Children's Safety Now Alliance

Framework for Quality Improvement and Innovation in Child Safety:

A Guide to Implementing Injury and Violence Prevention Strategies and Programs

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Overview and Goals

The purpose of the Guide to Implementing Injury and Violence Prevention Programs and Strategies is to provide a framework and resources to state and jurisdiction maternal and child health (MCH) and injury and violence prevention (IVP) practitioners to increase their capacity to achieve reductions in child and adolescent injury and violence related fatalities, hospitalizations, and emergency department visits. The Guide introduces the Children's Safety Network Framework for Quality Improvement and Innovation in Child Safety, provides background and resources in the three core components of the Framework, and provides state examples of application of the Framework.

The goals of the Guide are to help state and jurisdiction maternal and child health and injury and violence prevention practitioners:

- Be knowledgeable about a state/jurisdiction-tested framework for reducing injury and violence among infants, children, and adolescents: The Children's Safety Network Framework for Quality Improvement and Innovation in Child Safety
- Have a list of resources they can access to start implementing the Framework in their departments of public health
- Be familiar with the Children's Safety Network and the opportunity to receive training and technical assistance

Children's Safety Network

The Children's Safety Network (CSN) has worked with state and jurisdiction maternal and child health and injury and violence prevention programs for over twenty years to create an environment in which all infants, children, and youth are safe and healthy. CSN's goal is to equip states and jurisdictions to strengthen their capacity, utilize data, and implement effective strategies to make reductions in injury-related deaths, hospitalizations, and emergency department visits.

In cooperation with the Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau (MCHB), CSN implements learning collaboratives for state and jurisdiction health departments. Participating health departments select to work on a variety of high priority child safety topics. Learning collaborative topics have included bullying prevention, falls prevention, interpersonal violence prevention, motor vehicle traffic safety (including child passenger safety and teen driver safety), poisoning prevention (including opioid misuse prevention), sudden unexpected infant death prevention, and suicide and self-harm prevention.

In partnership with HRSA MCHB, CSN facilitates the national Children's Safety Now Alliance (CSN-A), with participation by leaders and experts representing national organizations, federal agencies, universities,

and states with a commitment to child safety. The CSN-A is guided by a Steering Committee, which works to create new synergy among public and private stakeholders and to support state and jurisdiction learning collaborative activities.

CSN provides training and technical assistance and resources on injury and violence prevention planning, programs, and evidence-based practices to state and jurisdiction health departments and health and safety services and systems. CSN strengthens state and jurisdiction health department infrastructure for child safety promotion by:

- Helping states to address their injury-related MCH performance measures
- Integrating injury prevention activities into MCH services
- Building partnerships among MCH, IVP, and other relevant programs at the national, state, and local levels
- Providing technical assistance and resources on the implementation and spread of proven strategies to prevent a wide variety of injuries affecting children and youth in a broad range of settings, including injuries related to motor vehicles, violence, and recreational activities, and injuries sustained in homes and schools
- Assisting states and jurisdictions in applying a public health approach to injury and violence prevention by defining the problem using data, identifying risk and protective factors, developing and testing evidence-driven prevention strategies, and ensuring widespread sustainable adoption of strategies
- Training and educating MCH and other public health professionals on injury and violence prevention

To faciltitate this work, CSN developed the CSN Framework for Quality Improvement and Innovation in Child Safety.

The Challenge of Preventing Child and Adolescent Injuries

More children and adolescents die from injuries and violence than from all diseases combined (Centers for Disease Control and Prevention, 2020), and injuries are a leading cause of disability. Every year, nearly 1 in 10 young people is injured seriously enough to be treated in the emergency department, while 1 in 361 require hospitalization (Healthcare Cost and Utilization Project Databases, 2016). Injuries are a leading cause of medical spending for children and adolescents, a burden estimated at $26 billion in medical costs annually (Spicer & Miller, 2015). Suffering a serious injury can have a significant impact on a child's ability to live to their full potential, sometimes leading to a lifetime of special health care needs that can change the life course of both the child and their family.

In 2018, close to 13,500 deaths occurred among infants, children, and adolescents as a result of unintentional injuries (7,368), suicide (3,009), homicide/legal intervention (2,697) and undetermined intent (361) (Centers for Disease Control and Prevention, 2020).

Injury causes vary by age and developmental stage. Primary causes of unintentional and intentional injury include motor vehicle-related injury (passengers, drivers, pedestrians, and bicyclists), firearm-related injuries (including suicide, homicide and unintentional shootings), poisonings, falls, drowning, suffocations, and fire and burn related injuries. New and emerging injuries appear periodically. For example, the National Center for Health Statistics recently approved the International Classification of Disease-10th-Edition (ICD-10-CM) codes to help with the injury surveillance of electronic scooters and other micro-mobility devices (Centers for Disease Control and Prevention, 2020, March 24).

During the past three decades, researchers and practitioners have successfully led efforts to understand the causes of these injuries and to generate an evidence base describing effective interventions. During that time, several notable reductions in rates of injury have taken place. However, these reductions have not occurred evenly across all populations, and a gap persists in the broad implementation of evidence-based programs, especially among high risk populations. Where evidence-based programs are being implemented, they often compete with one another for resources and audiences. The Health Resources and Services Administration (HRSA), state and jurisdiction maternal and child health programs, and their partners are well positioned to address these challenges. They support systems of care that serve children and their families, and they can drive system changes that integrate evidence-based child safety practices into these care settings.

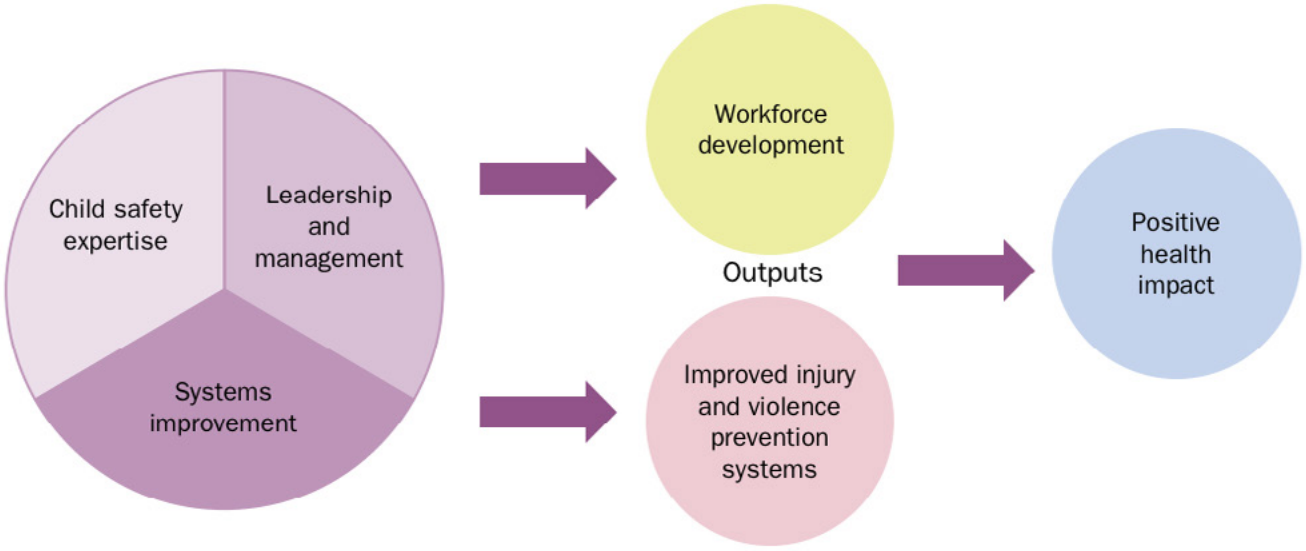
Introduction to the CSN Framework for Quality Improvement and Innovation in Child Safety

CSN established the Framework for Quality Improvement and Innovation in Child Safety to guide CSN's interactions and work with state and jurisdiction health departments. CSN's Framework is based on evidence-based models and resources, as well as on Education Development Center's experience providing training and technical assistance to state and jurisdiction departments of public health, expertise translating research to practice, and deep involvement in

leading effective communities of practice, the Child Safety Collaborative Innovation and Improvement Network (CS CoIIN), and the Child Safety Learning Collaborative (CSLC).

CSN's Framework involves three main components: child safety expertise, leadership and management, and systems improvement. These three components contribute to increased workforce development (e.g., knowledge and application of quality improvement methods and tools) and improved injury and violence prevention systems that ultimately contribute to positive health impact (e.g., reductions in injury and violence related fatalities, hospitalizations, and emergency department visits).

Figure 1: CSN's Framework for Quality Improvement and Innovation in Child Safety



In CSN's approach to reducing child injury and violence, states and jurisdictions develop strong child safety expertise, including evidence-based and evidence-informed strategies and programs, technical assistance from child safety experts, and state and local expertise. They also develop strong management and leadership, represented by senior leadership support, managers who lead, implementation teams. And they apply quality improvement approaches and implementation science, such as using systems thinking, tests of change, and data to inform decision making. To build this approach, CSN's framework draws on elements of the Center for Disease Control and Prevention (CDC) Social Ecological Model, Foundation Strategy Group's Collective Impact Approach, the Institute for Healthcare Improvement (IHI) Breakthrough Series (BTS) and Associates in Process Improvement (API) Model for Improvement (MFI).

This Guide is structured around the three main components of the CSN Framework for Quality Improvement and Innovation: child safety expertise, leadership and management, and systems improvement. Though the components are presented in a linear order, this framework represents an iterative process.

Component 1: Child Safety Expertise

Depending on the size and scope of injury prevention programs, it is often difficult for injury prevention staff to have full technical knowledge and expertise in all areas of injury a program might embark on preventing. There are several organizations and and initiatives that can assist program staff in developing expertise in specific child safety areas. Many of these are listed below in "Sources for Training and Resources."

TECHNICAL EXPERTISE EXAMPLE: CHILD SAFETY SEATS

Federally approved child car seats and boosters are highly effective in preventing injuries to children in a motor vehicle crash. However, misuse of child restraint systems (CRS) can lead to serious injury. Misuse can include any of the following: age and weight appropriateness of restraint system; direction of CRS; placement of CRS in relation to air bags; installation and secureness of CRS to the vehicle seat (tight safety belt); secureness/tightness of harness straps and crotch strap of the CRS; use of locking clip for certain vehicle safety belts; fit of vehicle safety belts across child in belt-positioning booster seat; defective or broken CRS elements. One study published by the National Highway Traffic Safety Administration (NHTSA) in 2015 estimated overall misuse of child restraints to be 46%. Certified Child Passenger Safety Technicians, car seat experts who have taken a 40-hour class with a curriculum written by NHTSA, can assist program staff with all of the technical issues involved in developing a program that promotes best practices.

Sources for Training and Resources

A number of national programs, both governmental and non-governmental, provide educational and professional development opportunities through annual conferences, online trainings, websites, white papers, infographics, resource guides, and other materials; many of these are available at no cost. Below is a sample of such programs; this is not an exhaustive list.

American Association of Poison Control Centers. Fifty-five poison control centers provide free, confidential medical advice for poison exposures in all 50 states, the District of Columbia, Puerto Rico, the Federated States of Micronesia, American Samoa, the U.S. Virgin Islands, and Guam. They also provide education for professionals and the public.
https://aapcc.org/Prevention

Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
https://www.cdc.gov/injury/about/index.html

> **Injury Control Research Centers.** ICRCs study ways to prevent injuries and violence and to work with community partners to put research findings into action. The ICRC Program forms a national network of nine comprehensive academic research centers that focus on three core functions—research, training, and outreach.
> https://www.cdc.gov/injury/erpo/icrc/index.html
>
> **National Peer Learning Teams.** NPLTs provide an opportunity to learn more about child maltreatment; intimate partner violence; motor vehicle crash injury prevention; traumatic brain injury; and systems thinking by connecting with experts across the country.
> https://www.cdc.gov/injury/stateprograms/peer.html
>
> **Regional Network Coordinating Organizations.** Five RNCOs provide coordination across states and with injury and violence prevention (IVP) organizations in specific regions of the country to share scientific evidence and violence and injury prevention program best practices.
> https://www.cdc.gov/injury/stateprograms/regionalnetworks/

Children's Safety Network. A national resource center for state and jurisdiction health departments working to promote child and adolescent safety through injury and violence prevention.
https://www.childrenssafetynetwork.org/

Injury Free Coalition for Kids. A national program comprised of 30 hospital-based, community-oriented programs whose efforts are anchored in research, education and advocacy.
https://www.injuryfree.org/index.cfm

Lifesavers. An annual conference that brings together traffic safety and public health professionals, researchers, advocates, practitioners and students committed to sharing best practices, research and policy initiatives proven to work.
https://lifesaversconference.org/

National Organizations for Youth Safety. A coalition of nonprofit and for-profit youth-serving organizations and government agencies working together toward the common goal of addressing health and safety issues that affect youth in the United States.
https://noys.org/programs/injury-prevention

Safe States Alliance. A non-profit organization and professional association whose mission is to strengthen the practice of injury and violence prevention.
https://www.safestates.org/

Safe to Sleep Campaign. A campaign, led by the Eunice Kennedy Shriver National Institute of Child Health and Human Development, that conducts research and provides outreach, education and resources to promote safe sleep.
https://safetosleep.nichd.nih.gov/

Society for Advancement of Violence and Injury Research. A professional organization that provides leadership and fosters excellence in the science of preventing and treating injury and violence.
https://www.savirweb.org/aws/SAVIR/pt/sp/home_page

Stopbullying.gov. A website, managed by the U.S. Department of Health and Human Services, in partnership with the Department of Education and the Department of Justice, that features webpages on What is Bullying, Cyberbullying, Who is at Risk, Preventing Bullying and Responding to Bullying. It also has a section of state bullying prevention policies and laws and resources for parents, educators, communities, teens and kids. In addition, it includes a Bullying Prevention Training Center, a research-based training module presentation; the Community Action Toolkit, user guides tailored to 11 audiences, and trainings for educators and school bus drivers.
https://www.stopbullying.gov

Suicide Prevention Resource Center. A federally supported resource center devoted to advancing the implementation of the National Strategy for Suicide Prevention, which provides training, consultation, resources, and a weekly newsletter.
https://www.sprc.org/

ThinkFirst National Injury Prevention Foundation. A foundation whose mission is to prevent brain, spinal cord and other traumatic injuries through education, research and advocacy.
https://www.thinkfirst.org/

Evidence-based and evidence-informed interventions

Selecting an injury program intervention can prove challenging and time-consuming, but there are several principles and widely available resources that can assist teams in decision-making.

