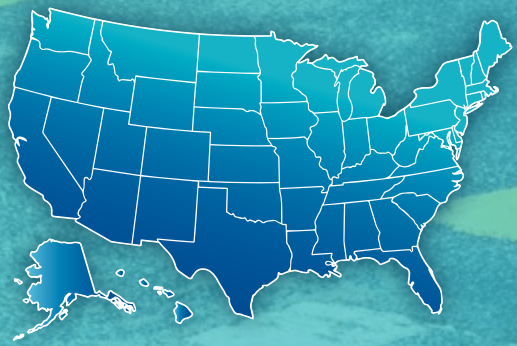
IMPACT EVALUATION REPORT:
PEDESTRIAN INJURY PREVENTION ACTION TEAM PROGRAM



SAFE STATES

www.safestates.org

TABLE OF CONTENTS

ABOUT THE SAFE STATES ALLIANCE

The Safe States Alliance is a national non-profit organization and professional association whose mission is to strengthen the practice of injury and violence prevention. To advance this mission, Safe States Alliance engages in activities that include:

- Increasing awareness of injury and violence throughout the lifespan as a public health problem;
- Enhancing the capacity of public health agencies and their partners to ensure effective injury and violence prevention programs by disseminating best practices, setting standards for surveillance, conducting program assessments, and facilitating peer-to-peer technical assistance;
- Providing educational opportunities, training, and professional development for those within the injury and violence prevention field;
- Collaborating with national organizations and federal agencies to achieve shared goals;
- Advocating for public health policies to advance injury and violence prevention;
- Convening leaders and serving as the voice of injury and violence prevention programs within state health departments; and
- Representing the diverse professionals within the injury and violence prevention field.

For more information about the Safe States Alliance, contact the national office:

Safe States Alliance
2200 Century Parkway, Suite 700
Atlanta, Georgia 30345
(770) 690-9000
www.safestates.org

This report was developed with support from a cooperative agreement (DTNH22-13-H-00411) between the Safe States Alliance and the National Highway Traffic Safety Administration (NHTSA).

Disclaimer: *The opinions, findings, and conclusions expressed in this publication are solely those of the authors. They do not necessarily represent the official positions of the Safe States Alliance, the National Highway Traffic Safety Administration (NHTSA), or any agencies affiliated with authors or program participants.*

Recommended Citation:
Impact Evaluation Report: Pedestrian Injury Prevention Action Team Program. Atlanta (GA): Safe States Alliance, 2017.

ACKNOWLEDGEMENTS

The impact evaluation of the *Pedestrian Injury Prevention Action Team Program* was conducted by the Safe States Alliance, with funding support from the National Highway Traffic Safety Administration (NHTSA). Individuals from these organizations, as well as Action Team Lead Organizations and mini-grantee agencies, helped to make this evaluation possible and are acknowledged below.

Safe States Alliance	Amber Williams, Executive Director Jamila Porter, DrPH, MPH, Director of Programs and Evaluation Ina Robinson, MPH, Evaluation and Technical Assistance Coordinator Tiandra Thornton, MPH, Public Health Associate, Centers for Disease Control and Prevention (CDC) Dayna Alexander, DrPH, MSPH, CHES, Evaluation Fellow, Oak Ridge Institute for Science and Education (ORISE), Centers for Disease Control and Prevention (CDC)
National Highway Traffic Safety Administration (NHTSA)	Paula Bawer, National Pedestrian/Bicycle Safety Program Manager
Action Team Lead Organizations	California Department of Public Health Oregon Health Authority Rhode Island Department of Health University of Kentucky Research Foundation for the Kentucky Injury Prevention and Research Center
Local Mini-Grantee Agencies	Asian Pacific American Network of Oregon (APANO) and Oregon Walks Bike Newport (Rhode Island) California Walks City of Eugene (Oregon) City of Lincoln City and Lincoln City Community Sustainability Committee (CSC) (Oregon) City of Providence, Healthy Communities Office and Department of Planning (Rhode Island) County of San Luis Obispo Public Health (California) County of Sonoma Department of Health Services (California) Lexington-Fayette County Division of Police (Kentucky) Louisville Metro Department of Public Works (Kentucky) Madison County Health Department (Kentucky) San Francisco Walks (California)

EXECUTIVE SUMMARY

Program Purpose and Evaluation Questions

To support the National Highway Traffic Safety Administration (NHTSA)'s efforts to "raise awareness of the dangers to pedestrians" and "provide leadership, expertise, and resources to communities across America to combat these crashes,"[1] the Safe States Alliance, with financial support from NHTSA, implemented the two-year *Pedestrian Injury Prevention Action Team Program.* Implemented from January 2014 – December 2015, the goal of this pilot program was to **leverage public health leadership** to enhance statewide pedestrian safety efforts by: **strengthening partnerships between multidisciplinary partners** with a stake in pedestrian safety and **enhancing the collective capacity of state and local organizations** to implement pedestrian safety initiatives.

Four state injury and violence prevention (IVP) programs (also known as "Action Team Lead Organizations") were selected to participate in the program from four health departments including: California Department of Public Health; Oregon Health Authority; Rhode Island Department of Health; and University of Kentucky Research Foundation for the Kentucky Injury Prevention and Research Center. Organized and selected by the four Lead Organizations, each Action Team included six state and local professionals that represented various fields with a stake in pedestrian safety, including (but not limited to): public health, transportation, planning, law enforcement, education, and advocacy.

Through the *Pedestrian Injury Prevention Action Team* Program, state Action teams:

- Participated in a three-day, in-person **Pedestrian Injury Prevention Workshop** to learn how to build capacity for pedestrian safety efforts at state and local levels;
- Obtained a **demonstration grant** up to $35,000 each to fund mini-grants to local agencies to implement education, evaluation, and/or enforcement activities related to pedestrian safety that supported city or county-wide pedestrian safety action plans;
- Developed and facilitated at least three mandatory **customized local trainings** (based on principles from the Pedestrian Injury Prevention Workshop) to enhance the capacity of local partners to implement pedestrian safety activities;
- Developed **communication tools and resources** in support of pedestrian injury prevention; and
- Utilized the **Pedestrian Injury Prevention Community of Practice (CoP)**, a special online community hosted by the Safe States Alliance that enables partners engaged in the association's pedestrian injury prevention initiatives to exchange ideas, information, and resources

The goal of this impact evaluation was to determine to what degree the *Pedestrian Injury Prevention Action Team Program* achieved its short-term outcomes or "impacts" as described in the logic model (Appendix A). The evaluation was guided by three evaluation questions:

1. How and to what extent did the Pedestrian Injury Prevention Action Team Program increase or enhance Action Team members' and mini-grantees' capacity to address pedestrian injury prevention? (i.e., staff support, participating in collaborative efforts, implementing and evaluating interventions, conducting or participating in trainings, or implementing communication activities)
2. What successes did participants achieve and what challenges did participants encounter through the *Pedestrian Injury Prevention Action Team Program?*
3. What value or advantages did public health leadership bring to pedestrian injury prevention efforts?

