about harmful trends could lead to voluntary changes in activities.

Location. OIRA and SSP would lead the development of guidance.

Timing. Guidance could be developed and promulgated within a few months.

Increase federal data accessibility.

What we know. The federal government collects a substantial amount of data about firearms, including surveys and administrative data collections, but the investment in the data collection dwarfs the investment in data accessibility for research. And, barriers are increasing to that use. For instance, within the last decade, all data sponsored by the U.S. Department of Justice and maintained by FACTS through the [Inter-university Consortium for Political and Social Research \(ICPSR\) platform](#) at the University of Michigan have been moved to restricted access, greatly limiting research on these important topics. Other barriers to access include insufficient documentation and low visibility that reduces demand by researchers to study important questions.

Recommended approach. The federal government should prioritize enhanced data accessibility for qualified researchers with appropriate protections for confidentiality and use.

- The expert panel recommends that the federal government conduct a regular review to be made public of the accessibility of key firearms data. This review would include barriers to researcher access and use, and would document the known limitations of the data. Data to be included in this review include NIBRS, NVDRS, NICS, NEISS, HCUP, ATF Trace, ATF new firearms and firearm transactions, and the GSS.
- Encourage, facilitate, and guide the appropriate use of firearms data by researchers to increase the demand for and use of firearms data. Data use could be encouraged through better marketing through dissemination and events about the strengths and weaknesses of the available datasets. Data use could be facilitated by increasing the ease of use by reducing barriers to access, creating libraries of data with documentation and associated publications, and that include better documentation of data and clear descriptions of the limitations of existing data. Many of the specific recommendations in the sections that follow include provisions to enhance researcher access to data.

Policy impact. The breadth and scope of research questions that could be asked and answered from existing federal data collections is unknown. Potentially, data to answer important public safety questions already exist, and important opportunities to improve policy and practice have been missed. The expert panel recommends optimizing our existing investments in data collection by maximizing their use by researchers and by ensuring that their data are not misinterpreted.

Location. [Interagency Council on Statistical Policy](#).

Timing. This research could begin immediately.

Annual survey of firearms ownership, acquisition, and storage practices.

What we know. Firearms are used more often in suicides and [violent crimes](#) in the United States than elsewhere among similar nations, and Americans are injured more often in firearm accidents as well. Despite the obvious need for accurate data on firearms ownership, use, and storage to inform effective public health strategies, there is no official data on firearms ownership. Critical data includes: what proportion of homes have firearms, why people own firearms, how they store them, and whether they change their storage practices (e.g., store away from home or take other steps to restrict access when a family member is at risk for suicide or misuse). These data are critical both for suicide and assault prevention work. There are a number of surveys that ask a few of these questions, such as the General Social Survey ([GSS](#)), and there have been more detailed surveys in the past, such as the Behavioral Risk Factor Surveillance System ([BRFSS](#)), which asked about household firearms ownership in all 50 states in the early 2000s but not in subsequent years, and some privately funded efforts. In general, the annual surveys ask broad questions consistently, and other surveys query more deeply but generally only as one-time surveys. Policymaking on firearms would be improved with accurate data describing who owns firearms, how firearms ownership is transferred, the reasons people buy and sell firearms, and their attitudes toward storage.

Recommended approach. The expert panel recommends establishing a semi-annual random household survey of Americans' firearm ownership. These surveys would measure:

- *Firearms ownership and carriage.* The proportion of homes with firearms, the number and type of firearms owned, how they are purchased and sold, how they are stored, and perceptions of risk. Data on state firearm ownership enables us to evaluate the extent to which firearm availability helps protect from or increase risk of suicide and different types of homicide and crime. These data would help inform better prevention strategies and policymaking in a number of areas. For example, many evaluations of firearm legislation do not examine whether the legislation was associated with changes in the underlying behavior that the laws were intended to impact. Instead, in cross-sectional analysis they mistakenly attribute to the law observed differences in mortality rates that are more likely the impact of state-specific baseline differences in ownership and storage. In the absence of national sales data, surveys are currently the only source of denominator data on the nation's firearm stock when evaluating, for example, whether specific firearm types are over-represented in crime or how often transfers are made without a background check.
- *Risk perception.* In the broadest sense, policymaking about firearms ownership and use regulation are tied to owner perceptions about risk—both the risk to their household from owning firearms and their perceptions of external risks that lead them to own a firearm.