First, select a program that is evidence-based or evidence-informed and is aligned with the injury challenge the team is trying to address. Numerous evidence-based programs have been rigorously tested in controlled settings, proven effective, and translated into practical models that are widely available. The evaluations should be reviewed by experts, not just those who developed and evaluated the program, to determine that the evaluation methods are approved and that the conclusions about the program's effects are objective (Project Enhance, n.d.). "Evidence-informed practices use the best available research and practice knowledge to guide program design and implementation. This informed practice allows for innovation while incorporating the lessons learned from the existing research literature. Ideally, evidence-based and evidence-informed programs and practices should be responsive to families' cultural backgrounds, community values, and individual preferences" (Child Welfare Information Gateway, n.d.).

Second, strategy selection should be guided by data and research—not only on effectiveness but also regarding fit and appropriateness (e.g., the local problem, groups affected, risk and protective factors, needs and resources, cultural characteristics and preferences).

Third, in many cases, a combination of strategies may be needed. Prevention efforts are often more likely to succeed when they combine several strategies—education, policies/regulations, and engineering or environmental measures—that work together to achieve the greatest results (e.g., a law requiring graduated driver licensing for teen drivers combined with a communication campaign disseminating information about the law). The most appropriate and effective mix of strategies will vary by type of injury, groups affected, risk and protective factors, and other contextual factors. Many injury prevention programs are guided by the social-ecological model, which considers the complex interplay between individual, relationship, community, and societal factors in developing a comprehensive approach to address injury prevention topics. The model suggests that in order to prevent injuries, it is necessary to act across multiple levels contemporaneously and that this approach is more likely to sustain prevention efforts over time than any single intervention (Centers for Disease Control and Prevention, 2020, January 28).

ADVANTAGES OF USING EVIDENCE-BASED PROGRAMS

Five advantages of using an evidence-based program are:

1. Positive impact, or change in the desired direction, is more likely with an evidence-based program
2. Funders increasingly demand that programming be based on solid evidence
3. Agency leaders want to concentrate limited resources on proven programs
4. Program managers can concentrate their efforts on program delivery rather than program development, allowing them more time to reach a larger population and achieve greater impact
5. Demonstrated outcomes of evidence-based programs are attractive to community members and potential partners, facilitating community buy-in and the formation of partnerships (Project Enhance, n.d.)

RESOURCES FOR SELECTING EVIDENCE-BASED AND EVIDENCE-INFORMED PROGRAMS

When seeking programs based on the best available research evidence, registries of evidence-based programs are a good starting point. Technical assistance resource centers tailored to a particular area of injury prevention can also often provide valuable resources. Examples include:

Centers for Disease Control. Understanding Evidence. https://vetoviolence.cdc.gov/apps/evidence/Default.aspx

Cochrane Collaboration. https://us.cochrane.org/

The Campbell Collaboration. https://campbellcollaboration.org/

The Guide to Community Preventive Services. https://www.thecommunityguide.org/

SAMHSA Evidence-based Practices Resource Center https://www.samhsa.gov/ebp-resource-center

CHILD SAFETY EXPERTISE IN TENNESSEE SUICIDE PREVENTION

Importance of Youth Suicide Prevention in Tennessee: In 2018, 39 Tennessee children died by suicide, resulting in a death rate of 2.6 deaths per 100,000 population. Although Tennessee's 2018 suicide death rate is the lowest it has been in the past three years (2016–2018), in an effort to further reduce the number and rates of suicide deaths, the Child Safety Learning Collaborative Tennessee Suicide Prevention Team has worked to increase the child safety expertise of individuals within the state who work closely with children/youth by spreading the use of the evidence-based Question, Persuade, Refer (QPR) suicide prevention training program (QPR Institute, n.d.).

QPR/Suicide and Self Harm Prevention in the Young: QPR is an evidence-based gatekeeper training program. A gatekeeper is anyone who may be strategically positioned to recognize and refer someone at risk of suicide. QPR training is designed to teach participants how to recognize the warning signs of someone who may be contemplating suicide, question them about whether or not they are having thoughts of suicide, offer hope to an individual experiencing a suicidal crisis, persuade them to get help, and refer an individual having a suicidal crisis to help in order to save their life. The Team expects to reduce the number of children who die by suicide in Tennessee by equipping youth impactors across the state with the knowledge and skills needed to identify a child at risk for suicide and refer them to help as soon as possible.

Use of Data to Target Training: The Team developed a model of rapid prevention response for when alerts of increased emergency department (ED) visits for suicide-related behavior in children 18 and under is shown using the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) tool (Military Health System, n.d.). The Tennessee Department of Health conducts weekly surveillance of suicide-related ED visits across the state involving children 18 and under to identify areas with increased suicide-related behavior. The Team works with the Tennessee Suicide Prevention Network (TSPN) and other identified partners to offer QPR trainings to youth impactors in those areas.

Collaboration and Results: Through their work with the Child Safety Learning Collaborative, the Team, TSPN, and other identified partners worked together to support TSPN in providing 111 gatekeeper trainings and training 3,737 youth impactors in QPR across Tennessee in 2019.

Next Steps: The Team will continue to work with the TSPN, Tennessee Department of Education (DOE), Tennessee Department of Mental Health and Substance Abuse Services and other partners to expand and strengthen the ESSENCE rapid prevention response plan.

Component 2: Leadership and Management

Strong leadership and management are critical to achieving sustained and widespread quality improvement and innovation in child safety. CSN works with state and jurisdiction health departments to engage senior leaders in child safety improvement efforts, provide training and technical assistance to maternal and child health and injury and violence prevention practitioners to identify key stakeholders and build partnerships and teams, and apply consistent and sound leadership and management practices to motivate and sustain teams to implement change, use data to inform decision making, and achieve results.

Engaging Leadership and Building a Team

Building a strong child and adolescent injury prevention program requires ongoing commitment and support from high level agency staff. Typical leaders to include are the state or jurisdiction maternal and child health director, injury and violence prevention director and state health officer. In some cases, these leaders may already show commitment to the priority child safety topic. In other cases, program staff may need to secure, solidify, and maintain their support. Some states may find it helpful to document the injury and violence prevention challenge they are addressing, the approach, resources needed, and how they will keep senior leaders informed of progress and lessons learned. States may periodically ask senior leaders to attend a key meeting or present senior leaders with progress reports.

Other team members are also needed to plan, manage, implement, and evaluate injury prevention activities related to the priority topics. Many state health departments have a limited number of staff available to address each child and adolescent safety topic of concern. Developing a state strategy team (see Figure 2, page 15) that includes both agency staff and external partners committed to implementing a shared strategy can maximize impact. Many agencies benefit from developing a state strategy team for each priority injury prevention topic.

State strategy teams are composed of key staff and external partners working on a given topic area. External partners often have valuable technical knowledge and skills in the topic area. Strategy team members may be tasked with implementing and spreading evidence- based strategies and programs, reporting monthly data, and participating in professional development activities, including learning

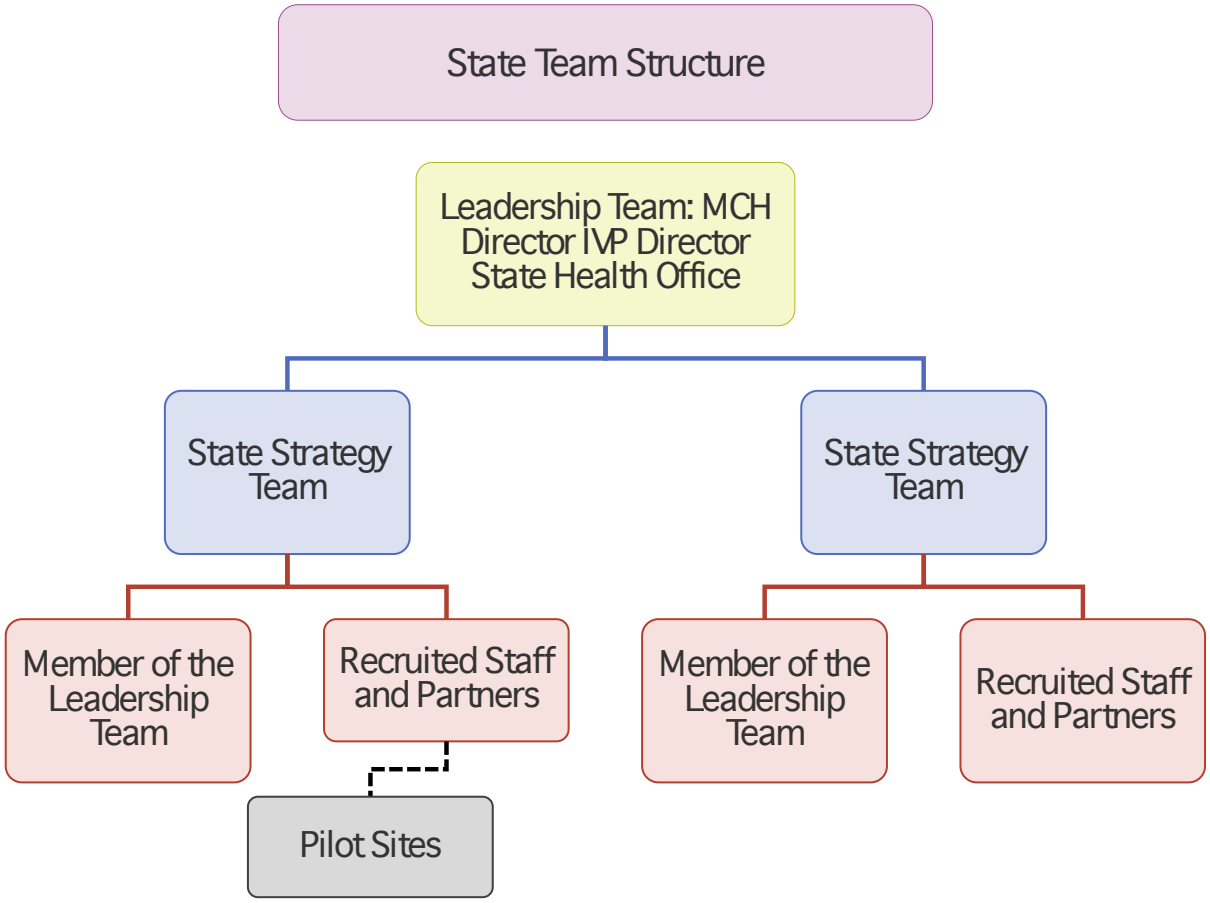
sessions, communities of practice that foster cross-state and jurisdiction collaboration in a child safety topic area, technical assistance webinars, and other opportunities to build capacity in quality improvement processes and cross-cutting child safety topics (e.g. populations and settings).

State strategy teams are typically comprised of multiple partners that are considered integral to the successful implementation and spread of the evidence-based strategies and programs on which the team is working. Selection of partners to recruit for the state strategy team depends largely on the selected strategies and programs as well as on the type of funding involved. The nature of some strategies will involve recruitment of sub-teams consisting of front-line workers at pilot sites, such as schools, hospitals, faith communities, non-profits, community agencies, and other state agencies. State strategy teams should work with partners to clearly align work, identify the value of the partnership for all stakeholders, and regularly meet with partners to ensure all parties are benefiting from the relationship.