Key Evaluation Findings

Enhancing Participants' Capacity to Address Pedestrian Injury Prevention

According to participants—which included Action Team members and representatives from local agencies that received mini-grants—*Pedestrian Injury Prevention Action Team Program* helped the four participating states and their 12 communities to enhance their pedestrian injury and violence prevention capacity across five of the six "Core Components" that describe injury and violence prevention organizational capacity, as identified by the Safe States Alliance.[2] These five Core Components include: build and sustain a solid, stable infrastructure; select, implement, and evaluate effective program and policy strategies; engage partners for collaboration; effectively communicate information to key stakeholders; and provide training and technical assistance.

Build and sustain a solid, stable infrastructure

State grantees in California, Kentucky, Oregon and Rhode Island provided mini-grants ranging from $4,000 to $10,000 were to 12 communities from larger demonstration grants of up to $35,000 per state. Action Teams and mini-grantee agencies used these funds to **support program staff time and consultants** that implemented interventions, **travel** to conduct local trainings and implement interventions, and obtain **materials and supplies**.

Select, implement, and evaluate effective program and policy strategies

Action Teams and their local agency mini-grantees implemented a total of 27 interventions that were informed by existing city or county-wide pedestrian safety action plans. Interventions focused on education, enforcement, and/or evaluation efforts. Examples of interventions included: assessing the walkability of school zones; preventing distracted walking and driving; building awareness of crosswalk laws; and encouraging safe walking behaviors.

Engage partners for collaboration

Action Teams consisted of six state and local-level professionals from key sectors, including public health, transportation, engineering, urban planning, community organizing, policy, and law enforcement. Organizations with whom Action Teams and mini-grantee agencies worked to implement pedestrian injury prevention efforts included (but were not limited to): mayor's offices, public works agencies, police departments, media organizations, public health departments, universities, chambers of commerce, and housing agencies.

Effectively communicate information to key stakeholders

All mini-grantee organizations implemented educational interventions to build awareness of pedestrian injury among a variety of subgroups, including university students, police officers, and parents of grade school students. Educational interventions included customized communication messages and pathways intended to reach these specific audiences.

Provide training and technical assistance

Fourteen trainings were conducted through the Pedestrian Injury Prevention Action Team Program, collectively educating 225 attendees in 12 communities across all four states. Local trainings and workshops allowed Action Teams and their mini-grantee agencies to: enhance community awareness of pedestrian injury as a public health problem; provide forums for community members to share ideas, insights, and potential solutions; and obtain community members' feedback on safety interventions that were to be implemented.

KEY SUCCESSES AND CHALLENGES OF PROGRAM PARTICIPATION

Participants described **three key successes** that they achieved as part of the *Pedestrian Injury Prevention Action Team* Program: (1) Enhanced awareness of pedestrian injury as a public health problem within mini-grantee communities; (2) Increased development of new partnerships across diverse disciplines; and (3) Improved ability to tailor interventions to the needs of communities.

Enhanced awareness of pedestrian injury as a public health problem within mini-grantee communities	During various encounters with stakeholders and partners – whether during trainings, in planning meetings, or while implementing interventions – **program participants were able to bring the topic of pedestrian safety to the forefront of discussions with stakeholders and synergize efforts related to their pedestrian injury prevention strategies.**
Increased partnerships across diverse disciplines	Throughout the program, **participants successfully forged new partnerships and strengthen existing ones with a variety of organizations, including transit providers, businesses, law enforcement, transportation, planning, community-based organizations, and schools.** Participants noted that having to create an "Action Team" through the program – which had to be composed of six state and local individuals from a variety of fields, including public health, transportation, and other areas – provided unique opportunities to work with new partners and agencies with whom they had not previously worked.
Improved ability to tailor interventions to the needs of communities	The *Pedestrian Injury Prevention Action Team* Program provided an opportunity for participants to obtain feedback from community members, partners, and other stakeholders to tailor their interventions to the needs of their communities. **Program participants achieved buy-in from community members, which ultimately resulted in greater community investment in and support of pedestrian injury prevention efforts.**

Participants also identified **three key challenges** associated with their participation in the program: (1) Insufficient funding and time to make sustained change related to health outcomes; (2) Turnover and personnel changes across participating organizations; and (3) An inadequate evidence base for identifying appropriate, non-engineering pedestrian injury prevention interventions.

Insufficient funding and time to make sustained change related to health outcomes	Given that the grants provided to Action Teams and mini-grantee agencies were relatively small and only provided within a 13-month implementation period, the **grants did not provide enough funding and or time** for to Action Teams or mini-grantee agencies to sustain staff, make see long-term changes related to health impacts, or evaluate connections between funded interventions and long-term health outcomes (e.g., pedestrian injury-related morbidity and mortality).
Turnover and personnel changes across participating organizations	**During the program, all four Action Teams suffered turnover and staff changes that interrupted their programmatic timelines or activities.** Unfortunately, staff turnover, retirements, and attrition will continue to be challenges faced by implementers of public health efforts, given that having people available to implement and evaluate interventions is necessary for success.
Inadequate evidence base for identifying appropriate, non-engineering pedestrian injury prevention interventions	Participants had hoped to easily identify evidence-informed pedestrian injury prevention initiatives that were not engineering-related and could be adapted to their respective communities. However, program participants were disappointed to find scarce evidence to support these kinds of interventions. **Given the lack of evidence related to effective non-engineering initiatives, program participants often served as trailblazers, implementing and evaluating new initiatives that they developed based on existing data, past efforts, community needs, and partner input.**

VALUE AND ADVANTAGES OF PUBLIC HEALTH LEADERSHIP FOR PEDESTRIAN INJURY PREVENTION EFFORTS

Participants discussed the value and advantages that public health leadership brings to pedestrian injury prevention efforts. **Public health leadership uniquely enhanced pedestrian injury prevention efforts** by: (1) Engaging and connecting multidisciplinary partners and community members; (2) Providing access to unique data sets to support prevention efforts; and (3) Utilizing robust evaluation techniques to confirm what works (and what doesn't).

Engaging and connecting multidisciplinary partners and community members	According to program participants, **having public health agencies lead efforts through the Pedestrian Injury *Prevention Action Team Program* allowed them to connect members of various multidisciplinary groups** – including individuals from community-based organizations, local government agencies, schools, law enforcement, and businesses – to collaboratively identify and customize pedestrian injury prevention interventions for their communities.
Providing access to unique data sets to support prevention efforts	**The public health discipline serves as a conduit for access to health-related data to support pedestrian injury prevention efforts.** Access to surveillance data is often essential to the design, implementation, monitoring and evaluation of pedestrian injury prevention efforts at the state and local level. Additionally, state and local level partners can help establish systems inclusive of morbidity, mortality, and risk behavior data. Program participants noted the value of having access to public health data to inform their pedestrian injury prevention efforts.
Utilizing robust evaluation techniques to confirm what works (and what doesn't)	**As a field, public health actively often leads the evaluation of programs and policies to systematically assess their merit, value, and worth.** Pedestrian injury prevention efforts can benefit substantially from regularly utilizing robust, public health-informed evaluation techniques and methodologies. Program participants acknowledged that it was valuable to have public health partners to lead evaluation efforts.