- *Exposure.* Exposure to firearms violence, particularly about children and adolescents, can have long-term consequences. Neither the incidence nor prevalence of exposure to firearms violence is currently collected, nor are the effects of exposure.
- *Suicide risk.* More narrowly, perceptions of risk affect firearm owners' decisions about storing a weapon. Locked and unloaded storage appears to be associated with lower risk of household suicide. The vast majority of people who take their life with a firearm could pass a background check. This has led firearm owner groups and suicide prevention groups to promote changes in social norms, such as routinely locking firearms and taking more active voluntary steps (such as storing firearms away from home or making the combination to the safe inaccessible to the at-risk person until they recover) when a household member is at risk for suicide. Survey data are necessary for evaluating the impact of these interventions and secular changes. Correlates and trends in risk and storage behaviors can be linked to policy responses to prevent suicide.

The expert panel recommends that research is initiated to explore two promising platforms for a semi-annual survey. One option is to fund a survey collection outside the federal government. For instance, the National Firearms Survey (NFS),⁷ conducted by researchers at Harvard and Northeastern Universities and administered by Growth for Knowledge (GfK), could be adapted to a bi-annualized series through sustainable funding. And, the Firearms Safety Among Children and Teens ([FACTS](#)) consortium at the University of Michigan fields the National Survey of Firearm-owning Parents and Youth, which is a national representative survey of parents and adolescents that could similarly be adapted and sustained. Another option is to adapt an ongoing survey data collection administered by the federal government. The National Household Survey on Drug Use and Health ([NSDUH](#)) is currently used to collect data on other health-related behaviors and could be extended to include questions about firearms ownership and storage. The advantage of NSDUH is that it could generate estimates for both the nation as a whole and for each individual state. The expert panel recommends implementing both strategies: 1) nationally representative data (like the NFS) that deeply investigates household firearms ownership and preferences and 2) state-representative data (which is more expensive to administer than a national survey and may provide less granular state-specific data), which would ideally be implemented through the NSDUH or, second best, the BRFSS. The state and sub-state estimates of ownership and storage are particularly vital for understanding drivers of suicide rates.

Potential impact. The range of policies that could be informed by survey data is extensive. Survey data can identify changes in storage behavior and in attitudes toward firearm use that

⁷ Azrael D, Hepburn LM, Hemenway D, and Miller M. 2017. The stock and flow of U.S. firearms: Results from the 2015 National Firearms Survey. *Russell Sage Foundation Journal of the Social Sciences*, 3(5), 38-57. doi.org/10.7758/RSF.2017.3.5.02

drive storage decisions. For example, the NFS has noted an increase in the proportion of firearm owners who own a firearm for protection and who store firearms unlocked and loaded.

Location. The NSDUH is administered by the Substance Abuse and Mental Health Services Administration, an agency in the U.S. Department of Health and Human Services. BRFSS is administered by the CDC. The NFS is currently a private, foundation-funded effort.⁸

Timing. A small number of specific questions could be developed and added to the ongoing NSDUH sample in short order to efficiently track household firearm ownership and whether any firearms are stored unlocked, loaded, or both. The NFS is currently being conducted every three to four years with foundation funding. The semi-annual survey could be funded in 2021 and conducted in 2022.

Set up an interagency working group around data to create federal partnerships to address specific infrastructure gaps (that are not just reporting mechanisms).

What we know. The federal government has established numerous interagency workgroups to facilitate coordinated and coherent policymaking around issues that fall under the jurisdiction of numerous federal agencies. Examples include [diagnostics, safety, and quality in health care](#); [prisoner reentry](#); and [support programs and services for youth](#).

Recommended approach. Enactment of the federal [Evidence Act](#) creates both momentum and added resources for interagency workgroups to apply to difficult problems such as firearms data integration. The expert panel recommends prioritizing the inclusion of chief statistical/data officers from the 13 principal statistical agencies in the [Interagency Council on Statistical Policy](#) and other key agencies (CDC, ATF, and FBI). To signal the importance of the initiative and the interagency workgroup, the expert panel recommends that the panel is chaired by the U.S. chief statistician. In addition to coordinating policy development and implementation, the expert panel recommends:

- a. Creating agency guidance to make more data public.
- b. Setting up a pilot project with a small number of states and federal agencies.
- c. Creating tools for dissemination and a delivery system and supporting the use of those products to optimize use. The expert panel recommends that the Council and their agencies consider funding and embedding the implementation supports through an intermediary organization that specializes in these issues.