Key stakeholders to include on the team include organizations, groups, or individuals who are:

- impacted by the outcome of an initiative
- interested and invested in the initiative's success
- essential to the implementation and success of the initiative

Figure 2: Building Teams to Achieve Improvement and Innovation in Child Safety



State and Jurisdiction Team Member Roles

The table below outlines the typical expectations of state strategy team members. As a state or jurisdiction may have multiple strategy teams, typically one per child safety topic area, individuals may participate on more than one strategy team and/or fill more than one role on a particular team.

State and Jurisdiction Team Member Role Descriptions

Role	Individual Responsibilities
Strategy Team Manager	Oversees the selection, implementation and spread of strategies and programs throughout the state or jurisdiction. Provides intellectual leadership, strategic direction and oversight to strategy team members, key stakeholders, and partners. Participates in professional development activities, such as communities of practice, webinars, and learning sessions. Coordinates the work of the team in conducting key activities: » Needs and landscape assessments, and piloting of strategies to inform selection of priority child safety strategies to implement and spread. » Stakeholder analyses and engagement of partners to commit to spreading evidence-based child safety strategies throughout the state or jurisdiction. » Development of necessary educational materials » Working with partners to secure resources (e.g., staff time) for the initiative.
Strategy Team Data Manager	Works with strategy team members to collect, analyze, and use real-time data to inform decision making that supports implementation and spread of child safety strategies throughout the state or jurisdiction. Participates in professional development activities, such as communities of practice, webinars, and learning sessions. Works with the strategy team manager and state/jurisdiction/injury epidemiologist, if available, to identify measures to monitor the progress of implementation and spread of child safety strategies. Works with the strategy team manager, state/jurisdiction injury epidemiologist, and select partners to identify data sources. Designs and implements data management systems in collaboration with program leadership, including creating and modifying data collection tools and managing project databases. Coordinates data collection and reports progress to stakeholders using quantitative and qualitative data. Leads the strategy team in reviewing summary data, analyzing the data and using the data to inform programmatic decision making. Collaborates and communicates with national, state, and local partners, stakeholders, and funders to discuss project progress and results. Conducts descriptive analyses on new and existing datasets; creates tables, figures and written explanations of findings; generates site-level and summary reports in an accurate and timely manner; identifies data trends and communicates opportunities for further analyses.

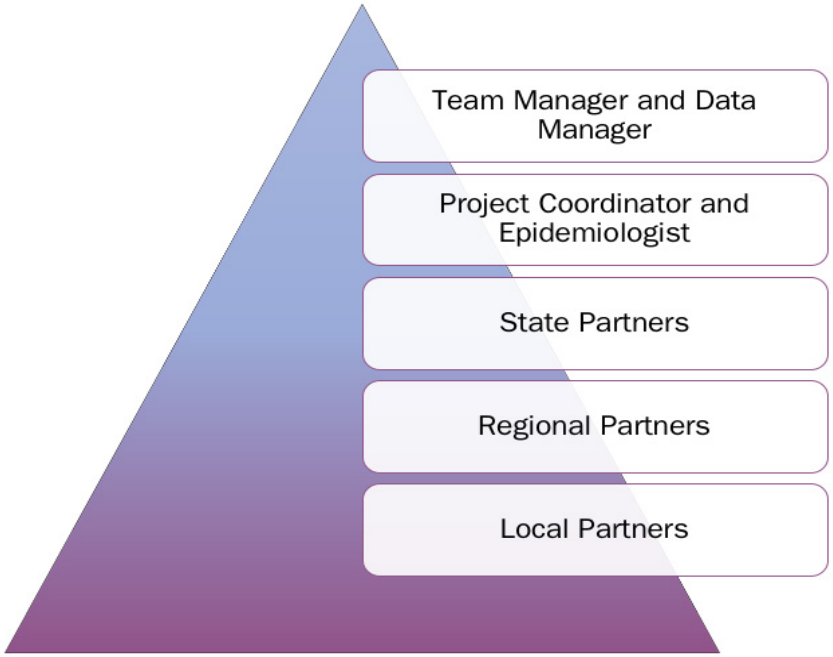
Role	Individual Responsibilities
Project Coordinator	Assists with logistics, administration, and material development necessary for successful implementation and spread of child safety strategies throughout the state or jurisdiction. Participates in professional development activities, such as communities of practice, webinars, and learning sessions. Communicates with team members and partner organizations on project aims, work plan, and logistics. Provides support to project team members for additional administrative and logistical activities. Epidemiologist Uses relevant specific subject matter expertise (e.g., injury control, violence control, suicide prevention, maternal and child health, behavioral health) to inform the design and implementation of activities to achieve the identified aims. Serves as a resource to the strategy teams in the state or jurisdiction regarding all outcome and process measures. Participates in technical assistance calls and webinars related to evidence-based practice and measurement. Participates in select professional development activities, such as communities of practice, webinars, and learning sessions. Recommends and reviews available measures and provide measurement assistance (e.g., identifying data sources and collecting, combining, and reporting data). Works with appropriate state and federal agencies (e.g., CDC and Centers for Medicare and Medicaid Service Medicaid) to identify specific data elements and sources (such as Vital Statistics, PRAMS, and YRBSS), and processes and timelines for data downloads. Provides coding and analytic support to the data manager and strategy team manager for the preparation, collection and reporting of measures. Works with the strategy team manager and data manager to address data challenges as needed. **Note:** This role may vary depending upon state size/population and organization of related state agencies, such as the state department of health.

Role	Individual Responsibilities
Epidemiologist	Uses relevant specific subject matter expertise (e.g., injury control, violence control, suicide prevention, maternal and child health, behavioral health) to inform the design and implementation of activities to achieve the identified aims. Serves as a resource to the strategy teams in the state or jurisdiction regarding all outcome and process measures. Participates in technical assistance calls and webinars related to evidence-based practice and measurement. Participates in select professional development activities, such as communities of practice, webinars, and learning sessions. Recommends and reviews available measures and provide measurement assistance (e.g., identifying data sources and collecting, combining, and reporting data). Works with appropriate state and federal agencies (e.g., CDC and Centers for Medicare and Medicaid Service Medicaid) to identify specific data elements and sources (such as Vital Statistics, PRAMS, and YRBSS), and processes and timelines for data downloads. Provides coding and analytic support to the data manager and strategy team manager for the preparation, collection and reporting of measures. Works with the strategy team manager and data manager to address data challenges as needed. **Note:** This role may vary depending upon state size/population and organization of related state agencies, such as the state department of health.
Team Member » As many as necessary » Includes front-line workers at pilot sites (e.g., schools, clinics, hospitals) Tests and reports on strategies and programs.	Develops organizational policy, as needed, to sustain child safety strategies. Secures resources, as needed, to sustain child safety strategies (e.g., funding, staff time, technology, materials, etc.). Reports on progress to the data manager and strategy team manager. Participates in regular meetings of the strategy team. Participates, as appropriate, in professional development activities, such as communities of practice, webinars, and learning sessions.

To implement and spread the selected evidence-based strategies and programs, state strategy teams will likely need a range of partners on the state, regional, and local levels. For example, a state health department might partner with the state department of transportation, the registry of motor vehicles and/or the governor's highway safety office to implement graduated driver licensing (GDL) education and compliance. The partner organization then engages local/regional health departments and schools to implement a driver's education program targeting GDL awareness.

State strategy team membership may change over time (e.g., partnerships may broaden as work moves from piloting a child safety program or strategy to spreading this program or strategy across the state). For example, a state strategy team may begin implementation of a GDL awareness program first in one district, then in all the districts in one county, and then in districts in several counties, and ultimately work towards statewide spread.

Figure 3: Typical State Strategy Team Members



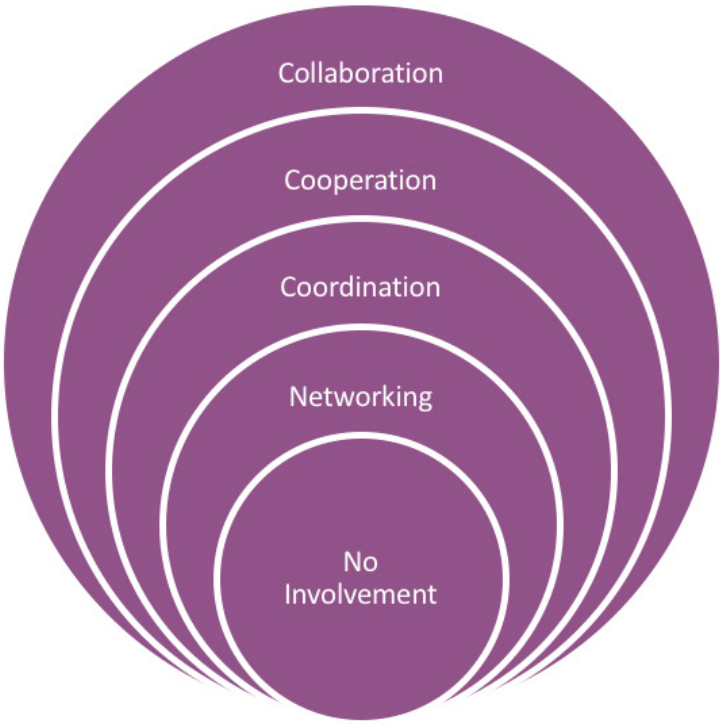
In identifying key stakeholders to include in a state strategy team, typical questions include:

- Does the state strategy team have established partnerships for the work they are doing or are they establishing initial contact?
- Do the partners work together currently, or only with the lead agency?
- What purpose do partnerships serve in the system?
- What benefit is gained by partners by joining the team (e.g., aligns with their mission, advances their work, fills grant obligations, funding, credibility, marketing, etc.)?

Levels of Partner Engagement

Not every partner or every group needs to be at the same level of engagement, and their level may change throughout the project timeframe for implementing and spreading the child safety interventions. Levels of engagement can range from engaging in networking opportunities, in which partners exchange information in order to help each do a better job; to coordination, in which partners modify their activities so that together, they provide better services to their constituents; to cooperation, in which partners share resources to help each other do a better job; to collaboration, in which partners help each other expand or enhance their capacities to do their work (Center for Community Health and Development, University of Kansas, n.d.).

Figure 4: Levels of Engagement



For example, epidemiologists and others providing data to support your planning and assessment may need to be at the "cooperation level" early in the project or even "coordination" but may never reach collaboration, and at some points may drop down to "networking."

Stakeholder Analysis

To build support from potential partners, it can be helpful to conduct a stakeholder analysis. State strategy teams often conduct stakeholder analyses early in an initiative. They identify who should be around the table and how to get them there. This is often essential to success in launching a quality improvement initiative and ensuring it is supported (e.g., implementing and spreading a new child safety strategy or program throughout the state or jurisdiction). It is also important to review and analyze stakeholder support periodically. The stakeholders needed to support and implement priority activities can shift over the life of an initiative. Stakeholders may change due to staff turnover or changes in agency/organizational focus. The dynamic nature of collaborative project work requires that state strategy teams continually keep an eye on stakeholder engagement and stakeholder needs.

Common questions to consider in conducting a stakeholder analysis include:

- Who has a stake in the initiative?
- Do they have the political will and organizational approval to participate?
- What is their motivation to support the initiative?
- What level of support is needed from this individual/organization/group?
- For how long might their support be needed?
- What other options are available if they don't participate?

STAKEHOLDER ANALYSIS QUESTIONS

Initial Analysis Questions	Ongoing Analysis Questions
» Who should be included in this work? » What is their motivation? » What support do we need from them and why? » What is their biggest concern? » What do we need to do to get their support? » What are the next steps? » Who is responsible?	» Who else should be included in this work? » What is their level of engagement? - What has it been? - What do we need? » What is a barrier to participation/support? » How do we increase/maintain engagement? » What are the next steps? » Who is responsible?

Developing a strong state strategy team is central to applying child safety expertise effectively and to enacting a process of quality improvement and innovation to achieve the aims of the initiative.

LEADERSHIP AND MANAGEMENT IN WISCONSIN MOTOR VEHICLE TRAFFIC SAFETY

Partnership. In 2019, in order to address risks related to reckless and distracted driving by teens in Wisconsin, a cross-sector collaborative pilot was developed through a partnership among Children's Hospital of Wisconsin (Children's Wisconsin), the Department of Transportation (DOT), Department of Health Services (DHS), and Emergency Medical Services for Children (EMSC). The pilot used the evidence-based program Impact Teen Drivers (Impact Teen Drivers, n.d.). The partners were fortunate to be able to leverage working relationships that were in place for many years, so when the opportunity around program, funding, and staffing aligned, they were able to move quickly from piloting the program to implementation. The time from opportunity to completion of the project was under 6 months.