Future Opportunities to Enhance Pedestrian Injury Prevention Practice

Public health and transportation agencies at federal, state, and local levels should collaboratively support ongoing multi-sector collaborations to advance pedestrian injury prevention efforts. These agencies should engage partners from across a variety of sectors (e.g., public health, education, planning, law enforcement, advocacy, etc.) to collaboratively enhance pedestrian injury prevention efforts. Specifically:

***Federal agencies* responsible for addressing public health and transportation efforts can:**	• Fund national, state, and local organizations to conduct rigorous evaluations of non-engineering pedestrian injury prevention initiatives (e.g., education, enforcement, etc.) to expand the evidence base and widely disseminate evaluation findings to inform what works and why • Create sustainable, cross-agency funding structures that are united in a common goal: to make travel for pedestrians safe, accessible, and equitable
***State and local agencies* responsible for implementing public health and transportation interventions can:**	• Convene multi-sector partners at state and local levels on an ongoing basis to actively collaborate on pedestrian injury prevention efforts • Improve access to comprehensive and reliable pedestrian injury-related data sources – including utilizing effective methods of collecting these data – to inform pedestrian injury prevention activities

OVERVIEW: PEDESTRIAN INJURY PREVENTION ACTION TEAM PROGRAM

Safe and walkable neighborhoods can significantly enhance health and quality of life in communities by providing safer, pedestrian-friendly streets, improving air quality, and enhancing community interactions and social connectedness. Unfortunately, it has been difficult for communities and states to realize these benefits. **While traffic fatalities have decreased nationally, pedestrian fatalities have increasingly become a larger proportion of all traffic-related deaths.**[3]

For years, experts in transportation, public health, public safety, urban planning, and school safety, have grappled with the problem of pedestrian safety in isolated siloes. Their successes have been limited because pedestrian safety cannot be addressed through a single field or specialty.[4] Rather, effective solutions to pedestrian safety must be multi-faceted and include collaborative efforts between experts from each of these diverse fields, along with significant input from the community itself.

To support the National Highway Traffic Safety Administration (NHTSA)'s efforts to "reduce traffic safety risks to pedestrians," "promote programs and countermeasures to save the lives of all road users," and "provide leadership, expertise, and resources to communities across America,"[5] the Safe States Alliance, with financial support from NHTSA, implemented the two-year *Pedestrian Injury Prevention Action Team Program*. Implemented from January 2014 – December 2015, the goal of this pilot program was to leverage public health leadership to enhance statewide pedestrian safety efforts by: strengthening partnerships between multidisciplinary partners with a stake in pedestrian safety; and enhancing the collective capacity of state and local organizations to implement pedestrian safety initiatives.

Following a nationwide call for applications and a competitive application review process, state injury and violence prevention (IVP) programs (also known as "Action Team Lead Organizations") were selected to participate in the program from four health departments:

- California Department of Public Health;
- Oregon Health Authority;
- Rhode Island Department of Health; and
- University of Kentucky Research Foundation for the Kentucky Injury Prevention and Research Center.

These four state IVP programs were tasked with developing and leading a multidisciplinary pedestrian injury prevention "Action Team." Action Teams consisted of six state and local-level professionals from a variety of areas, including public health, transportation, engineering, urban planning, community organizing and law enforcement.

Through the *Pedestrian Injury Prevention Action Team Program*, state Action Teams:

- Participated in an in-person *Pedestrian Injury Prevention Workshop* to learn how to build capacity for pedestrian safety efforts at state and local levels;
- Obtained a demonstration grant of up to $35,000 to fund mini-grants to local agencies to implement education, evaluation, and/or enforcement activities related to pedestrian safety that were supportive of city or county-wide pedestrian safety action plans;
- Developed and facilitated at least three mandatory customized local trainings (based on principles from the Pedestrian Injury Prevention Workshop) to enhance the capacity of local partners to implement pedestrian safety activities;
- Developed communication tools and resources in support of pedestrian injury prevention; and
- Gained access to the Pedestrian Injury Prevention Community of Practice (CoP) to obtain news, information, and updates on pedestrian safety resources.

EVALUATION PURPOSE, DESIGN, & QUESTIONS

The purpose of this impact evaluation was to determine to what degree the *Pedestrian Injury Prevention Action Team* Program achieved its short-term outcomes or "impacts" as described in the logic model (Appendix A). As such, this evaluation was structured as a comparative multi-site case study and was guided by three evaluation questions:

1. How and to what extent did the Pedestrian Injury *Prevention Action Team Program* increase or enhance Action Team members' and mini-grantees' capacity to address pedestrian injury prevention? (i.e., staff support, participating in collaborative efforts, implementing and evaluating interventions, conducting or participating in trainings, or implementing communication activities)

2. What successes did participants achieve and what challenges did participants encounter through the *Pedestrian Injury Prevention Action Team Program*?

3. What value or advantages did public health leadership bring to pedestrian injury prevention efforts?

The evaluation methodology – including data sources and descriptions of analyses – can be found in Appendix B.

ACTION TEAM STATES AND MINI-GRANTEE COMMUNITIES

Pedestrian Injury Prevention Action Team Program participants—which included Action Team members and representatives from local agencies that received mini-grants—came from four states and 12 communities. Each state's Action Team Lead Organization, local agencies that were selected as mini-grantees, and the interventions they implemented as part of the program are listed in Appendix C.

California

- Humboldt County, CA (Hoopa Valley Indian Tribe and McKinleyville, CA)
- San Francisco, CA
- San Luis Obispo, CA
- Sonoma County, CA (Santa Rosa, CA)

Kentucky

- Lexington-Fayette County, KY (Lexington, KY)
- Louisville, KY Metro Area
- Madison County, KY (Richmond, KY)

Oregon

- Eugene, OR
- Lincoln City, OR
- Portland, OR

Rhode Island

- Newport, RI
- Providence, RI

EVALUATION RESULTS

Enhancing Participants' Capacity to Address Pedestrian Injury Prevention

The Safe States Alliance has defined six "Core Components" that describe injury and violence prevention organizational capacity.[6] The *Pedestrian Injury Prevention Action Team Program* helped the four participating states and their 12 communities to enhance their injury and violence prevention capacity across five of the six Core Components:

1. Build and sustain a solid, stable infrastructure
2. Select, implement, and evaluate effective program and policy strategies
3. Engage partners for collaboration
4. Effectively communicate information to key stakeholders
5. Provide training and technical assistance

While the program was implemented over a brief 13-month period, program participants – including Action Team members and program staff from local agencies that received mini-grants – noted that the program provided essential seed funding that enhanced their capacity to address pedestrian injury prevention.

Build and Sustain a Solid, Stable Infrastructure

Infrastructural elements can include having access to key structural elements including an organizational home, core staff, leaders, and funding to implement and support prevention strategies.

The Safe States Alliance and NHTSA awarded each of the four state Action Team Lead Organizations with demonstration grants of up to $35,000. Using these grant funds, **Action Teams awarded mini-grants of $4,000 to $10,000 to 12 communities across each of the four states.**

Mini-grants provided 13 months of funding to enhance local agencies' implementation of existing pedestrian injury prevention initiatives, and also funded completely new injury prevention interventions. **Action Teams and mini-grantee agencies used these funds to support program staff time and consultants that implemented interventions, travel to conduct local trainings and implement interventions, and obtain materials and supplies.**

During the kick-off Pedestrian Injury Prevention Workshop, members of the Kentucky Action Team – all from fields ranging from public health, transportation, and law enforcement – collaborate to develop a map of community assets related to pedestrian injury prevention.