Potential impact. The interagency workgroup would provide a sustainable mechanism for the development of a coordinated federal data infrastructure policy to: 1) signal to other agencies and

⁸ Fund for a Safer Future (New Venture Fund/Fund for a Safer Future) and the Joyce Foundation.

state and local government the importance of this effort, 2) create guidance and model policies, and 3) serve as a resource and information clearinghouse for matters related to firearms data infrastructure.

Location. An agency lead would be designated for the interagency workgroup.

Timing. An interagency workgroup could be established within months of authorization.

Create specific guidance to improve consistency and timeliness of data for use in background checks.

What we know. In February 2013, The National Consortium for Justice Information and Statistics (SEARCH) [released a report](#) detailing substantial roadblocks to the timeliness and quality of criminal justice history and other data input into the NICS. The report describes how almost all of the data in NICS that determines if an individual is ineligible to purchase a firearm are drawn from state data collections that include substantial gaps in information. SEARCH describes barriers to effective state data collection feeding into each of the three databases (Interstate Identification Index, National Crime Information Center, and NICS Index) that together determine firearm purchase eligibility. Two issues dominate: 1) that states lack the capacity and capability to collect and report more—and more accurate—data, and 2) that criminal history data, which is where most resources flow today, inform only two of the 10 disqualification categories. Data on the other eight disqualification categories, particularly around mental health and court data, lag even further. The library of U.S. government-funded research studies ([National Criminal Justice Reference Service](#)) shows no studies released on improvements to the NICS since July 2017.

Recommended approach. The expert panel recommends that an audit is immediately conducted to determine precisely how much legally required information does and does not flow into the NICS. That audit should document specific barriers and provide recommendations for remediating those barriers, including an estimate of the financial investment required for the database to comply with the legal obligations in the authorizing law, the 1998 Brady Act. The expert panel further recommends that the audit is conducted annually to ensure sustainable compliance.

Potential impact. The NICS system is designed to prevent firearm purchases by individuals deemed too dangerous to own a firearm. Incomplete data ensures that at least some dangerous individuals can legally purchase a weapon. These data gaps are a threat to public safety.

Location. FBI/BJS.

Timing. Immediate.

Create specific guidance and recommended strategies for supporting the development and use of data collection/data use agreements based on best practice in implementation science.

What we know. The U.S. criminal justice system includes more than 18,000 LEAs and state and county criminal courts. Each of those agencies and systems must balance limited information system budgets with the need for open and transparent data. While the federal government requires or strongly encourages reporting on a variety of data, there is limited funding support for the implementation of local data improvements and for sustainable practices that account for local context. Contextualizing data collection and management processes locally can substantially improve the efficiency and comprehensiveness of data.

Recommended approach. Any requests or mandates for new or expanded firearms data collection by the federal government should be accompanied by resources to aid local and state officials in the development of actionable plans for improved data architecture. The expert panel recommends that the improved national roll-out of NIBRS as recommended above is used as a model for implementation practices and financial investments in local and state governments to improve existing data collections and to prepare those governments for new data collections.

Potential impact. Virtually all criminal justice system administrative data around firearms use in crime are collected by local LEAs and criminal court systems. At best, those data are currently broadly incomplete and their use in the policymaking process is necessarily limited. More and better support around the implementation of more sophisticated and comprehensive data systems would produce more accurate statistics both locally and nationally. There are positive feedback loops to supporting local data collections as they enhance local capacity beyond any one collection.

Timing. Support for the implementation of NIBRS should begin immediately, and development of a model for information technology supports should be developed from that experience within the next year.

Location. Bureau of Justice Assistance (BJA).

Create resources and best practice guides for local and state governments to facilitate the integration of health, social service, criminal justice, and other data on victims and perpetrators of firearm injury and misuse.

What we know. Firearms-related injuries and deaths vary substantially across the country and are affected by local and state laws, local and state risk factors such as economic conditions and racial disparities, and local and regional attitudes towards safe firearm practices. Information sharing about the level of risk and trends in those risks across political boundaries on firearms harms is critical to public safety. Local and state governments need not only practical guidance about how to implement data sharing, but also guides to effectively transfer risk of data

integration from the agency level to the policy level. Certain states and localities have been innovators in data linkage that is aimed at better understanding their local firearm injury problem or how to most effectively respond to victims and perpetrators to prevent further harm. The data linkage is necessarily customized because it involves state-specific or institution-specific datasets that are not necessarily uniform across jurisdictions. It must also be customized because it is often constrained by state law. Further, creating national guidelines that states and localities could follow would effectively hold them harmless for errors in the guidelines.