Strategy and Results. Fire and EMS professionals were identified through EMSC and train-the-trainer sessions were delivered by Children's Wisconsin. Training and program materials were provided at no cost to the EMS agency and a stipend was offered to offset their time. DHS provided financial support through the Wisconsin Violence and Injury Prevention Program (WIVIPP), which was used for materials and stipends. DOT supported the travel expenses. Both agencies provided support by promoting the train-the-trainer sessions and connecting the organizers with appropriate community resources. After training, EMS agencies worked with schools and driver education programs to conduct sessions with local youth.

From September to December 2019, Children's Wisconsin conducted 9 classes, and trained 56 professionals from 36 agencies in 13 counties. At the end of the pilot, seven sessions reaching approximately 125 teens had been delivered, and four additional communities were working to schedule with their schools.

Through their participation in the motor vehicle traffic safety state strategy team in the Child Safety Collaboration Innovation and Improvement Network (COIIN) and the Child Safety Learning Collaborative (CSLC), the Wisconsin partners learned and applied a variety of quality improvement methods, including stakeholder analysis, understanding of the different phases of improvement, and Plan/Do/Study/Act (PDSA) testing cycles to develop and implement a theory of change (see Figure 7 on page 32).

The state strategy team's theory of change, organized around the social-ecological model, provides clear direction for the partners' work. Key components of their theory of change include working to develop:

- A statewide culture of teen driver safety
  - Structures and policies
  - Knowledgeable advocates and policy makers
- Organizational structures to support a culture of teen driver safety
  - Multi-stakeholder engagement
  - Use of evidence-based programs and best practices
- Knowledgeable teens, parents, and community members
  - Dissemination of resources
  - Engagement with the community

This theory of change has been fully integrated into the Wisconsin state strategy and provides a clear blueprint for partner collaboration.

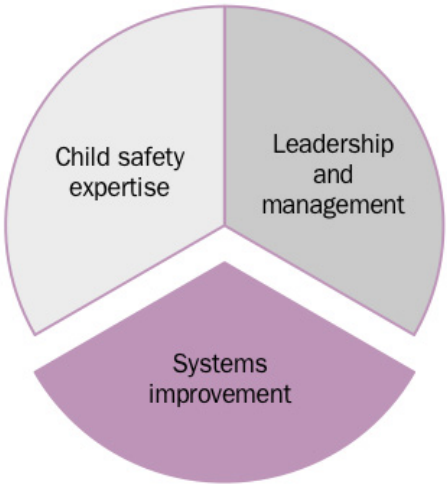
Initial anecdotes suggest that Impact Teen Drivers sessions were impactful to youth. For example, in two of the communities that conducted sessions, students discussed the content with their caregiver, who relayed accurate details back to the EMS Trainer.

Next Steps

Goals for 2020 include conducting at least 20 Impact Teen Drivers programs, reaching at least 400 teens, and collecting data from pre and post student surveys.

Component 3: Systems Improvement

The third component of the CSN Framework is engaging in ongoing systems improvement. Implementing evidence-based strategies to reduce injury and violence related fatalities, hospitalizations, and emergency department visits often requires that states and jurisdictions have a comprehensive understanding of their injury and violence prevention systems, including the aim, inputs, processes, relationships, and outcomes of their systems. Making systems improvements typically begins with a state or jurisdiction team of practitioners embracing systems thinking as a regular practice, understanding and defining the various systems and sub-systems in the state or jurisdiction, and identifying gaps in the systems they are working in. With this knowledge, states and jurisdictions are better equipped to plan and manage quality improvement initiatives that will sustainably improve their injury and violence prevention systems.



Injury and violence prevention and maternal and child health practitioners who lead their state and jurisdiction health departments or divisions in adopting improvement as a key business strategy will more readily embark on an organized approach to improvement initiatives as part of standard business practice. The Improvement Guide (Langley, et al., 2009) recommends five essential components for how organizations or organizational units (e.g., a state division of maternal and child health or division of

injury and violence prevention) can build an internal system of improvement that aligns and supports all improvement efforts. They are:

- Establishing constancy of purpose
- Understanding the organization [or division] as a system
- Designing and managing a system for gathering information for improvement
- Conducting planning for improvement and integrating it with business planning
- Managing and learning from a portfolio of improvement initiatives

The Children's Safety Network provides training and technical assistance to state strategy teams to work both within and across their maternal and child health and injury and violence prevention divisions, with their partners (see Figure 4 on page 22), and in alignment with the department of health, to build a sustainable system of improvement that will define their division's injury and violence prevention system, guide and organize their work, and lead to results.

Establishing Constancy of Purpose

A clearly defined aim statement and goals are integral to aligning and motivating state strategy teams and partners (Langley, et al., 2009, p. 312). The overall aim of maternal and child health and injury and violence prevention systems is commonly to achieve health impact, such as a reduction in deaths, hospitalizations, and emergency department (ED) visits related to specific child safety topics (e.g., motor vehicle safety, falls prevention, interpersonal violence prevention, suicide and self-harm prevention, etc.). An aim will typically be stated as a percent or rate reduction (e.g., in deaths, hospitalizations, and ED visits) relative to the state or jurisdiction baseline. Goals further define the aim statement, often describing the necessary progress needed to achieve the overall aim. Some state strategy teams will further define their work with objectives for the goals. In measuring results, outcome measures generally align with the aim and tell the story of health impact, while process measures align with goals, objectives, and expected outcomes and tell the story of progress.

State strategy teams work to ensure the aim and goals for their injury and violence prevention system are SMART:

- **Specific:** Include a clear and well-defined system (where?) and population (who exactly?)
- **Measurable:** Include quantitative goals (how much?)
- **Actionable:** Within your sphere of influence and control
- **Realistic:** Align with your division and state or jurisdiction priorities and available time and resources
- **Time bound:** Include a timeframe by when results will be achieved (by when?)

State strategy teams are encouraged to make sure everyone is on board with the aim and goals and to refer back to them on a regular basis, asking, "Will doing this work, or making this change, help us to achieve our aim and/or goal(s)?"

Understanding the Organization as a System

Given the complex environment in which state strategy teams operate, it is often necessary to understand the overall state or jurisdiction health department as a system, with various divisions represented as sub-systems. State strategy teams can view their division as a system with a unique and aligned aim (e.g., maternal and child health system, injury and violence prevention system). Within the maternal and child health or injury and violence prevention system, there may be various sub-systems, depending on the scope, funding, and resources of the division (e.g. motor vehicle traffic safety sub-system, suicide and self-harm prevention sub-system, etc.). Understanding the work from a systems perspective illuminates the many interacting components within and across the various health department systems, across state agencies, and with external partners.

A system is "an interdependent group of items, people, or processes with a common purpose" (Langley, et al., 2009, p. 37). Systems are composed of relationships, processes, people, tasks, beneficiaries, and suppliers. All components, as well as the interactions between the components, can be improved. When thinking about injury prevention, a state strategy team can benefit from mapping their work as a system. They may ask:

- What is our vision?
- What is our aim (how are we realizing the vision)?
- Which individuals and organizations are involved?
- What resources are required?
- Who are the clients and beneficiaries?
- What processes take place and how do they influence one another?
- What are the results of those processes?
- What is the family of measures that will indicate our system is moving in the direction of our aim?

There are many advantages of systems thinking. It enables teams to better understand and manage complexity. It allows teams to anticipate and prevent unintended consequences. Systems thinking makes it easier to spot and address challenges, gaps, or bottlenecks. It helps teams identify and implement high-leverage changes and cross-cutting evidence-based and evidence-informed child safety strategies, as well as supports more rapid scale-up and spread of effective child safety strategies.

Systems thinking prevents new tools from becoming the latest trend in an organization or division and motivates teams to see how disciplines (and their respective practices and tools) interrelate. For example, vision without systems thinking can paint a lovely picture of the future with no deep understanding of the forces that must be mastered to move from the current situation to the future vision. Systems thinking and practices can lead to a genuine belief and progress toward the vision (Senge, 2006).

State strategy teams can begin understanding and improving their system by focusing on their aim, structures, relationships, processes, and patterns, rather than on static or isolated events. They can recognize that cause and effect are often separated from one another by many relationships and processes that provide opportunities for improvement.

Defining Your System

State strategy teams typically define their system by developing a SMART aim and identifying all inputs, processes, relationships, and outcomes related to that aim. Mapping the injury and violence prevention system is this manner will assist state strategy teams in defining their systems' boundaries. Once the system is mapped, state strategy teams can determine whether their aims, goals, and expected outcomes are being achieved. If they are, state strategy teams can discuss whether they want to develop a more ambitious aim and goals, identifying areas for further improvement. If they are not achieving their aim, goals, and expected outcomes, state strategy teams can work to identify and assess the multiple relationships in the system and what is preventing them from achieving their aim, goals, and expected outcomes. This analysis begins the system improvement process and teams are expected to revisit this analysis throughout improvement initiatives.

System Components

» **Aim:** An aim is a written, measurable statement about the expected outcomes of the system. Every system must have an aim, and the aim needs to be known by everyone in the system. The aim represents a value judgement. The purpose of the maternal and child health and injury and violence prevention systems is often that beneficiaries will be helped today and in the future as a result of interacting with the system. An example of a system aim is:

  By April 2023, the state/jurisdiction will decrease suicide-related fatalities and self-harm-related hospitalizations, and emergency department visits by 4% from the state/jurisdiction April 2020 baseline for children and adolescents ages 10 through 19, through the implementation and spread of evidence-based suicide and self-harm prevention strategies and programs.

» **Processes:** A process is a series of steps that is routinized and repetitive and transforms inputs into outcomes in your system. Differentiating between processes versus systems is often necessary. A process is smaller than the system, multiple processes can exist in one system, and processes are concrete and actionable. By analyzing processes, the state strategy team can:

- Establish a common understanding of how work gets done
- Identify non-value steps, bottle necks, challenges, and gaps
- Identify decision makers and key personnel
- Clarify roles and responsibilities
- Break down silos between organizations or divisions
- Envision the ideal process (Massoud, et al, 2001).

An example of a process is an emergency department protocol for how to screen a child or adolescent who is at risk for suicide.

» **Relationships:** On the other hand, a system is larger than a single process, not always clearly defined, and is characterized by interrelationships. A system has broader impact and includes:

- Individuals and Organizations
- Resources
- Clients/Beneficiaries
- Outcomes
- Measures

There are multiple relationships, often unidentified, in a system. Relationships can exist between any parts of the system (e.g. resources to processes; process to process; beneficiary to outcome). Identifying and examining the various relationships leads to opportunities to identify areas for improvement. State strategy teams are guided to:

- Identify the interaction(s) and connection(s) that are necessary to accomplish the work and achieve the system aim
- Broaden operations planning to include more components of the system
- Describe the system using maps or linkage processes
- Promote regular visits and other interactions between departments, agencies, and other system components.

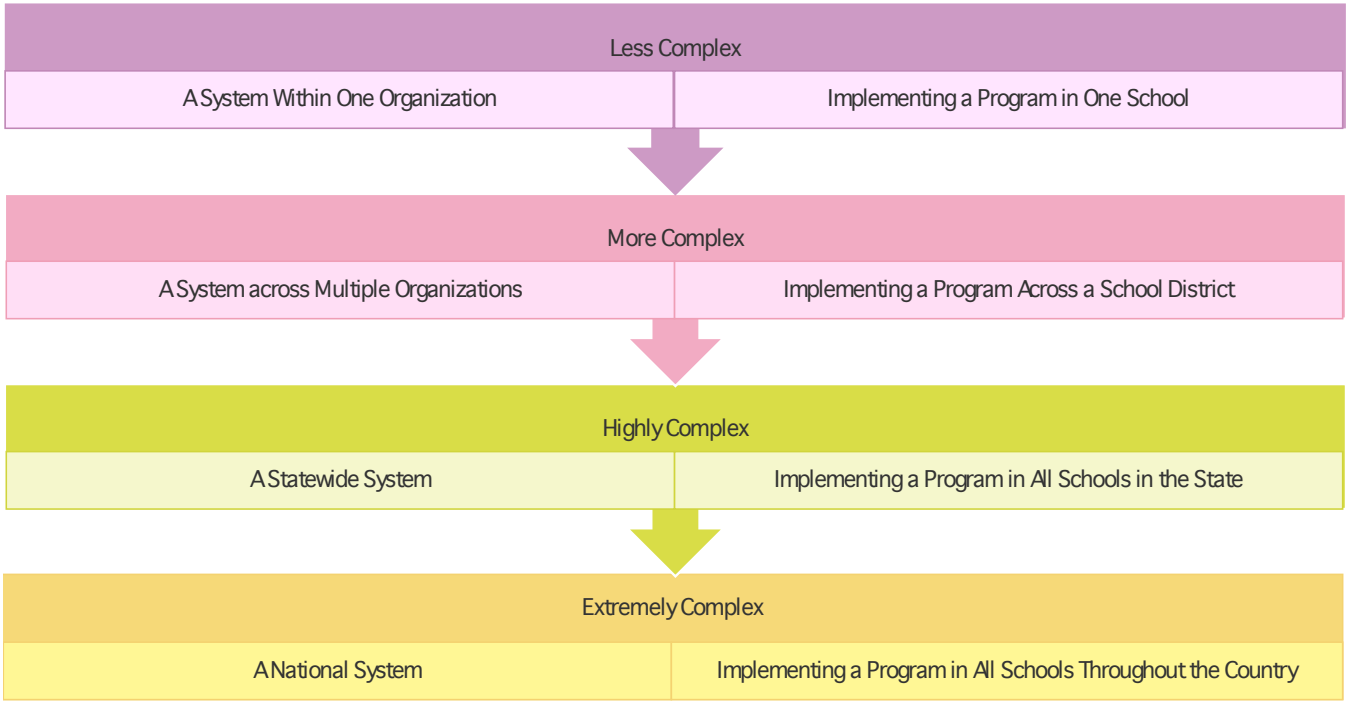
An example of a relationship is the way the state or jurisdiction department of health interacts with regional health departments to share data and address areas of need.