"Having funding – the grants that we were able to provide to some towns were very small– but they enabled us to gather partners, get some work going that we wouldn't have been able to do otherwise, and also support some technical assistance. I think with a small amount of money, we were able to get some work at least off the ground that we're hoping will continue and expand."

– Rhode Island Program Participant

Select, Implement, and Evaluate Effective Program and Policy Strategies

Strategies are evidence-informed interventions that include both programs and policies. Program interventions generally focus on education and individual behavior change. Policy interventions aim to change environments, influence population-level behavior change, and make safer choices easier and more routine.

Action Teams and their mini-grants implemented a total of 27 interventions, each focused on education, enforcement, and/or evaluation efforts under the NHTSA funded cooperative agreement.. Interventions included (but were not limited to): assessing the walkability of school zones; preventing distracted walking and driving; building awareness of crosswalk laws; and encouraging safe walking behaviors. Each local agency that received a mini-grant implemented pedestrian safety interventions to support an existing city or county-wide pedestrian safety action plan. All mini-grantee organizations opted to implement at least one purely education-focused intervention. Many of the interventions that were initiated or enhanced by the Pedestrian Injury Prevention Action Team Program were found to be immensely valuable to Action Teams and their partners. As a result, nearly all Action Teams planned to continue implementing many of these interventions in collaboration with partners after the program concluded. Highlights of the interventions are described in Appendix C.

Signs placed in the middle of sidewalks were noted as potentially disrupting safe walking in the area.

"Being able to provide an opportunity for the local grantees to tailor the intervention to what their community needed more was really important. It enhanced people's ability to buy into and implement the intervention, which resulted in a stronger pedestrian injury prevention effort overall."

– California Program Participant

Engage Partners for Collaboration

Collaboration and coordination with multidisciplinary partners is essential for public health agencies to implement and evaluate their strategies, amplify their work, and achieve health impact. Partnership activities can include: sharing data; involving partners in program planning, implementation, and evaluation; exchanging funds; collaborating on policy efforts; and exchanging knowledge through training and technical assistance.

A primary focus of the Pedestrian Injury Prevention Action Team Program was to encourage multidisciplinary collaborations across state and local agencies to advance pedestrian injury prevention efforts. **Action Teams consisted of six state and local-level professionals from a variety of areas, including public health, transportation, engineering, urban planning, community organizing, policy, and law enforcement.**

Community members and partner agencies meet to discuss and address pedestrian safety issues in Humboldt County, California.

Action Teams worked with local agencies they selected to receive mini-grantees to implement education, enforcement, and evaluation interventions. **Organizations with whom Action Teams and mini-grantee agencies worked to implement pedestrian injury prevention efforts included (but were not limited to): mayor's offices, public works agencies, police departments, media organizations, public health departments, universities, chambers of commerce, and housing agencies.**

"One of the biggest pieces of feedback that we got was the multidisciplinary approach to pedestrian safety that's required. So, sure you can have local engineers working on some engineering improvements, but if you're not also involving the public health department, local communities and organizations, the law enforcement department, if you're not involved with all those folks to tackle the true safety improvements from a multi-disciplinary perspective, you're not going to get very far."

– California Program Participant

Effectively Communicate Information to Key Stakeholders

Communication skills – from using infographics to conducting media advocacy – are essential to effectively reach key audiences, including policy makers, partners, and the public.

All mini-grantee organizations implemented educational interventions to build awareness of pedestrian injury among a variety of groups, including university students, police officers, and parents of grade school students and through a variety of mechanism like bus signs, videos, brochures. Action Teams utilized a variety of educational approaches and mediums, including bus signs, brochures, and videos. The approaches used for communicating with these populations were initiated through a variety of conversations between Action Team members, local mini-grantee agencies, and their partners. As a result, **educational interventions included customized communication messages and pathways intended to reach these specific audiences.**

A scene from "At the Corner of Change," a video in which residents of Portland, Oregon's "Jade District" discuss issues related to displacement, land development, and pedestrian safety.

"I think there's huge value in getting diverse groups to talk in the same room and talk to each other, and I think it did have a lasting effect. It got people thinking in a different way. It wasn't quite as siloed. I think just being in the same room and discussing different perspectives got the creative juices flowing, which ultimately had a lot of value."

– Kentucky Program Participant

Tribal Chairwoman of the Hoopa Valley Tribe, Danielle Vigil-Masten, welcomes residents to a local training supported by the Pedestrian Injury Prevention Action Team Program.

Provide Training and Technical Assistance

Professionals working in injury and violence prevention must meet a dual training and technical assistance challenge: they must keep their own skills and knowledge current, while also ensuring that they share their expertise with partners and other stakeholders.

A total of 14 local trainings were conducted through the *Pedestrian Injury Prevention Action Team Program* across all four states and 12 mini-grantee communities (Appendix D). **Across all Action Teams, trainings collectively educated 225 attendees from a variety of backgrounds, including public health, transportation, engineering, law enforcement, education, business, and advocacy.**

Local trainings allowed Action Teams and their mini-grantee agencies to: enhance community awareness of pedestrian injury as a public health problem; provide forums for community members to share ideas, insights, and potential solutions; and obtain community members' feedback on safety interventions that were to be implemented.

Local trainings brought new and existing partners together and provided a forum for them to share ideas, experiences, expertise, and resources. Through the trainings, mini-grantee agencies successfully engaged community members and professionals from a variety of disciplines. This mix of perspectives allowed training participants to synergize their efforts to collectively address pedestrian injury.

"We had three meetings in the three communities, one in each community and we got quite broad participation in those meetings. I think part of the ripple effect of this effort will be the networks that were developed and some future collaborations that will probably come out of the fact that we've got some folks that we're working with on similar issues."

– Oregon Program Participant

SPOTLIGHT ON STATE SUCCESS: **KENTUCKY**

Reducing Distracted Walking and Driving in Madison County, KY: The "Oh Cell No!" Education and Enforcement Intervention

Located in the Bluegrass Region of Kentucky, Madison County – home to the cities of Richmond and Berea – is one of the fastest growing counties in the state. But with growth comes growing pains. Based on their data, the Pedestrian Safety Workgroup of the Madison County Safety Coalition realized that distracted walking and driving were becoming significant public health issues, particularly around the Eastern Kentucky University (EKU) campus.

In response, the coalition – led by the Madison County Health Department – partnered with EKU Public Health along with the EKU and Richmond Police Departments to launch a coordinated education and enforcement intervention. Students at Eastern Kentucky University developed and tested messages to find ones that resonated with the primary audience of university students. To communicate that using a cell phone while walking or driving was unacceptable, the students adopted the message, "Oh Cell No!"

During the six-week intervention period in Fall 2015, posters, flyers, and brochures featuring the "Oh Cell No!" message were posted and distributed throughout the EKU campus, in businesses, and along public streets. The messages were also promoted via social media platforms. To enforce the messages, officers from Richmond and Eastern Kentucky University police departments issued warnings to motorists and pedestrians.