Recommended approach. The role of the federal government can be to help support these data linkage efforts with funding and a resource center to help disseminate lessons learned across jurisdictions. Local and state governments need a variety of supports to create more effective firearms data information systems. In particular, data toolkits are needed that provide practical guidance for data integration, including specific examples of compliance, gap analysis, and technological solutions. Guidance around sharing and linking data and creating data use agreements is a specific need. That guidance should include resources with information about successful city and regional initiatives. For instance, the [AISP](#) (Actionable Intelligence for Social Policy) program at the University of Pennsylvania has created 35 local and regional networks that regularly and sustainably integrate public health data through partnerships that include practitioners, policymakers, researchers, and community stakeholders. This support should also include ongoing technical assistance processes and simple structures (federal to state/local) for how to use the guides in the local context as passive dissemination of materials, guides, and toolkits yield low utilization rates.

Policy impact. The COVID-19 public health crisis has clearly demonstrated that public health crises, like the unacceptably high rate of firearms-related injuries, cross political boundaries and that effective responses such as AISP must also cross those boundaries. If all of the federal recommendations in this report are taken up by the federal government, the effect will be muted if data sharing at the local level is limited.

Location. The model programming guides recommended here are national in scope and could be addressed by either the federal government (we recommend a CDC/BJA partnership) or by a private foundation with a national scope.

Timing. These activities can begin immediately, and initial work could be completed within 12 to 24 months. To be effective and sustainable, this work should be ongoing.

Improvements to the firearm ownership and use datafiles.

What we know. The federal government maintains a number of data collections that describe how firearms purchases are processed through federally licensed firearms dealers (FFL), how firearms are used in violent crimes, and how firearms contribute to unintentional injury and

death, suicide, and homicide. There are important limits to each of these datasets that can be addressed through relatively modest changes to the scope of data in those collections.

Recommended approach. The expert panel recommends the following changes in scope for three key data collections of firearms ownership and use.

- **National Incident-Based Reporting System (NIBRS)**

- Add a subcategory for weapons charges. This category would include finer distinctions among “Weapons” arrests on the person arrested and nature of the charge: this would distinguish arrests for carrying without a permit from arrests for illegal possession by a convicted felon or person otherwise prohibited from owning a weapon, and would include data about the nature of the subcategory (for instance, prohibited via restraining order or prohibited via an involuntary mental health commitment). The data should include the beginning and end dates of the period of prohibition and the arrest date. Add a variable describing how the arrestee acquired the weapon.
- Add a subcategory for gunshot wound, including incident-level firearms assault with injury data.
- Add a subcategory for domestic violence firearms incidents.

- **Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)**

Improve access to ATF Tracking Investigations and improve access to ATF compliance reports. These data include the results of inspections into FFLs and include reports of dealer violations. Improved access would allow law enforcement and researchers to identify FFLs with a suspiciously high ratio of crime guns to firearms sold, while simultaneously linking other investigations into that FFL, the violation history of the FFL, and any administrative actions in response to those investigations by the ATF.

- Add a specific check-off for a trace in the case of suicide to ATF Trace Data.
- Remove disclaimers prohibiting interpretation of the data.
- Report number of firearm transfers that were completed before background check process was completed.
- Add details about ghost firearms. One of the most troubling areas in violence prevention policy is the emergence of ghost firearms. These are firearm parts sold as kits that allow users to assemble their own semi-automatic or automatic firearm without any tracing through manufacturers or FFLs. There is no make, model, or serial number on these firearms. Data systems are not able to track this market in a meaningful, actionable way—there is no capacity to understand the emergence of this problem. Firearm regulations are essentially rendered moot if individuals can

essentially manufacture their own weapons. Design of a data collection mechanism by the ATF should be a top data priority.

- **National Vital Statistics System (official death certificate-based mortality data)**

Vital Statistics mortality data provide basic counts and rates at the national, state, and county level of homicides and suicides by method and by victim demographics that are largely accurate. However, the system dramatically misclassifies unintentional firearm deaths and legal intervention deaths (largely officer-involved shootings or OIS). The extent to which these deaths are misclassified varies tremendously from state to state. As a result, any comparison of state mortality rates for unintentional injury and OIS based on official mortality data are unreliable, and policy analyses that use these as outcomes are critically flawed.

Add a feedback loop between state NVDRS offices and state Vital Statistics registries to improve the accuracy of National Vital Statistics System’s ICD coding of firearm accidents and legal intervention deaths. The NVDRS provides a far more accurate count of unintentional firearm deaths and OIS than Vital Statistics.