Systems Map

Defining the system is vital to identifying opportunities for improvement. If the state strategy team is testing a new child safety intervention or is not achieving expected results for a current intervention(s), one recommendation is to identify and map the system in which the intervention(s) takes place. A system map will visually depict the various components and interrelationships of the system. State strategy team members can collect and analyze data to understand what is taking place and identify areas for improvement.

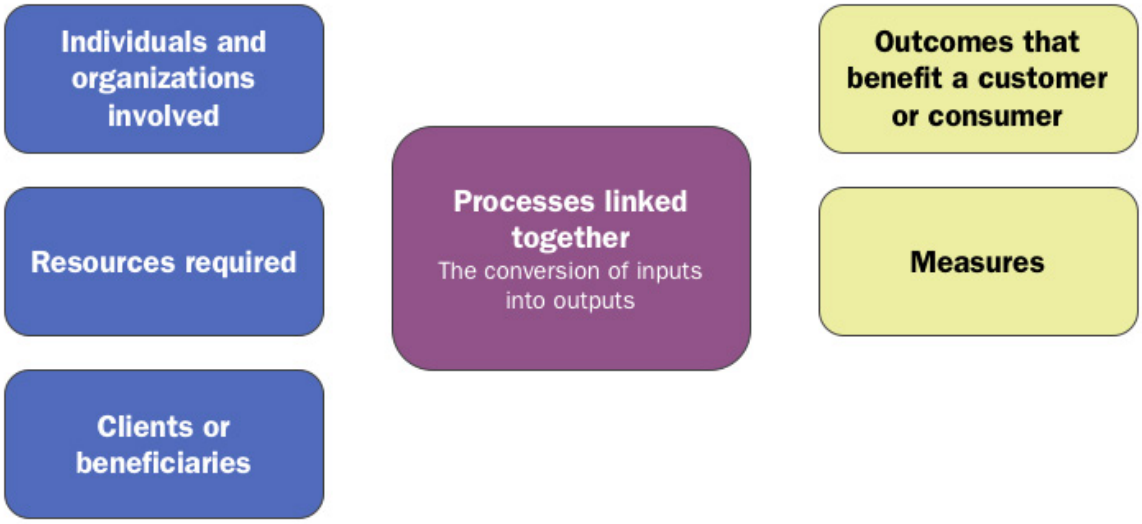
Systems vary in their degree of complexity and the state strategy team will need to determine the boundaries of the system. The degree of complexity of a system increases relative to the system's boundaries. A system's boundaries may not be explicit and may require consensus building and decision making. The figure below illustrates systems of varying complexity.

Figure 5: Levels of Complexity



A systems map can be developed as a state strategy team activity. Teams should understand that the map is a living document that will be regularly updated and drawn upon to inform system improvement efforts.

Figure 6: Systems Map



Questions to Consider:

- How is the state strategy team defining injury and violence prevention? What are the key child safety topic areas?
- What is the boundary of the system? Are there sub-systems within the injury and violence prevention system?
- What is the aim and goal(s) of the injury and violence prevention system? Can the aim and goal(s) be SMART (Specific, Measurable, Actionable, Realistic, Time bound)?
  - **Specific:** Include a clear and well-defined system (what geography and location?) and population (who exactly?)
  - **Measurable:** Include quantitative goals (how much and in relation to what state or jurisdiction baseline?)
  - **Actionable:** Within your sphere of influence and control
  - **Realistic:** Aligns with your division and state or jurisdiction priorities and available time and resourcesd
  - **Time bound:** Include a timeframe by when results will be achieved (by when?)
- What injury and violence related outcome(s) is the state strategy team trying to achieve?
- What family of measures will demonstrate progress toward the defined outcomes?

» Is the state strategy team achieving their aim?

- If yes, is this where improvement work is needed? Does the aim need to be revised?
- If not, what parts of the system might not be working optimally? Why? Are there components missing in the system that are necessary to achieve the aim? What are they and how could they be included in the system?

Systems Improvement Tools

Theory of Change

Improvement initiatives are often guided by a theory of change that is tested and updated as learning occurs throughout the improvement initiative (Bennett & Provost, 2015). As state strategy teams work to sustainably implement and widely spread tested strategies, it is important to communicate the theory of change and results to date in order to engage new partners and resources. The theory of change communicates what child safety strategies are necessary to achieve the aim.

CSN, in collaboration with the national Children's Safety Now Alliance, partners, and HRSA MCHB developed theories of change (Langley, et al., 2009, p. 118-119) for a variety of child safety topics, including bullying prevention, falls prevention, interpersonal violence prevention, motor vehicle traffic safety, poisoning prevention, sudden unexpected infant death prevention, and suicide and self-harm prevention. These theories of change are referred to in CSN's learning collaboratives as change packages. The change packages include theories of change for the aim of reducing infant, child, and adolescent fatalities, hospitalizations, and emergency department visits across child safety topics. Each change package is comprised of an aim statement, driver diagram of evidence-based and evidence-informed child safety strategies, and a measurement strategy to determine if progress is being made toward the aim. The change packages are based on the Associates in Process Improvement Model for Improvement, which asks three key questions:

» What are we trying to accomplish [aim statement]?

» How will we know a change is an improvement [measurement strategy]?

» What changes can we make that will result in improvement [driver diagram]? (Associates in Process Improvement, n.d.)

Plan-Do-Study-Act Cycles

A key component to systems improvement is the ability to conduct small tests of change to effectively try new child safety approaches and interventions throughout the system and adapt them to ensure they are working before implementing them system-wide. The Plan-Do-Study-Act (PDSA) cycle (see Figure 7, page 32), a core component of the Model for Improvement, is a framework for learning and action, as teams develop, test, implement, and spread evidence-based strategies and programs through a planned

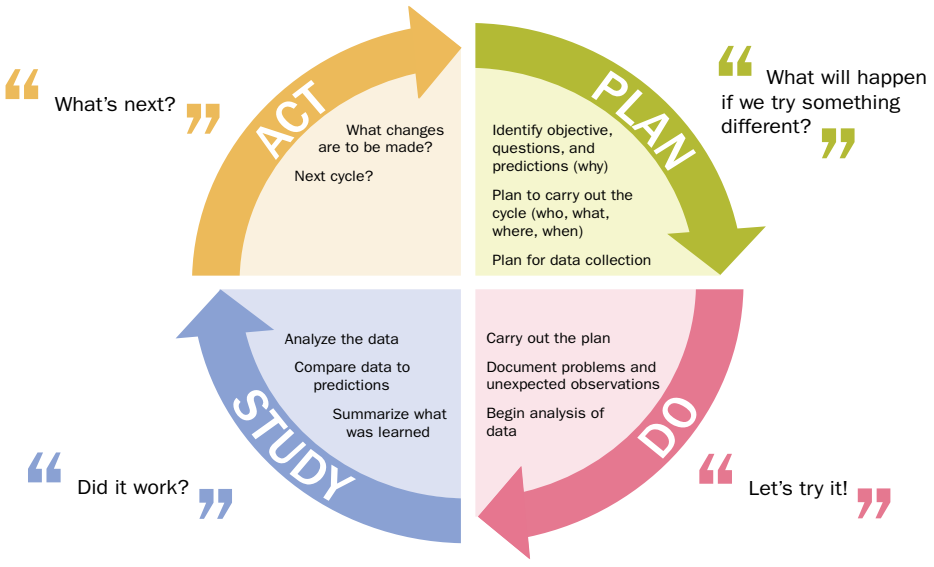
learning process. Core components of a PDSA cycle are to identify questions the team wants to answer, make predictions, and then:

- Develop a plan (Plan),
- Carry out the plan (Do),
- Observe and learn from the results (Study),
- Determine next steps in the plan (Act).

PDSAs begin with clearly stating what the state strategy team hopes to learn, written in the form of questions. This focus on learning is what distinguishes a PDSA from a task list in an action plan. The state strategy team then develops a plan for how they will answer the questions, makes predictions for what they will learn, and carries out the plan. The state strategy team asks themselves whether their predictions were accurate, what they learned, and what their next steps will be. The state strategy team may find that they need to make adaptations to their quality improvement work, discover they are on track and can proceed, or learn that they need to abandon a particular approach.

PDSAs are intended to help state strategy teams learn as they perform their improvement work, providing opportunity for changes and enhancements along the way, while risk of failure is small. It is often necessary to run several PDSA cycles to successfully test (pilot) strategies and programs under a wide variety of conditions (e.g., different demographics, organizational settings, geographic regions, etc.) before implementing and scaling the strategies and programs systemwide (e.g. throughout a county or the state). PDSAs provide an approach to learning and data-driven decision making throughout all phases of improvement initiatives (see Figure 8, page 33).

Figure 7: Plan-Do-Study-Act (PDSA) Cycle (Langley, et al., 2009, p. 97)



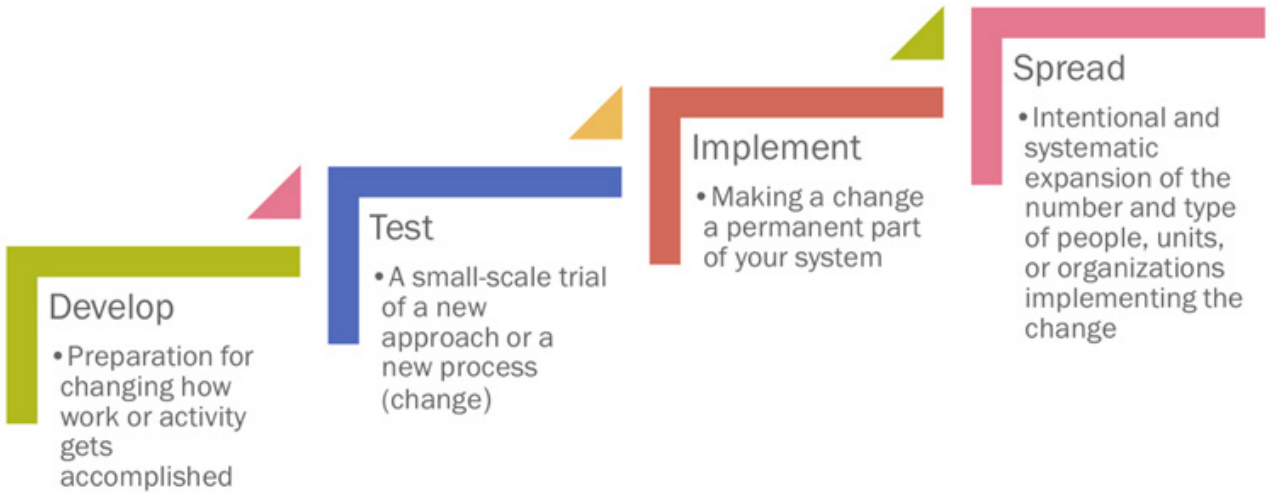
Source: The Institute for Healthcare Improvement

Phases of Improvement

State strategy teams can help to organize and focus their work by identifying the phase of improvement they are in for each child safety intervention they are working on, as they strive to make progress toward their aim. The four phases of improvement are: develop, test, implement and spread (Langley, et al., 2009, p. 5-9, 35-47). Understanding the phases can guide state strategy teams to develop appropriate partnerships and infrastructure for each phase, test a change at extremes and gradually on larger scales, make a change a permanent part of their system, and spread the change to more sites and eventually state-wide, all while learning and adapting along the way. Understanding these phases can help state strategy teams to balance tendencies to extensively study problems prior to taking action with tendencies to act quickly on a large scale when enough information isn't sufficiently understood (Provost & Murray, 2011).