To evaluate the impact of the intervention, a total of over 2,000 direct observations of pedestrian and motorists were conducted before and after the intervention at nine different crosswalk locations, most along Eastern Bypass and Lancaster Avenue – major thoroughfares that surround the EKU campus.

Following the intervention, observed cell phone use by motorists decreased by 7%, and observed cell phone use by pedestrians decreased by 9%.

What's next? According to Mr. Lloyd Jordison, RN – Health Education Director at the Madison County Health Department and a member of the Kentucky Pedestrian Injury Prevention Action Team – stated that agencies across the county plan to work collaboratively to implement more coordinated safety efforts for pedestrians and bicyclists: "All of the groups from the different organizations that we worked with over the last couple of years are saying now it's time for us all to put this together and look at what we're doing with our trails, with our multi-mobile pass, with our pedestrian things and bicycle stuff too. This [project] was a good way to bring more partners in. **It's also given us more interest in being comprehensive in our approaches."**

Posters used in Madison County's "Oh Cell No!" education and enforcement intervention

SPOTLIGHT ON STATE SUCCESS: **CALIFORNIA**

Engaging Tribal Members to Make Community-Wide Pedestrian Safety Improvements in Hoopa, CA

Located in California's North Coast region, Humboldt County is a rural county that lies on the Pacific Coast between the San Francisco Bay Area and the Oregon border. The County is home to seven incorporated cities and numerous unincorporated communities including Hoopa and McKinleyville. Additionally, Humboldt County contains the largest number of indigenous Native Americans of any California County, and includes the Hoopa Valley Tribe, which has a population of roughly 3500 that reside in tribal lands on the Trinity River.

State Route 96 (SR-96) is the only thoroughfare that runs through Hoopa Valley tribal lands. SR-96 is a two-lane, high speed "main street" highway that experiences relatively high traffic volumes and freight traffic. Many community residents utilize the highway as a primary transportation corridor on foot, as it is the only street that runs the full length of the community and there are no existing pedestrian facilities along SR-96.

To address pedestrian safety issues occurring in tribal lands, the Hoopa Valley Tribe convened an Active Transportation Program Technical Advisory Committee (TAC). The TAC was created to look closely at pedestrian safety issues, propose concrete recommendations to improve pedestrian safety, and develop an application to obtain funding to address these issues from the California Department of Transportation's (Caltrans) Active Transportation Program (ATP). The TAC included a variety of partners, including representatives from local tribes (Bear River Band of Rohnerville Rancheria, Karuk, and Yurok tribes), as well as staff from Caltrans, the school district, public works department, the medical center, California Highway Patrol (CHP), community groups, and a state social service agency.

The TAC's first order of business was to obtain a more comprehensive understanding of the pedestrian safety problem, as traffic collision data on tribal lands is often lacking and reflects substantial underreporting. During an introductory workshop, community members were asked to participate in crowdsourcing exercise in which they identified traffic collisions with pedestrians that occurred on tribal lands but were not captured in the Statewide Integrated Traffic Records System (SWITRS) data. The results of the crowdsourcing exercise were striking and confirmed underreporting of tribal pedestrian collisions: community members identified an additional nine pedestrian collisions, of which three were fatalities.

Following the crowdsourcing exercise, California Walks facilitated a follow-up action planning discussion with TAC members. Through this action planning discussion, TAC members developed their final ATP application proposal, which included providing a multi-use asphalt side path along SR-96 between the Blue Slide area and Supply Creek Bridge. TAC members also recommended other pedestrian safety improvements in Hoopa based on the "6 E's" (Education, Encouragement, Engineering, Enforcement, Equity, and Evaluation). These improvements included identifying funding opportunities to increase pedestrian infrastructure, reevaluation of speed limits, and introducing traffic calming measures.

Through their participation in the Action Team Program, California Walks was able to substantially enhance their ongoing work with the tribes and communities of Humboldt County. "We were able leverage in the resources that the Safe States Alliance project provided in order to really expand our efforts in the Hoopa Valley Tribe, as well as the unincorporated community of McKinleyville," said Tony Dang, Deputy Director of California Walks. "These were two high-need communities that had been put on the backburner due to lack of overall resources on the part of our local partners and local agencies. So, I thought this was a great opportunity to use the resources through Safe States Alliance to bring much needed pedestrian safety action planning, coordination, and engagement to the community."

Workshop attendees participate in a crowdsourcing exercise to supplement underreported pedestrian collision data in Hoopa, CA

Key Successes and Challenges of Program Participation

Successes

Based on feedback from the participants, key successes of the *Pedestrian Injury Prevention Action Team Program* included:

- Enhanced awareness of pedestrian injury as a public health problem within mini-grantee communities;
- Increased partnerships across diverse disciplines; and
- Improved ability to tailor interventions to the needs of communities.

Enhanced awareness of pedestrian injury as a public health problem within mini-grantee communities

Staff from mini-grantee organizations described how the *Pedestrian Injury Prevention Action Team Program* provided great opportunities to inform community members, partners, and stakeholders about how pedestrian injury is a public health problem that impacts communities throughout their state and across the country. In California, one program participant described how their organization was able to engage and increase awareness about pedestrian injuries among partner agencies that had a tangential, but important connection to pedestrian safety, but had not previously integrated it into their work:

> *We have a long-standing relationship with the food bank, but we had never introduced the concept of pedestrian safety into any of the summer food programs before, so we perhaps created an awareness among food bank staff. That was something they should consider when they do these types of projects all summer. Often when they do summer lunch feeding programs [for children], there are no crossing guards because the schools are closed. So, we just created an awareness in their staff that that's something they should be thinking about.*

Given that public health approaches to improving community health and safety involve multi-faceted and comprehensive strategies, program participants engaged partners in implementing a combination of efforts to address pedestrian injury. In Kentucky, a program participant described how awareness increased among many of their partners, and pedestrian injury can not be solved by engineering efforts alone. During various encounters with stakeholders and partners – whether during trainings, in planning meetings, or while implementing interventions – program participants brought pedestrian safety to the forefront of discussions with stakeholders and synergized efforts related to their pedestrian injury prevention strategies.

Increased partnerships across diverse disciplines

Throughout the program, participants successfully forged new partnerships and strengthened existing ones with a variety of organizations, including transit providers, businesses, law enforcement, transportation, planning, community-based organizations, and schools. Participants stated that having to create an "Action Team" – which was composed of six individuals from a variety of state and local agencies, including public health, transportation, law enforcement, education, advocacy, and other areas – provided unique opportunities to work with new partners and agencies with whom they had not previously worked.

> *The state Action Team was a good process for making connections with folks we never worked with before, and we hadn't worked with the engineering side of state highway safety before. It was a really good opportunity for us to bring in some good partners and meet people that are important that we hadn't worked with before and I think it certainly put the issue on our radar.*

For instance, the City of Newport, RI developed a comprehensive pedestrian safety public education communications campaign that included over $10,000 of in-kind support from a communications agency to create the messaging materials (e.g., printed materials, tailored messages, and videos). As a result of this in-kind communications support, the City of Newport was able to use a variety of methods to widely share their educational messages with individuals and organizations across the city. Additionally, program participants described how bringing together their partners through program activities helped to confirm the value of having diverse perspectives to inform pedestrian injury prevention interventions and activities.