- **National Violent Death Reporting System (NVDRS)**

The NVDRS is a state-based and federally funded system established by the CDC in 2003 and now operating in all 50 states. It is comparable to the National Highway Traffic Safety Administration’s (NHTSA) Fatality Analysis Reporting System (FARS), in that it links information from death certificates, police reports, and coroner/medical examiner reports. The system covers suicides, homicides, and undetermined injury deaths by any method, as well as unintentional firearm deaths. It covers great detail on where incidents occurred (to the street address level and by type of location—like school, home, work, public transportation), the victim’s occupation and education levels, demographics, military service status, whether they were pregnant or homeless, the specific weapons involved (including—for guns—the specific type, make, model, and caliber/gauge, and—when available—the relationship of the firearm owner to the shooter), number and location of wounds, results of post-mortem toxicological screening, relationship of victim(s) to suspect(s), whether suspects attempted or completed suicide during the incident, whether a homicide was deemed justifiable, and detailed information on precipitating circumstances and related circumstances that are tailored to the death type (e.g., information on mental health diagnoses, treatment status, history of suicide attempt, existence of relationship or job problems and etc. for suicide victims). In addition, short narratives summarize the circumstances leading up to the death.

- Continue funding a fully national NVDRS.⁹
- Add specific precipitating circumstance variables that are tailored to legal intervention deaths (e.g., the highest level of force used by the decedent against law enforcement and against civilians, whether and with what the decedent was armed, etc.) While NVDRS provides the nation with its only accurate, comprehensive, and detailed federal reporting system for legal intervention deaths, it could be improved by coding the additional rich information that NVDRS abstractors have access to.
- Funding should be made available to states and the CDC to help improve the uniformity with which local law enforcement and coroners/medical examiners conduct and document death investigations. NVDRS can only be as good as the source data that it links.

Policy impact. These changes to existing systems will improve the ability of researchers to understand firearms use, misuse, and acquisition.

Location. The FBI and BJS have primary jurisdiction for NIBRS, ATF data are collected and maintained by the ATF, NVDRS data are maintained by CDC’s National Center for Injury Prevention and Control, and Vital Statistics is maintained by the CDC’s National Center for Health Statistics.

Timing. Full implementation of these recommendations would likely take up to two years—redesigning data collection instruments to capture these data is straightforward, but it will require additional implementation support for reporting agencies. Improving source data on which NVDRS is based would be a long-term strategy.

Improve the Survey of Prison Inmates (SPI).

What we know. One substantial gap in information about criminal firearm use is how those who use firearms in a crime obtained their firearm. One approach to this is through a survey of prison inmates. The SPI is an occasional survey of state prison inmates fielded in 1974, 1979, 1986, and of both federal and state inmates in 1991, 1997, 2004, and 2016. The SPI includes a module about firearms, specifically asking respondents about “firearm possession during the crime for which a prisoner was serving time and how the firearm was used during the crime. It also collects information on the method, source, and process that prisoners used to obtain the firearm” (Alper and Glaze, 2019). Data from the 2016 survey has not been released; however, a brief on the weapons module was published in February 2019 (Alper and Glaze, 2019).

Recommended approach. The expert panel recommends that the SPI is sustainably funded as a biannual data collection. Grant funding should be made available to create a repeated module on

⁹ See also: https://cdn.ymaws.com/www.safestates.org/resource/resmgr/nvdrs/issue_brief_2020/nvdrs_issue_brief_safe_state.pdf.

the illicit firearms market, including specific questions about how a crime gun was obtained and the purchase price (the current questions are too general to allow for research on the nature of the illicit firearm market). Additional survey items should be created on the offenders' motive for acquisition and their expectations about firearms use. In order for these data to be useful, they must be released in a timely fashion, within one year of the completion of the survey.

Policy impact. As has been stated in other recommendations, little is known about the illicit firearm market and, in particular, about how crime guns get into the hands of offenders. This information is critical both to inform law enforcement operations and to allow for research into the nature of the market (so that it can be disrupted) and the motivations for firearms use (so that policy can be crafted to reduce that motivation).

Location. BJS.

Timing. A request for applications could be developed immediately to fund the development of a new survey instrument. A survey including those questions could be fielded in 2021, with data available early in 2022.

Integrate federal public health data and criminal justice data on firearms.