Understanding the phases of improvement can help state strategy teams to stay on track with quality improvement approaches, providing the opportunity to experiment and verify what works, how it works, and what changes can and should be made while the risk of failure is still low in the developing and testing phases, before implementing and spreading the interventions widely in the state or jurisdiction. Additionally, the approach provides an evidence base for introducing, implementing, and building confidence in an improvement before moving to adopting it on a wider scale. It should be noted the phases of improvement are iterative (Langley, et al., 2009).

Figure 8: Phases of Improvement



Develop

In the CSN learning collaboratives, during the develop phase of improvement, state strategy teams select child safety strategies and programs from the change packages and develop processes, materials, curricula, toolkits, partnerships, etc. necessary to start testing their strategies and programs on a small scale. The experience of numerous state strategy teams working in complex systems, within and across state agencies, sectors, and industries, has shown substantial attention is needed for project set up, particularly in aligning and mobilizing key stakeholders and partners and developing materials. It is recommended that state strategy teams focus on this early and important work during the develop phase of improvement, utilizing PDSAs to learn about the most effective ways to create partnerships, processes, and materials.

Test

Once a state strategy team identifies pilot sites and partners and secures materials necessary to test the child safety strategies, the team begins small-scale testing under a range of conditions. It is helpful to test at extremes, under varying conditions that are representative of the conditions expected to be encountered during projected spread. For example, state strategy teams may select one to three pilot sites with different characteristics and small samples of the population that represent different demographics (e.g., testing shaken baby syndrome prevention education in a small rural hospital and a large city hospital with small groups of parents). This step enables the team to make any necessary adaptations to the child safety strategies or approaches and to increase confidence that the strategies work under many different applicable conditions. It is recommended that teams use multiple PDSAs with rapid, small-scale testing to increase learning while the risk of failure on a large scale remains low. Small-scale tests allow for opportunities for adopting, adapting, or abandoning strategies early in the improvement process. As state strategy teams gain confidence and evidence that the strategies will lead to improvement and there is increased commitment at sites to adopt the change, state strategy teams move to the next phase of improvement (Langley, et al., 2009).

Implement

During the implement phase of improvement, state strategy teams have confidence in the effectiveness of their child safety strategies. They now focus on how to sustainably implement the strategies in sites (e.g., schools, hospitals, health clinics, WIC agencies, community organizations, etc.). State strategy teams focus on what is needed to embed the child safety strategies in day-to-day operations of a site. State strategy teams work with sites to consider what policies, processes, job descriptions, and resources are needed to sustain the strategies (Langley, et al., 2009). While the state strategy teams are implementing child safety strategies, they continue to use PDSAs to learn about the implementation process and make improvements. What challenges and lessons learned can be leveraged when implementing at a new site?

Spread

During the spread phase of improvement, state strategy teams work to have more sites adopt the tested child safety strategies. Leveraging learning and results from the previous phases, state strategy teams engage new sites, often using communications materials and spreading to additional sites by multiples of five (e.g., 5 sites, then 25, then 125, etc.). Spread requires strong leadership, continuous learning, a clear communication strategy, and measurement and feedback (Langley, et al., 2009). PDSA cycles can be used in this phase to address any adaptations that may be necessary in moving from one type of site to another.

Designing and Managing a System for Gathering Information for Improvement

Throughout the use of CSN's Framework for Quality Improvement and Innovation in Child Safety, maternal and child health and injury and violence prevention staff on state strategy teams gather information for system improvement that will lead to health impact. They rely on data to guide their efforts when assessing their systems; determining if they need a quality improvement initiative; setting up, monitoring, and evaluating the initiative; and evaluating their overall system (Ali, 2019). State strategy teams use national, state, and local data, qualitative and quantitative real-time data from PDSAs, management meetings, leadership and management assessments, peer-reviewed literature and the injury and violence prevention evidence-base to:

- Compare state data to national benchmarks or to other states
- Assess if they are meeting their system aim and goals
- Create and/or revise their aim system aim and goals
- Identify at-risk communities and populations
- Understand risk and protective factors
- Increase support for quality improvement initiatives

- Identify and engage stakeholders
- Provide accountability to stakeholders
- Improve child safety strategy and program testing, implementation, and spread
- Inform decision-making processes
- Understand changes over time
- Contribute to the scientific base

For state strategy teams working on a quality improvement initiative, the information gathered varies depending on the stage of the improvement initiative: assessing needs before the launch of the initiative, monitoring progress during the initiative, and evaluating outcomes.

State strategy teams use both primary data, which are collected specifically for the needs of the improvement initiative, and secondary data, which are already collected for another purpose and are available for use.

PRIMARY AND SECONDARY DATA

Primary

- Data which are collected to answer unique questions related to the target population's characteristics, practices, needs and priorities
- Often collected via interactive contact methods
- Advantage: Answer questions planners want answered

Secondary

- Data already collected by another agency or someone else (for another reason) and readily available for use
- Often collected via no-contact methods
- Advantage: Data already exist and are relatively inexpensive to obtain

Quantitative data are represented by numbers and the analysis is largely statistical. Qualitative data are typically represented by words instead of numbers, are often gathered using interviews and observational techniques, and analysis and reporting are largely narrative.

Assessing Need

States and jurisdictions start by reviewing state/jurisdiction and local data compared to benchmarks (e.g., within-state, state-to-state, and national data), making comparisons and identifying trends related to child safety outcomes. States and jurisdictions then assess their injury and violence prevention system and ask, "What are our system aim and expected outcomes? Are we achieving them? Do these need to be revised?" This step helps states and jurisdictions assess their work through systems thinking and begin to identify if there is a need for a quality improvement initiative.

Conducting a need assessment then helps states and jurisdictions understand the context for a quality improvement initiative.

The needs assessment process can help answer questions such as:

- What are the most pressing needs?
- What can realistically be changed?
- What are the characteristics, needs, and priorities of the target population?
- Are there adequate resources to deal with the problem?
- Can the problem best be solved by an injury and violence prevention strategy or program, or could it be handled through another means?
- Are effective evidence-based or evidence-informed strategies and programs available to address the problem? Which ones would work better in our state/local context and why?
- Can the problem be solved in a reasonable amount of time?
- What do we know about possible settings/context for the program?

The process can help states and jurisdictions to gain knowledge about the problem, assess the feasibility of possible interventions, and determine the level of agency, division, and community support.

Sources of quantitative data for needs assessment may include:

- Needs assessment survey
- Climate survey
- Reports of incidents
- Survey data about previous interventions

- Peer reviewed literature and evidence base
- Hot spot mapping

Sources of qualitative data may include:

- Community meetings
- Needs assessment comments
- Stakeholder interviews
- Focus groups
- Social media posts
- News coverage

If a state or jurisdiction determines they will launch an improvement initiative, they can begin to set up the initiative, guided by the CSN Framework for Quality Improvement and Innovation in Child Safety. State strategy teams are formed and they select a child safety strategy or program based on state needs; engage leadership, establish partnerships and establish management structures; and determine how they will know if they are making progress toward their system aim and goals. State strategy teams can locate evidence-based and evidence-informed child safety strategies and measures (outcome and process) using sources such as CSN change packages. Strategies and measures are typically selected during project set-up.

Monitoring Progress

State strategy teams systematically collect and analyze data to monitor progress and inform decision-making throughout an improvement initiative. In monitoring real-time, month-to-month progress, state strategy teams ask, “How will we know a change is an improvement?” (see Figure 9 on page 40). State strategy teams identify the measure(s) that will answer this question, identify data sources, ensure access to data, and collect available baseline data during project set up. This type of measure is a process measure that will be monitored in real-time on a monthly basis throughout the improvement initiative. This is distinguished from an outcome measure that will show health impact over the long-term (e.g., reduction in fatalities, hospitalizations, and emergency department visits).

Many state strategy teams are able to access and report on count data on a monthly basis (e.g., number of individuals trained, number of parents receiving education, number of adolescents in a program, number of organizations providing education, number of child safety seats distributed, etc.). Reviewing these data regularly enables state strategy teams to assess whether they are achieving their goals for the number of organizations or individuals reached by a child safety strategy or program.

Some state strategy teams are able to collect data on knowledge, skill, or behavior change, often by conducting surveys. This type of data allows state strategy teams to have a better understanding of the effect of the child safety strategy or program on the target population.

Monitoring can help address questions such as:

- How many program facilitators/trainers were trained?
- How many programs were implemented in the state/jurisdiction?
- How many program sessions were delivered?
- Were activities delivered as intended?
- How many individuals received training?
- Did trainees increase their knowledge? Skills?
- Did trainees experience changes in their behavior?

Sources of quantitative data for monitoring include:

- Attendance data
- Fidelity logs
- Observations
- Surveys
- Online resource downloads

Sources of qualitative data include:

- Focus groups
- Semi-structured interviews
- Observations

A common challenge for state strategy teams is to set goals for how many organizations or individuals the team aims to reach during the quality improvement initiative. Working with partners and reviewing data collected during the needs assessment (e.g., number of schools already offering a teen drive safety program, where the schools are located, identifying high risk populations, who the programs are currently serving, challenges and lessons learned, etc.) can inform goal setting. When state strategy teams set goals, they focus their work by further specifying how they will spread child safety strategies throughout a state (e.g., to whom, where, when). Monitoring progress toward their goals can keep teams motivated throughout the quality improvement initiative.

Another common challenge for state strategy teams is to operationalize constructs in the child safety strategy, so that progress can be monitored consistently over time. For example, if a strategy is to provide education on poisoning prevention, the state strategy team will need to define what constitutes "education." Education may be in the form of a flyer, a website, a newsletter, a workshop, etc. In this example, the state strategy team should be clear in working with partners from whom they are collecting data what will be considered as "education." They may determine it has to be in the form of a workshop with parents or caregivers. If all reporting is consistent, the state strategy team will understand their progress in relationship to this specific type of education. This could guide future decisions around different strategies, such as a follow-on state-wide web-based education campaign.

Regular monitoring is a key aspect of the quality improvement process. Monthly reporting of quantitative and qualitative data helps states and jurisdictions document and monitor their progress. State strategy teams report on child safety strategies and programs through process measures, and capture successes, challenges, and observations of program implementation and spread. Monthly reports keep state strategy teams and partners informed on the reach, dosage, duration, and fidelity to planned activities. Monthly reporting allows data to be collected over time and analyzed for trends, guiding further decision-making.

Evaluating Outcomes

In addition to assessing needs and monitoring progress during a quality improvement initiative, establishing a process for evaluating outcomes is important for determining whether the quality improvement initiative has led to health impact. Outcome evaluation may assess community-level change or longer-term results (e.g., changes in injury risk status, hospitalizations, emergency department visits, and deaths) to which the child safety strategy or program contributed.

Outcome evaluation can address questions such as:

- Have the system aim, goals, and expected outcomes been achieved? If not, what has been the progress?
- Is the child safety strategy or program achieving its expected objectives?
- To what extent are desired changes occurring for the target population?
- What seems to work and not work?
- What predicted and unpredicted impact has the child safety strategy or program had?

Sources of quantitative data for outcome evaluation include:

- Pre-post-tests
- Post-activity surveys

- Hot spot mapping
- Reported incidences
- Population surveys
- State level data

Sources of qualitative data include:

- Community meetings
- Staff and participant surveys
- Key informant interviews
- Observations

Conducting Planning for Improvement and Integrating It with Business Planning

State strategy teams can work with other staff in their division and health department to identify a portfolio of improvement projects (Langley, et al., 2009, p. 325). This portfolio should be composed of initiatives that aim to improve parts of the overall health department system or division level sub-systems.

State injury prevention programs typically have a strategic plan, work plans, and regular staff meetings. Integrating improvement planning into those activities and plans can help streamline improvement work and avoid redundancy and waste. It is important to align any new quality improvement initiatives with the strategic plan and work plan(s) already in place in the state or jurisdiction health department and/or division. State strategy teams are encouraged to seek alignment of their quality improvement child safety strategies and measures with the state strategic plan, and explore available resources to leverage (e.g., partnerships, funding, staff time, materials, etc.).

Figure 9: Defining a Portfolio of Improvement Projects

Managing and Learning from a Portfolio of Improvement Initiatives

Once a portfolio of improvement projects is defined within the state department of health or a division (e.g., maternal and child health division or injury and violence prevention division), state strategy teams can set up additional support structures to ensure the improvement initiatives are prioritized, a consistent quality improvement approach is used, resources are leveraged, and lessons are regularly shared across the department or division (Langley, et al., 2009, p. 325-328).

Prioritize the Portfolio of Improvement Initiatives

Key prioritization questions include:

- Which quality improvement initiatives should take place first?
- Can any of the quality improvement initiatives take place simultaneously?
- What team will form for each quality improvement initiative?
- For how long should each quality improvement initiative last?

Dedicate Staff and Leadership

Successful quality improvement initiatives often require someone to take charge and focus more deeply on the task at hand. For the time period that the project is taking place, someone may need to increase their time on the project and delegate some other tasks. That re-allocation of time and resources is why the development of the portfolio is so important. Quality improvement initiatives must be vital to the department or division and are expected to provide strategic benefits. The person who increases their time on a quality improvement initiative may also need additional training and support in quality improvement.