[A success for us] was working together, having all the parties in the room, realizing they're all on the same page as the community residents to improve safety, and value all the opinions. It's very powerful. You can see over time and understand how those relationships work together and make a difference.

As a result of new and strengthened partnerships that were developed, several program participants discussed new collaborative efforts that they planned to implement with partners that will build on the work they achieved together through the *Pedestrian Injury Prevention Action Team Program*.

Improved ability to tailor interventions to the needs of communities

By engaging community members and customizing approaches to meet each community's needs, participants in the *Pedestrian Injury Prevention Action Team Program* were able to successfully implement a variety of community-driven pedestrian injury prevention initiatives. The program provided participants with opportunities to obtain feedback from community members, partners, and other stakeholders that helped them to tailor interventions to the needs of their communities. Program participants achieved buy-in from community members, which ultimately resulted in greater community investment in and support of pedestrian injury prevention efforts:

Being able to provide an opportunity for the local grantees to tailor the intervention to what their community needed was really important. Sometimes you have prescriptive parameters setup by the funding source. This [program] was broad enough that each one is completely different and responsive to the needs of the community, and I feel that was really important. It enhanced the [community's] ability to buy into the intervention and implement it.

Another program participant elaborated on how concerted efforts to engage community members and implement program activities that met their needs helped to build additional momentum for pedestrian injury prevention efforts. As one participant stated, "Having had multiple interventions in multiple places creates more movement forward to expand the injury prevention effort, and this is particularly true with pedestrians."

Challenges

The mini-grantees identified three key challenges associated with their participation in the *Pedestrian Injury Prevention Action Team Program*:

- Insufficient resources to make sustained change related to health outcomes;
- Turnover and personnel changes across participating organizations; and
- Inadequate evidence base for identifying appropriate, non-engineering pedestrian injury prevention interventions.

Insufficient resources to make sustained change related to health outcomes

Given that the grants provided to Action Teams and mini-grantee agencies were relatively small and only provided funding for a limited 13-month implementation period, there were not enough resources or time for Action Teams or mini-grantee agencies to sustain staff, make see long-term changes related to health impacts, or evaluate connections between funded interventions and long-term health outcomes (e.g., pedestrian injury-related morbidity and mortality). For instance, according to Rhode Island program participants, their *Newport Waves* pedestrian safety educational campaign was limited in reach and saturation because it didn't have the funding or staffing necessary to fully achieve its long-term goals:

We have a staff of three people, so the opportunity is there, the seeds have been laid. But in order to actually deliver on the promise of folks actually posting and using all of this stuff, we have to hold their hands, and we don't have the bandwidth to do that. So it's very clear that this is just all about collaboration. The city gets behind it but, they're not going to deliver the personnel or the time to do it. So that's the really tough nut to crack.

SPOTLIGHT ON STATE SUCCESS: **OREGON**

Enhancing Crosswalk Education and Enforcement in Eugene, OR

Eugene is the third most populous city in the state of Oregon and is located at the southern end of the Willamette Valley, about 50 miles east of the Oregon Coast. The city is noted for its natural beauty as well as its recreational opportunities – bicycling, running/walking, rafting, and kayaking.

With support from the Oregon Health Authority, the City of Eugene launched an educational campaign to enhance the community's knowledge and awareness of crosswalk laws. To evaluate intervention, residents located in targeted areas were also asked questions about crosswalk laws via both pre- and post-program assessments. The assessments were used to provide insights into community members' understanding of the laws and to help determine community members' awareness and understanding could be increased as a result of being exposed to the ad campaign. Based on the evaluation findings, there was a 10% increase in respondents who understood that "any public street intersection not marked with paint is legally a crosswalk" following the campaign. To build on these results, the City of Eugene plans to collaborate with the regional Safe Routes to Schools program and the public transit organization, Point2Point Solutions, to expand the reach of the crosswalk educational campaign messaging to parents and students.

According to Heather Gramp, Policy Specialist at the Oregon Health Authority, "I think it was really valuable to bring people from different disciplines together. Because these were mini-grants and in small communities, that included elected officials and decision makers. I think we disseminated a lot of data and information to convince people that transportation is a health issue."

A family participates in a Pedestrian Safety/ Crosswalk Education event in Eugene, OR

SPOTLIGHT ON STATE SUCCESS: **RHODE ISLAND**

Advancing Efforts to Assess and Improve School Zone Pedestrian Safety in Providence, RI

Known for its historic districts and prestigious institutions of higher learning, Providence is the most populous city in the state of Rhode Island. Unfortunately, however, the city is also known for having one of the state's highest rates of pedestrian fatalities per capita. The Rhode Island Action Team identified school zones as one of the highest areas of concern, given that walking school buses had been established to encourage children to walk to school.

The Rhode Island Department of Health, the City of Providence's Healthy Communities Office and Department of Planning, and local non-profit, Family Service of Rhode Island, spearheaded efforts to improve pedestrian safety in school zones. The first step: conducting safety assessments around three elementary schools to document impediments to safe pedestrian safety and access. The assessments revealed a variety of safety issues, including problems with pedestrian infrastructure (e.g., sidewalk obstructions, lack of school zone signs) and motorist behavior (e.g., speeding).

To start addressing the issues highlighted by the assessments, action plans are in development that will prioritize and streamline the school zone improvements that need to be made with leadership and support from many other local agencies and advisory groups, including public works, planning, housing, and public schools. The goal is to maintain the momentum and make lasting improvements in pedestrian safety for communities. "I think it's already had an effect and I think it can be sustained," said Dave Everett, Principal Planner within the City of Providence Health Communities Office. "It's something that people are focused on and cognizant of as being an issue, that being school zone safety and pedestrian injury prevention. So, I think we've already gotten off on that track in a good way."

A crossing guard patrols a street in a Providence, RI

In Oregon, program participants also noted the challenges of meeting ambitious health impact-related expectations often set by programs, despite having received small amounts of funding that make it difficult to achieve these expectations:

> *Well I think with any small grant project, it's just difficult with communities being as stretched as they are for staffing and support. So, I've done quite a bit with mini-grants under $3,000 and $5,000 and I think they really can have a major impact in the community, but one of the challenges really is with that small amount of money, how do you really accomplish much when it comes to staffing and having that as a priority in the community?*

California's mini-grantees also cited funding limitations as a hindrance to the sustainability and impact of their pedestrian injury prevention interventions: "If we had more funding, we could hire a full-time staff person that could work on this for several years, and obviously, you'd have more impact."