What we know. Federal firearms data are housed in many federal agencies. A particular concern is that health data describing firearms injuries and mortality, and law enforcement data describing the circumstances of the shooting, are very difficult to combine. In other public health syndromes, significant efforts to share data have substantially contributed to remediating and preventing major health crises. For example, the CDC coordinates a substantial [data collection effort](#) on the consequences of smoking, including administrative data from a broad collection of health and public health agencies and detailed survey data. The CDC also provides in-depth guides to implementing effective strategies.

Recommended approach. The expert panel has identified two existing data platforms that could be used as a scaffold for this data integration. Federal [data fusion centers](#) have integrated justice, public health, and other data across all levels of government to facilitate operations in intelligence gathering around key policy areas. The NHTSA has also [integrated data across governments](#), and the data have been used to directly inform prevention policies that have improved driver safety.

Potential impact. Creating an integrated federal firearms data platform would facilitate the creation of what public health experts call “syndromic surveillance.” Syndromic systems collect and monitor real-time data to generate alerts and monitor indicators to detect outbreaks of dangerous firearm use that cannot be otherwise observed.

Location. The federal government must designate an interagency workgroup with defined responsibilities for developing and maintaining this data system.

Timing. Authorization for the interagency workgroup can be established immediately. Development of the data platform can also begin in the short-term, but the authorization must include a long-time horizon to create an ongoing and sustainable platform.

Create a model firearms data sharing platform within the federal government.

What we know. Data protections for all individuals are critical to good government. However, states and local governments often overly interpret these protections as prohibiting data sharing, and federal efforts to create efficient data sharing structures are generally specific to a single federal agency or a single collaboration. Data infrastructure solutions are also often framed as too expensive or too complex for routine use. States and local governments look to the federal government to provide leadership on data sharing. Within the federal government there is a need for a model data sharing platform for both proof of concept and as a blueprint for replication. In addition to facilitating data sharing within the federal government, and between the federal government and researchers, the platform could be used by states and local governments to develop their own data sharing platforms.

Recommended approach. The expert panel interviewed several experts from private and nonprofit companies that have successfully integrated confidential data in a secure environment that also facilitated research. Their recommendation, and the recommendation of the expert panel, is to designate or credential data environments that state and local governments can contract with to share data in a secure environment, prioritizing cloud environments that have Federal Risk and Authorization Management Program ([FedRAMP](#)) certification.¹⁰

Potential impact. Existing research has identified important ways firearms injuries are related to individual and community characteristics and attitudes toward firearms. Combining more of the in-depth data collected by federal agencies would provide policymakers at all levels of government with more detailed information that would improve the effectiveness of laws and regulations to prevent harm.

Location. A number of federal agencies, including the [National Institute of Standards and Technology](#), could serve as the hub for development of a model.

Timing. This is a long-term objective. The development of a model firearms data sharing platform, and information for other governments to use to guide their data sharing, would likely require two or more years.

¹⁰ FedRAMP “is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services.” Accessed October 1, 2020: <https://www.fedramp.gov/about/>.

Establishing Priorities for Local and State Firearms Data

The expert panel recommendations for local and state governments are clearly tied to the federal recommendations. In general, these governments have fewer resources and less flexibility than federal agencies (not only because they have fewer resources but also because those governments must comply in many instances with federal rules on data collection, storage, and transmission). In this section, we describe recommendations for strategies and practices that can be implemented at the state and local level, with or without federal government financing and technical support (though we note that all of these efforts can be enhanced with federal investments of financial and other resources).

Create a climate of transparency around local and state firearms data.

What we know. The protests that began in the wake of George Floyd’s murder underscore in part a long and simmering frustration with a lack of transparency around officer-involved shootings (OIS). Currently, there are no federal data collections on officer-involved shootings (the FBI is in the process of collecting data for the [National Use of Force Database](#)) and [few cities](#) make use of force or OIS data public. OIS issues, however, are only one particular instance where a lack of transparency around firearms limits local and state governments’ ability to develop and implement effective strategies to improve public safety.

Recommended approach. Creating a climate within local and state governments that removes existing barriers to firearms data sharing and analysis, with the key objective of creating publicly available firearms data and analysis, would substantially improve government transparency. We recommend that local and state governments make transparency a key policy objective and involve thoughtful people from a variety of perspectives in the process, including people who value firearms and individual freedom, researchers with a variety of areas of expertise, people from neighborhoods most impacted by firearm homicide, people who have struggled with their own or a loved one’s suicidality, people who are skeptical about the value of guns, mental health providers and community services workers, clinicians who treat gunshot wound patients, and law enforcement.