Consistently Review the Progress of the Quality Improvement Initiative

Quality improvement initiatives should be kept front and center by using existing work structures, such as staff meetings and communication channels. Remember why the quality improvement initiative was prioritized and revisit the system map, aim, goals, and expected outcomes. Share how this work is making a positive impact and humanize the effects whenever possible. Above all, stay flexible. Quality improvement focuses on real-time learning and progress, not perfection.

Set an End Date

By setting an end date, the state strategy team leading the quality improvement initiative can maintain and even gain momentum, plan more efficiently, and create more concrete goals. Setting an end date also helps to diminish fatigue. When the quality improvement initiative comes to its end date, the state strategy team and department or division staff can celebrate accomplishments, recognize lessons learned, identify how close they came to achieving intended goals, and move on to the next quality improvement initiative in the portfolio—or extend the current initiative, if strategically important.

SYSTEMS IMPROVEMENT IN IOWA BULLYING PREVENTION

CONTEXT

Iowa's objective in the Bullying Prevention topic team of the Child Safety Learning Collaborative was to engage in work that promoted and improved bullying prevention strategies in Iowa as part of the Title V National Performance Measure 9: Percent of adolescents, ages 12-17, who are bullied or who bully others.

PROCESS

After assessing Iowa's bullying prevention capacity by utilizing HRSA Maternal and Child Health's Assessing Prevention Capacity & Implementing Change: An evidence-informed and evidence-based Bullying Prevention Capacity Assessment and Change Package (Health Resources and Services Administration, 2018), the Iowa Team's aim for the project was reducing bullying victimization among children and adolescents by building and improving partnerships and implementing evidence-based and evidence-informed bullying prevention strategies, especially among the most vulnerable populations.

The Iowa Team entered into a service agreement with Iowa Safe Schools to pilot the Lifeguard Workshop (Trevor Project, 2018), an evidence-informed program to support youth at risk of bullying victimization due to sexual orientation/gender identity, gather feedback from facilitators and participants involved in the pilot, and if successful, offer the programming to more participants.

The pilot project offered the evidence-based bullying prevention program to LGBTQ+ students attending a weeklong Gay Straight Alliance (GSA) camp. Participants and Iowa Safe School staff assessed the program during the pilot and identified several nuances and made small adjustments to make in the delivery of the programming (e.g., allowing ample time for the rich discussion generated and ensuring that resources were available for students who needed additional support). The programming then was expanded and offered to a larger cohort of students in several Iowa GSAs in rural and urban areas.

NEXT STEPS

The Iowa Team and Iowa Safe Schools agreed that the evidence-based bullying prevention program could be integrated into future school-based GSA programming and is sustainable with little financial resources.

The Framework for Quality Improvement and Innovation in Child Safety in Action

The CSN Framework guides how CSN interacts with and provides support to states and jurisdictions seeking to improve their child and adolescent injury and violence programs. As HRSA's primary vehicle for providing training and technical assistance to states and jurisdictions on this topic, CSN utilizes the Framework in both individual technical assistance interactions and in collaborative settings, in which state and jurisdiction Title V employees and their partners learn from CSN and from each other. Evidence of the Framework in action includes the outcomes of the Child Safety Collaborative Innovation and Improvement Network (CS CoIIN), the ongoing work of the Child Safety Learning Collaborative (CSLC), and individual instances of TA with other states and jurisdictions.

Results from the Child Safety Collaborative Innovation and Improvement Network

Among the 21 states and jurisdictions active in the CS CoIIN between December 2015 and December 2017:

- 18 states/jurisdictions set up data collection and monitoring systems and selected process measures on which to report
- 16 states/jurisdictions submitted data on process measures
- 13 states/jurisdictions showed progress on these process measures
- 7 states/jurisdictions began statewide adoption of evidence-based programs
- 7 states/jurisdictions made progress in developing and improving their child safety systems

As a result of these efforts, accomplishments of the CS CoIIN states and jurisdictions include

- 106 schools increased access to evidence-based programs
- 1,216 adolescents were trained in non-violence skills
- 289 safety seat events were held
- 39 safety seat inspection stations were established
- 8,996 safety seats were distributed
- 15,054 safety seat inspection forms were submitted
- 5,000 parents and teens received information/education on teen driver safety
- 1,091 parent-teen driver agreements were signed

Outcome measures showed similar gains. Nationally from 2015 to 2016, for children ages 0-19

- Unintentional injury deaths increased 3.8%, but the CS CoIIN states experienced a 2.1% increase
- Motor vehicle traffic deaths increased 5.3%, but the CS CoIIN states experienced a 1.3% increase
- Homicides increased 7.9%, but the CS CoIIN states experienced a 4.2% increase

Results from the Child Safety Learning Collaborative

Among the 18 states and jurisdictions active in Cohort 1 of the CSLC from October 2018 to April 2020, preliminary results include:

- 7,957 individuals received education on poisoning prevention and sudden unexpected infant death prevention
- 6,000 parents and caregivers in underserved, at-risk communities received evidence-based safe-sleep education
- 638 organizations distributed child safety seats and booster seats
- 381 schools and organizations used evidence-based programs
- 315 child passenger safety technicians were trained and certified
- 315 schools increased access to evidence-based programs
- 214 organizations distributed free or discounted Pack n' Plays
- 118 hospital and birthing facilities provided infant safe sleep training to parents/caregivers
- 91 schools and organizations conducted teen driver safety programs with teens
- 81 hospitals and birthing facilities provided safe sleep training to health care providers
- 69 schools and organizations provided gatekeeper training
- 64 child passenger safety inspection and fitting stations were established
- 20 schools and organizations provided evidence-based multi-component suicide and self-harm prevention programs

Conclusion

Employing the three components of the CSN Framework for Quality Improvement and Innovation in Child Safety—child safety expertise, leadership and management, and systems improvement—can help state and jurisdiction maternal and child health and injury and violence prevention practitioners increase their capacity to achieve reductions in child and adolescent injury and violence related fatalities, hospitalizations, and emergency department visits.

By fostering child safety expertise in state and national priority child safety topics, building strong state strategy teams that lead and manage quality improvement initiatives, and using systems improvement processes and tools (e.g., needs assessment, stakeholder analysis, systems map, SMART aims, PDSAs, monthly reports), state and jurisdictions can have a major impact in reducing injures, increasing safety, and improving the quality of life for children and adolescents across the country.

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Appendix 1 - Framework for Quality Improvement and Innovation in Child Safety Resources

Child Safety Expertise Resources

Evidence-based and Evidence-informed Strategies for Child and Adolescent Injury Prevention
https://www.childrenssafetynetwork.org/resources/evidence-based-evidence-informed-strategies-child-adolescent-injury-prevention

Child Safety Collaborative Innovation and Improvement Network (CS CoIIN) Change Packages
https://www.childrenssafetynetwork.org/coiin/change-packages-outcome-measure

Leadership and Management Resources

Leveraging Funding Sources and Partnerships in Child and Adolescent Injury Prevention
https://www.childrenssafetynetwork.org/resources/leveraging-funding-sources-partnerships-child-adolescent-injury-prevention

Managers Who Lead: A Handbook for Improving Health Services
https://www.msh.org/resources/managers-who-lead-a-handbook-for-improving-health-services

Systems Improvement Resources

Injury and Violence Prevention Systems Toolkit
https://www.childrenssafetynetwork.org/resources/injury-violence-prevention-systems-toolkit

Plan/Do/Study/Act (PDSA) Worksheet
http://www.ihi.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx

Using Essential Elements to Select, Adapt, and Evaluate Violence Prevention Approaches
https://www.cdc.gov/violenceprevention/pdf/adaptationguidance.pdf

Appendix 2 - Framework for Quality Improvement and Innovation in Child Safety Tools

Leadership and Management Tools

Stakeholder Analysis Worksheet

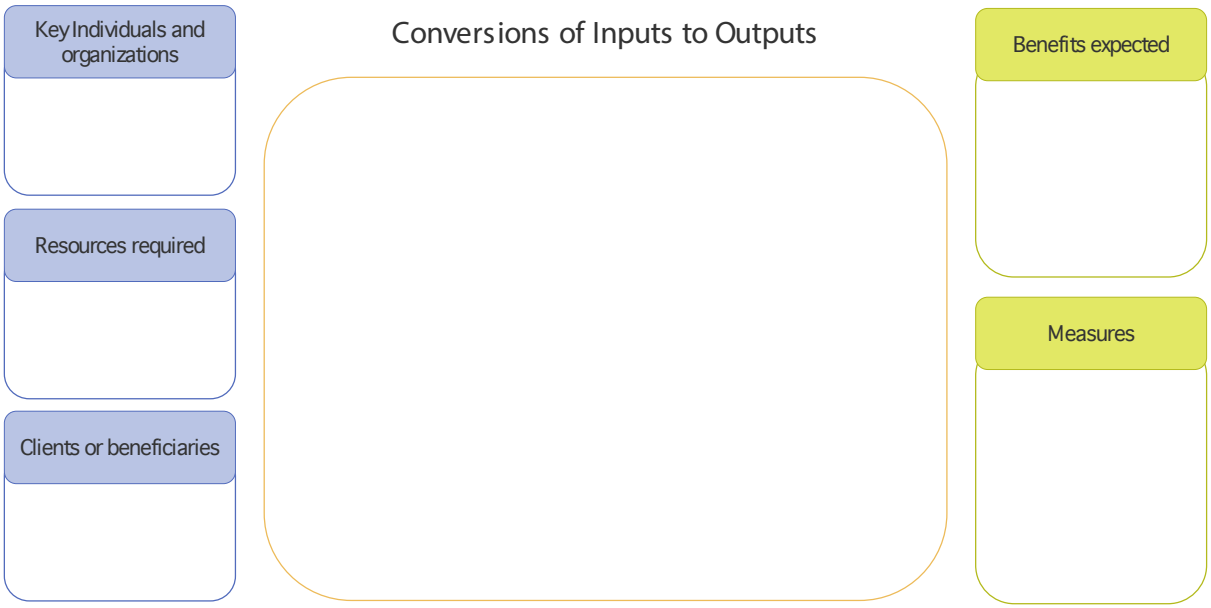
Instructions:

- Brainstorm a list of potential stakeholders and rank their priority/importance to your success
- Complete a 'stakeholder analysis worksheet' for each stakeholder in the table below
- Designate team members to pursue next steps to secure key stakeholders for your initiative

Stakeholder group or individual	What is their motivation (political will) to engage and support the work?	What is their biggest concern?	What do we need to do to get their support?	Next steps	Person responsible

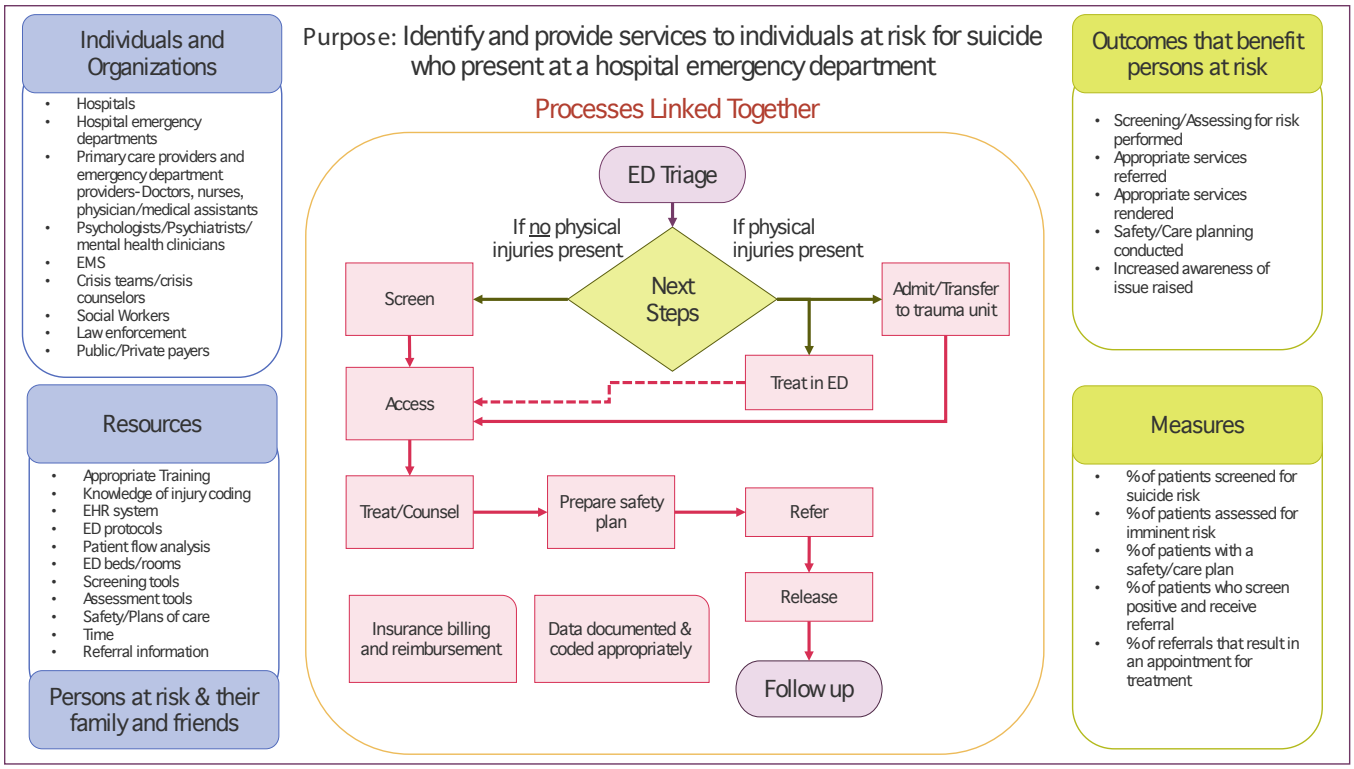
Stakeholder group or individual	What is their motivation (political will) to engage and support the work?	What is their biggest concern?	What do we need to do to get their support?	Next steps	Person responsible

Systems Improvement Tools



This diagram is informed by Health Quality Ontario's Quality Improvement Guide, which can be found at:
http://www.hqontario.ca/portals/0/documents/qi/qi-quality-improve-guide-2012-en.pdf

1



Outcome Measure Worksheet

Please note: This is a generic worksheet. Please see the CS CoIIN Resource Library to find the Outcome Measure Worksheets for each topic.