Turnover and personnel changes across participating organizations

Turnover and changes in staffing were commonly described as challenges that hindered program participants' efforts to implement their activities. In Kentucky, key members of a partner agency retired, which adversely impacted some of the Action Team's planned activities:

> *[Our partner] was one of a kind; I mean he's an amazing community outreach guy. He's exactly what you want a traffic officer to be, and he was well on the way to building a good coalition. Then, with the combination of his retirement and the previous police chief's retirement, the [new] police chief came in and actually put everything else on hold for a couple months…[We] accomplished a few things, but overall the project almost imploded under a set of circumstances that there really wasn't a way to predict.*

During the program, all four Action Teams suffered turnover and staff changes that interrupted their programmatic timelines or activities. In both California and Oregon, attrition within partner agencies were a significant hindrance to programmatic activities. In Newport, Rhode Island, the training of police officers was an essential part of the program's intervention; however, due to various staffing changes, there was a period of time when the training was unable to move forward. Fortunately, Newport mini-grantees were able to overcome this obstacle and get a designated, vested member of the police department to oversee this portion of the intervention. Unfortunately, staff turnover, retirements, and attrition will continue to be challenges faced by implementers of public health efforts, given that having people available to implement and evaluate interventions is necessary for their success.

Inadequate evidence base for identifying appropriate, non-engineering pedestrian injury prevention interventions

Given that funding for the *Pedestrian Injury Prevention Action Team Program* was provided by NHTSA, program participants were unable to use their grant funds to support engineering efforts. Instead, program participants implemented interventions related to the other "E's": education, enforcement, encouragement, and equity. Participants had hoped to easily identify evidence-informed, non-engineering pedestrian injury prevention initiatives that could be adapted to their respective communities. However, program participants were disappointed to find that evidence related to these kinds of interventions was largely scarce:

> *It's really difficult to find a lot of materials that are evidence-based that are on education, most of it is all around building infrastructure changes for pedestrian safety. That's where most of the effort and the energy goes to. So, it's a little bit of an emerging field with science to really help guide and work with groups to select things that they can do.*

Of the 14 countermeasures to improve pedestrian safety as documented in NHTSA's reference guide, Countermeasures That Work, 64% (n=9) were rated as "effectiveness still undetermined" or having "limited or no high-quality evaluation evidence."[7] Given the lack of evidence related to effective, non-engineering pedestrian safety initiatives, program participants often served as trailblazers; they implemented and evaluated new initiatives that they developed based on existing data, past efforts, community needs, and partner input. Participants also shared that they lacked sufficient funding and resources necessary to rigorously evaluate their efforts that would contribute to the evidence-base: "We don't have the capacity to evaluate these projects," one participant stated. "The information that we were able to collect is just descriptive about what was done and what sort of infrastructure was built and what hopefully will continue."

Value and Advantages of Public Health Leadership for Pedestrian Injury Prevention

The *public health approach* is a multifaceted process that involves using data, research, stakeholder engagement, and the implementation and evaluation of comprehensive interventions to improve community health and safety. Participants noted that having public health agencies lead pedestrian injury prevention efforts helped to ensure that program activities successfully embodied the public health approach. Having public health agencies lead program activities provided multiple advantages to the *Pedestrian Injury Prevention Action Team Program*, as they were uniquely able to:

- Engage and connect multidisciplinary partners and community members;
- Provide access to unique data sets to support prevention efforts; and
- Utilize robust evaluation techniques to confirm what works (and what doesn't).

Engage and connect multidisciplinary partners and community members

According to program participants, having public health agencies lead efforts through the *Pedestrian Injury Prevention Action Team Program* allowed them to connect with organizations across disciplines – including public health institutions, transportation agencies, community-based organizations, schools, law enforcement agencies, and businesses – to collaboratively identify and customize pedestrian injury prevention interventions for their communities:

> *Being able to provide an opportunity for the local grantees to tailor the intervention to what their community needed was important. [To be] responsive to the needs of the community – I feel like that was really important and good; it enhanced people's ability to buy into and implement the intervention, which resulted in a stronger pedestrian injury prevention effort overall.*

Program participants discussed how Action Teams (which were led by a representative from each state's public health department) served as a public health-centered leadership team that promoted collaboration among various stakeholders. As an Oregon program participant stated, "It was the collaboration of traffic engineers and bike/pedestrian transportation ODOT people with public health that really made it such a strong team, because they were both coming at [the issue of pedestrian injury prevention] from different perspectives."

Provide access to unique data sets to support prevention efforts

Public health practitioners provide an important conduit to data systems that can help target and inform pedestrian injury prevention interventions. Access to surveillance data – including morbidity, mortality, and risk behavior data – is essential to the design, implementation, and evaluation of pedestrian injury prevention efforts at state and local levels. Program participants noted the value of having access to public health data to inform their pedestrian injury prevention efforts:

> *I definitely think that it was really valuable to have the public state health department meet the efforts because I think that public health brings a couple of things to the table when we're talking about pedestrian safety. One is public health is very well versed in working with different data sets and I think that bringing a more objective approach to analyzing pedestrian safety conditions in order to have data driven solutions is so critically important in an era of limited resources.*

Examples of public health datasets that can be used to support state and local-level pedestrian injury prevention initiatives include (but may not be limited to) emergency department (ED), hospital discharge (HD), Emergency Medical Services (EMS), and vital statistics data. Additionally, the Centers for Disease Control and Prevention (CDC) has developed WISQARS™ (Web-based Injury Statistics Query and Reporting System)[8], an interactive, online database that provides data on fatal and non-fatal injuries – including pedestrian injuries – as well as cost of injury data derived from a variety of reliable sources.

Utilize robust evaluation techniques to confirm what works (and what doesn't)
As a field, public health often leads evaluations of programs and policies to systematically assess their merit, value, and worth. Program participants acknowledged that it was valuable to have public health partners lead evaluation efforts:

> *I think the health department is the perfect one to do the evaluation…they get training to do those evaluations academically, and I don't get that as an engineer. I've had to learn how to do those things after the fact, and so I think [public health is] a natural lead.*

Pedestrian injury prevention efforts can benefit substantially from regularly utilizing robust, public health-informed evaluation techniques and methodologies to convey the value of these efforts to practitioners, policymakers, and the public. The CDC has developed a variety of useful frameworks and resources to guide evaluations of programs[9,10] and policies.[11] By regularly planning for and conducting evaluations, those implementing pedestrian injury prevention efforts can:

- Determine if their interventions are being implemented as intended;
- Learn why specific interventions are (or are not) successfully achieving their intended outcomes;
- Obtain evidence to confirm what interventions are worthy of additional investments of resources, such as funding and staff time; and
- Assess what can be done to improve interventions in ways that will maximize their impact.

Evaluations can also be immensely effective methods of facilitating buy-in and support for interventions from key stakeholders. Engaging stakeholders early in the evaluation process ensures that they can support key evaluation activities, such as collecting and analyzing data or widely disseminating evaluation findings. Evaluation is essential to ensure that program and policy efforts provide the maximum benefit for the largest number of people – principles that are fully aligned with the public health approach.

FUTURE OPPORTUNITIES TO ENHANCE PEDESTRIAN INJURY PREVENTION PRACTICE

Looking forward, there are a variety of opportunities to build upon and expand the collaborative efforts that were initiated by the pilot *Pedestrian Injury Prevention Action Team Program*. **Public health and transportation agencies at federal, state, and local levels should actively lead and support ongoing multi-sector collaborations to advance pedestrian injury prevention initiatives.** These agencies should engage partners from across a variety of other sectors (e.g., planning, law enforcement, education, advocacy, etc.) to collaboratively enhance pedestrian injury prevention efforts. Specifically:

Federal agencies **responsible for addressing public health and transportation efforts can:**

Fund national, state, and local organizations to conduct rigorous evaluations of non-engineering pedestrian injury prevention initiatives (e.g., education, enforcement, etc.) to expand the evidence base and widely disseminate evaluation findings to inform what works and why.