Policy impact. Involving people from a variety of perspectives—especially those who value guns, those from communities most impacted by firearm deaths, and those who work most closely with victims and perpetrators—and regarding them all as key to finding practical solutions will help us ask better research questions. For instance, firearm storage practice appears to be an area of [bipartisan consensus](#). Poor firearm safety behavior is associated with increased risk of unintentional injury and suicides and increases the likelihood that firearms will be stolen or lost and transferred to illegal firearms markets where they can be used in violent crimes. Data sharing in general, and firearms data sharing in particular, is an apolitical mechanism of transparency that can demonstrate progress in protecting the public and building trust.

Location. Each local and state government should build its own program for improving firearms data transparency. As described elsewhere in this report, the federal government can play a substantial role in providing direct financial support and funding implementation, training and technical assistance to facilitate these efforts.

Timing. Progress toward open data can begin immediately.

Establish pilot projects linking public health and criminal justice data to show the feasibility of data sharing and data transparency initiatives.

What we know. A unique challenge to preventing firearms injury and death is the balkanized nature of American law enforcement. In a single city, multiple LEAs may have jurisdiction, and a single county is likely to have multiple LEAs. For operations, data sharing is critical. In addition, agencies with critical data about health, public health, and social services in those jurisdictions may be organized at a different level of government. And, while the purchaser of a firearm used in a suicide is likely to purchase a weapon from a FFL dealer, firearms used in crimes—particularly street crimes—are likely to be acquired on the secondary or illicit market, and these transactions may cross jurisdictional boundaries. Data linkage projects have helped identify, design, and ultimately evaluate new interventions. Thus, the need for information sharing at a minimum, and integrated data as a priority solution, are magnified for nonfederal governments. Initiatives to reduce firearms-related injuries and death require data from both public health data systems and criminal justice systems. In discussions with the expert panel, local and state firearms data experts repeatedly highlighted that local and state governments were concerned that efforts to integrate firearms data and to make that data publicly available were not feasible in their jurisdiction. Specifically, local and state governments have not linked public health and criminal justice data in the past due to concerns that willing intra- and inter-governmental data sharing partners are not available, that federal rules prohibit sharing of key data, and that partisan forces will prevent effective collaboration. The members of the expert panel have found that each of these concerns has been successfully overcome in other jurisdictions.

Recommended approach. The expert panel recommends that local and state governments prioritize the development, implementation, and evaluation of pilot projects that can serve as a proof of concept enabling a scaled solution. The development of these pilot programs can focus on issues of the highest priority in that jurisdiction (OIS, illegal firearm selling networks, increased risk to victims of interpersonal and domestic violence, new venues for changing social norms around household firearm storage to prevent suicide) or on issues where there are existing data sharing agreements that can be leveraged to share additional data. The expert panel further recommends that local and state governments create working groups consisting of firearm owners and other key stakeholders (as described above) to help design and interpret data from these integrated data systems. These projects would benefit from a technical assistance infrastructure and guidance around readiness, implementation, and implementation supports,

which could be provided either by intermediaries or by federal support to states to develop their own technical assistance infrastructures.

Policy impact. Large-scale and sustainable interventions to reduce firearm crimes, OIS, illegal firearm selling networks, increased risk to victims of interpersonal and domestic violence, the use of firearms in suicide attempts, and other firearms-related public safety problems require the integration of public health and criminal justice data.

Location. State and local governments should establish a lead agency with responsibility for planning, implementation, and oversight of integrated and transparent public health and criminal justice data.

Timing. The planning process can begin immediately, and pilot programs can be launched within one year. For many local and state governments, the process of making firearms data and analysis fully transparent will take several years.

Facilitate the development of regional working groups of violence prevention and public health teams to create strategies to eradicate data usage problems.

What we know. Injuries and deaths from firearms accidents, firearms violence, and suicides are caused by factors that cross political boundaries. Illegal firearms flow from states with fewer restrictions on firearms ownership into states with restrictions, and within states from outside cities into cities. Suicide and accident risk are related to regional attitudes around social norms about firearm ownership, access, and storage. These problems are difficult to solve when groups are focused on justifying preconceived notions about legislative policy positions. The problems are likely to be more tractable if people of good will from a variety of perspectives about firearms and who have complementary areas of expertise in suicide, violent crime, and firearm safety study the actual characteristics of their local suicide and violence problem together. Doing so can lead to novel, practical solutions.