Instructions

Complete the first page of this worksheet. Then, using the second page of the worksheet, identify which datasets are used in your state, and who is the individual responsible for reporting to that system. Contact that individual to explore options for getting real time data on a monthly basis.

Why Real-Time Data Is Important

We are looking for real-time data for the purposes of quality improvement and determining the impact our work is having on rates of injury-related deaths, hospitalizations, and emergency department (ED) visits. The data will be used to:

- Assess progress made towards the achievement of aim statements
- Compare trends in injury to tests of change conducted by the CS CoIIN Strategy Team(s)

Description of the Data

In an ideal world, these data will:

- Be collected and reported on a monthly basis
- Relate to this geographic region:
- Relate to this age group:
- Relate to populations with these characteristics:
- Reflect the relevant ICD Codes. A list of ICD-10 Codes by CS CoIIN topic area is available in the CS CoIIN handbook as well as on the CS CoIIN web portal.

These data do not need to be cleaned to the same extent that they are cleaned for federal data systems. From the Quality Improvement standpoint, some data is better than no data. We encourage you to explore your options.

Who Manages Injury Datasets?

The following individuals or organizations might be able to provide you with more information about data collected and reported in your state/jurisdiction:

Role	Name	Phone Number	Email
State Epidemiologist			
Child Death Review Coordinator			
Medical Examiners or Coroners			
State Administrator			
Hospital Epidemiologist(s)			

Injury Datasets

The following datasets contain the relevant data we are seeking on a state/jurisdiction level. You may need help from individuals in the table above to answer questions about these systems.

ED, Hospitalization and Death Data Systems

Data System	Does your S/J, or hospitals in your S/J have or report to this system?	Who is responsible for this system in your state/jurisdiction?	Does the system contain the data you are looking for?
Healthcare Cost and Utilization Project (HCUP)			
National Emergency Medical Services Information System (NEMSIS)			
Syndromic Surveillance System			
Violent Death Reporting System			
Poison Control Center Data			
The National Trauma Data Bank® (NTDB®)			
Crime Reports			
Child Abuse and Neglect Reports			

Data System	Does your S/J, or hospitals in your S/J have or report to this system?	Who is responsible for this system in your state/jurisdiction?	Does the system contain the data you are looking for?
Traumatic Brain Injury Registry			
Governors Highway Safety Association			
Other:			

ED Visit Data Systems

Data System	Does your S/J, or hospitals in your S/J have or report to this system?	Who is responsible for this system in your state/ jurisdiction?	Does the system contain the data you are looking for?
Emergency Department (State Emergency Department Databases) HCUP-SEDD			
National Electronic Injury Surveillance System			
National Electronic Injury Surveillance System- All Injury Program			
Ambulance Use Records			
Other:			

Hospitalization Data Systems

Data System	Does your S/J, or hospitals in your S/J have or report to this system?	Who is responsible for this system in your state/jurisdiction?	Does the system contain the data you are looking for?
HCUP-SID (Hospital Discharge Data)			
Kids' Inpatient Database (HCUP-KID)			
The National (Nationwide) Inpatient Sample (HCUP-NIS)			
Other:			

Death Data Systems

Data System	Does your S/J, or hospitals in your S/J have or report to this system?	Who is responsible for this system in your state/jurisdiction?	Does the system contain the data you are looking for?
Child Death Review			
Vital-Statistics Office			
Other:			

Guiding Questions

Once you find the data you are looking for in your state or jurisdiction, choose one dataset (or one dataset per outcome measure) and explore the following questions with the point person for that dataset:

- How is the data collected? For example: Where specifically does it come from? Who is it reported to? How frequently is the data collected?
- Is it possible to generate monthly reports that contain the data described on the first page of this worksheet?
- If I can't get data on a monthly basis, how often can I get data?
- If I can't get the specific data I am looking for, what data can I get related to hospitalizations, ED visits, and deaths?
- Do we need a data sharing agreement or memorandum of understanding?

If your state/jurisdiction does not have or report to any of these systems, ask the individuals listed in the second table of this worksheet if they can think of other data systems or ways to collect the data described on page one of this worksheet.

Spread Planner

This Spread Planner provides guidance for each state or jurisdiction strategy team to develop a spread plan for the implementation and spread of child safety strategies throughout their state or jurisdiction. Sections of the Spread Planner are adapted from the Institute for Healthcare Improvement's Spread Framework.

Leadership

To what extent is spread of injury and violence prevention child safety strategies a strategic initiative for each of the key leadership organizations you identified in your state?

☐ Yes ☐ No ☐ Unsure

If yes, how do you know?

If no, whose commitment do you need to secure?

If you are unsure, how can this be clarified?

Actions:

Is there a designated person with authority and influence responsible for spread of injury and violence prevention child safety strategies throughout the state or jurisdiction within your own organization?

☐ Yes ☐ No ☐ Unsure

If yes, is the person responsible passionate about the change? ☐ Yes ☐ No ☐ Unsure

Is success in spreading child safety strategies widely part of his/her goals/strategic objectives?

☐ Yes ☐ No ☐ Unsure

If no, who is the best candidate?

Actions:

Is there support for this effort at a policy level?

☐ Yes ☐ No ☐ Unsure

If yes, how does the policy support a plan for spread of child safety strategies?

If no, what can you do to gain this support; i.e. legislative endorsement, etc.?

If you are unsure, how can this be explored and clarified?

Actions:

To what extent are the goals/incentives of other key stakeholders within the state aligned with the goals of spread of injury and violence prevention child safety strategies?

☐ Yes ☐ No ☐ Unsure

Which entities have statewide goals that are aligned with the goals of this initiative?

Are these goals sufficiently aligned to motivate leaders and new adopters?

☐ Yes ☐ No ☐ Unsure

Actions:

If no, how can you support alignment?

Actions:

Is there a person or team responsible for implementing and spreading injury and violence prevention child safety strategies within your state or jurisdiction?

☐ Yes ☐ No ☐ Unsure

If yes, do they have sufficient time and resources? ☐ Yes ☐ No ☐ Unsure

If no, how can you engage leadership to support spread of medical home?

Actions needed to assure time is available:

If yes, do they have access to a supportive team with a range of expertise to share?

☐ Yes ☐ No ☐ Unsure

If no, how can you engage leadership to support spread of medical home?

Actions needed to assure a team with relevant skills is available:

Better Ideas

Can you make the case for adoption of the injury and violence prevention child safety strategies?

☐ Yes ☐ No ☐ Unsure

What evidence do you have that adoption of the "spread-able" changes will lead to improved outcomes?

Have you considered the benefits for all adopter groups? Have you considered what is in it for them personally?

☐ Yes ☐ No ☐ Unsure

If not, what needs to be done?

Can you counter important arguments against spread?

☐ Yes ☐ No ☐ Unsure

If yes, have you identified the key arguments against spread within different stakeholder groups? If not, what needs to be done?

If yes, have you developed effective responses to the key counter arguments?

☐ Yes ☐ No ☐ Unsure

If not, what needs to be done:

Have you documented the injury and violence prevention child safety strategies you want to spread, including successes and learning from implementation of those strategies in select sites?

☐ Yes ☐ No ☐ Unsure

If yes, have you assessed the level of successful implementation in the sites (e.g. Child Safety Learning Collaborative Implementation and Spread Progress Scale)?

If not, what needs to be done?

Are the injury and violence prevention child safety strategies packaged in a way that facilitates adoption in other sites?

☐ Yes ☐ No ☐ Unsure

If not, what needs to be done:

Set-up

What is your implementation plan for spread? Consider: where will change come from; how do you envision making it happen (e.g. use a broad based communication campaign, identify and use opinion leaders, share comparative data)?

Plan:

Who are the key target groups you need to reach to implement your plan for spread (e.g. community leaders, teachers, counselors, nurses, pediatricians, media figures, others)?

Different Audiences:

Is there a successful site(s) that you can point to as a model for the state?

☐ Yes ☐ No ☐ Unsure

How many successful sites are there?

What percent is this of the target population?

Have they implemented all the changes you intend to spread?	☐ Yes	☐ No	☐ Unsure
Have they achieved the goals of the project?	☐ Yes	☐ No	☐ Unsure
Are the sites representative of the target population?	☐ Yes	☐ No	☐ Unsure

Actions:

What is the potential role of the successful site(s) in spreading to new sites:

If there is not a successful site in the state, how will you demonstrate the feasibility of success?

Communication

How will awareness of the initiative be communicated?

What are your strategies for raising awareness among each key target group? Are new communication channels needed?

What face-to-face interactions are planned?

How will technical knowledge be transferred (e.g., knowledge management system, listserv, shared survey results) and financed?

What kinds of technical knowledge will be needed by different stakeholder groups?

What communication channels will transfer technical knowledge to these groups?

Is new technology needed to support the transfer?

☐ Yes ☐ No ☐ Unsure

If no, what is the plan?

How will information about practice-level changes on injury and violence prevention child safety strategies get collected and shared within the state?

<u>Initial Strategy:</u>

Who are the key messengers that will explain the initiative to new sites?

How will you identify messengers that have influence in the community network?

What will you do to support them (including the use of technology)?

How will you continue your relationship with them (including providing feedback)?

Measurement and Feedback

What is your measurement strategy?

How will progress be measured?

How will the rate of spread be monitored?

Who will be responsible for collecting, plotting and sharing the data?

What is the system for feedback?

How will assessment of progress and results be communicated back to sites to support and encourage further progress?

What is the initial strategy for reward and recognition of participation and progress?

How will progress be communicated to leadership?

What are your plans to establish two-way communication between those leading spread and the sites?

(Consider: What existing venues can be used? What new communication venues need to be created? Who will be responsible to monitor effectiveness of two-way communication?)

How will outcomes be tracked and reported?

What are the relevant outcome indicators?

How will outcomes be monitored?

Who will be responsible for collecting, plotting and sharing the data?

Strengthening the Social System

How will the key stakeholder groups stay connected at state and community levels?

Strategy:

Informed by Langely, G.J, Moen, R.D., Nolan, K.M., Nolan, T.W., Norman, C.L., & Provost, L.P. (2009). The improvement guide: A practical approach to enhancing organizational performance (2nd ed.). Jossey-Bass: San Francisco, CA. and the Medical Home Spread Planner.

PDSA Worksheet

State/Jurisdiction:

Topic:

Cycle #:

Start Date:

End Date:

Strategy:

Objective of this cycle:

This cycle is used to ☐ develop, ☐ test, ☐ implement, or ☐ spread a strategy.

Questions you want to answer with this cycle:

What do you hope to achieve or learn through this cycle? What strategy are you working on that you think will result in improvement? Provide any necessary contextual information.

Plan

List the tasks needed to set up this cycle	Person responsible	When to be done	Where to be done

Predict what will happen as a result of the cycle	Measures to determine if prediction & cycle succeed

Do

Describe what happened when you ran the cycle, including surprises, successes, obstacles, ease of collecting data, etc.

Study

Describe the measured results and how they compared to the predictions. What are the lessons learned? Was the cycle successful?

Act

Based on what you learned, describe next steps, including modifications for the next cycle. Will you adapt, adopt, abandon change(s)?

Adapted from the Institute for Healthcare Improvement

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