Recommended approach. Regional discussions elevate data sharing above local policy conflicts and allow solutions to be developed across political barriers. The goal of these groups is to be a mechanism for operations and problem-solving. For example, the Community Solutions Group's Built for Zero movement around chronic homelessness and veterans' homelessness focused on non-federal information sharing, starting with a specific goal of reducing the number of the unhoused and then allowing the organization to evolve organically. We recommend that these regional working groups include a diverse partisan composition to limit political pressures. The workgroups should address several specific data issues:

- *Reducing legal barriers to data sharing.* There are multiple reasons why data are not currently shared across political boundaries, but the specific reason most often cited is a perceived restriction on data sharing resulting from federal privacy rules on HIPAA,

CREA, etc. However, there is a consensus within the expert panel that these concerns reflect an over-interpretation of these rules and that a clear reading of these rules should not restrict information sharing, but rather provide guardrails for how firearms information is transferred and stored. The regional working groups should develop a shared understanding of local, state, and federal privacy restrictions and shared solutions to allow standardized firearms data collection.

- *Funding implementation research.* These cross-jurisdiction workgroups should fund implementation research that identifies gaps in government's capabilities and capacities to collect, transfer, store, integrate, and analyze firearms data and to identify best practices in successful data sharing. It is the consensus of the expert panel that solutions to these problems are available and can be found through federal guidance, model regional data sharing that is ongoing, or nonprofit and academic partners.

Workgroups should be established where members share issues and barriers even if they do not share political boundaries. For instance, large city workgroups would address common issues that may differ from smaller geographies (for instance, about half of the U.S. law enforcement offices have less than 10 officers). Much of the prior policy work in policing has been focused on issues particular to larger cities, and these cities have their own professional policing association (Major City Chiefs Association). Workgroup activities would include discussing/sharing effective data policy and data practice, barriers to data sharing (both technical and political), and identification and replication of best practices. Detroit might dominate a within-Michigan state discussion in the same way St. Louis might dominate a Missouri discussion, but Detroit and St. Louis are likely to find common issues that are unique to their size. The expert panel also recommends the development of a clearinghouse of city government-led demonstrations/strategies and outcomes with curated takeaway points. City agencies will tend to experiment based on demonstrations from other cities rather than the research literature when seeking a source for guidance. And, within each workgroup a facilitating agency should be designated to coordinate and manage the process.

Policy impact. Inconsistent state laws on firearms ownership create public safety hazards that are difficult to monitor and interdict. Cities with the highest level of firearms violence often have strict firearms ownership laws, but relatively lax laws in adjacent states and counties have a direct impact on firearms violence there. Limits on data sharing substantially restrict cities' ability to monitor threats to public safety from these inconsistencies, limit operational effectiveness of law enforcement programs, and limit the development of effective prevention and intervention policies and programs. Regional workgroups would not prevent the flow of firearms from one part of a region to another, but they improve coordination, practice, and policy.

Location. While the federal government can play a role in supporting the development of regional workgroups, ultimately these workgroups must be located within the jurisdictions that

participate in the group. To facilitate the development of the regional workgroups, the federal government should prioritize the funding of pilot programs.

Timing. Workgroups can begin convening almost immediately.

Support the adoption of state equivalents to the federal Foundations for Evidence-Based Policymaking Act of 2018 (Evidence Act).

What we know. In 2019, Congress approved, and the president signed into law, the Evidence Act, the purpose of which was summarized succinctly [in a memorandum to all federal agency heads](#):

“Despite previous efforts and resource commitments, Federal agencies often lack the data and evidence necessary to make critical decisions about program operations, policy, and regulations, and to gain visibility into the impact of resource allocation on achieving program objectives. Investing in and focusing on the management and use of data and evidence across the Federal Government will enable agencies to shift away from low-value activities toward actions that will support decision makers: linking spending to program outputs, delivering on mission, better managing enterprise risks, and promoting civic engagement and transparency.”

State governments experience all of these deficits the Evidence Act is intended to improve—perhaps more so since state governments lack the resources of the federal government across the board.

Recommended approach. The expert panel recommends that each state consider a state law to allow data sharing that follows the federal rules defined in the Evidence Act. As each state must work within its own legal framework, the federal government should establish and fund an intermediary organization to provide technical assistance to states.

Policy impact. State rates of unintentional injury, suicides, and intentional firearms injury vary substantially, and within states those rates vary over time. While national data can highlight general issues to be considered by state and local governments in their policymaking, the benefit to public safety would be substantially improved if states collected and analyzed their own data to understand their particular risks and trends.

Location. State legislatures.

Timing. Immediate.