Although many engineering and infrastructure-specific approaches to preventing pedestrian injury have been well-evaluated, a key challenge that program participants faced was a lack of evidence related to non-engineering approaches (e.g., education campaigns, enforcement initiatives, etc.). Due to the scarcity of evidence and ongoing evaluation in these areas, most Action Teams and their mini-grantee organizations were unable to implement interventions that clearly built upon previous effective efforts. By funding robust evaluations of non-engineering interventions – and widely disseminating findings from these evaluations – organizations and agencies across the nation can implement efforts that build on these findings and will advance our collective knowledge of effective, non-engineering pedestrian injury prevention efforts.

Create sustainable, cross-agency funding structures that are united in a common goal: to make travel for pedestrians safe, accessible, and equitable.

Pedestrian injury prevention is a complex public health problem that requires integrated and interconnected strategies related to the "Six E's" (evaluation, engineering, education, encouragement, enforcement, and equity). As such, an effective pedestrian injury prevention initiative cannot be sufficiently addressed by only one organization or agency. Comprehensive and effective pedestrian injury approaches require sustained, cross-agency funding structures designed to advance shared goals related to community health, safety, and prosperity. A key example is the Partnership for Sustainable Communities (PSC), which was forged in June 2009 between the U.S. Department of Transportation (DOT), the U.S. Department of Housing and Urban Development (HUD), and the Environmental Protection Agency (EPA). The PSC was developed to "help communities nationwide improve access to affordable housing, increase transportation options, and lower transportation costs while protecting the environment" by coordinating federal housing, transportation, water, and other infrastructure investments.[12] By continuing this landmark interagency partnership – and expanding it to include the U.S. Department of Health and Human Services (HHS) – federal agencies can jointly fund initiatives that make progress toward achieving shared goals and solving complex problems, such as pedestrian injury.

***State and local agencies* responsible for implementing public health and transportation interventions can:**

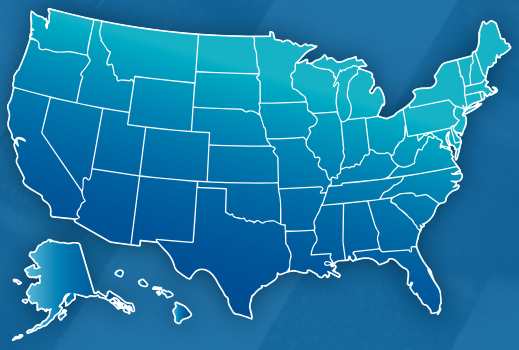
Convene multi-sector partners at state and local levels on an ongoing basis to actively collaborate on pedestrian injury prevention efforts

One of the most valuable aspects of the *Pedestrian Injury Prevention Action Team Program* noted by participants was having an opportunity to work with and within multi-sector teams. Together, these multidisciplinary teams collectively planned and implemented a variety of interventions, which ultimately helped to enhance their value and sustainability. Future efforts to address pedestrian injury prevention should routinely utilize multi-disciplinary and multi-level (e.g., local, regional, and state-level) approaches to ensure that interventions benefit from the diversity of perspectives and resources that various agencies can contribute.

Improve access to comprehensive and reliable pedestrian injury-related data sources – including utilizing effective methods of collecting these data – to inform pedestrian injury prevention activities

During interviews with participants in the *Pedestrian Injury Prevention Action Team Program*, they collectively stated that improved access to reliable and comprehensive data sources is needed to more effectively address pedestrian injury prevention in their states, regions, and communities. An initial step is to promote the existence of various data sources – including those collected by public health, transportation, and law enforcement agencies. These data sources should be made available to those implementing pedestrian injury prevention interventions at state, regional, and local levels. Additional data that should be prioritized for collection and dissemination include *quantitative data* to measure pedestrian injury exposure (e.g., automated and manual methods, using individuals, cameras, and other devices) and the prevalence of injurious behaviors (e.g., distracted and impaired walking or driving), as well as *qualitative data* – such as stories and experiences from community members – that can help illustrate and contextualize community issues and needs related to pedestrian safety.

APPENDICES



Appendix A: Logic Model for the Pedestrian Injury Prevention Action Team Program

PUBLIC HEALTH PROBLEM & PROGRAM PURPOSE	INPUTS	ACTIVITIES
Safe and walkable neighborhoods can significantly enhance health and quality of life in communities by providing safer, pedestrian-friendly streets, improving air quality, and enhancing community interactions and social connectedness. Unfortunately, it has been difficult for communities and states to realize these benefits. While traffic fatalities have decreased nationally, pedestrian fatalities have increasingly become a larger proportion of all traffic-related deaths. According to the U.S. National Highway Traffic Safety Administration (NHTSA), pedestrian deaths have steadily grown from 11% to 15% of all traffic fatalities, resulting in the loss of nearly 50,000 lives from 2006—2015. These fatal injuries were generally caused by collisions between pedestrians and motor vehicles, resulting in irreparable physical trauma, and ultimately death. Decreasing motor vehicle-related pedestrian injuries and fatalities in a state requires strong partnerships between a variety of agencies and effective strategies implemented at multiple levels. Solutions to enhance pedestrian safety must be multifaceted and include collaborative efforts between experts from each of these diverse fields, with significant input from the community. The goal of the Pedestrian Injury Prevention Action Team Program is to leverage public health leadership to enhance statewide pedestrian safety efforts by: strengthening partnerships between multidisciplinary partners with a stake in pedestrian safety; and enhancing the collective capacity of state and local organizations to implement pedestrian safety initiatives.	**People** • Safe States staff • NHTSA staff • Members of multi-sector Action Teams (CA, KY, OR, & RI) • Staff from local mini-grantee agencies • Consultants from Health Resources in Action (HRiA) **Funding** • NHTSA Cooperative Agreement No. DTNH22-13-H-00411 ("Injury Prevention for Pedestrians") **Materials & Technology** • Materials and resources developed for the Pedestrian Injury Prevention Workshop and local trainings • YourMembership (Pedestrian Injury Community of Practice – CoP)	Safe States and HRiA plan, facilitate, and evaluate the Pedestrian Injury Prevention Workshop for all Action Teams Safe States and NHTSA provide demonstration grants to Action Team Lead Organizations Action Teams plan, facilitate, and evaluate local trainings (based on principles from the Pedestrian Injury Prevention Workshop) for local organizations and agencies Action Teams provide mini-grants to local organizations working in pedestrian safety Mini-grantees implement pedestrian injury prevention interventions Mini-grantees create communication tools to support interventions Action Team Lead Organizations report on programmatic activities Safe States facilitates the "Pedestrian Injury Prevention Community of Practice (CoP)," an online community that provides program participants with opportunities to exchange ideas, information, and resources.

ASSUMPTIONS

- There is sufficient coordination and cooperation between agencies responsible for pedestrian injury prevention at state and local levels, such as public health departments, transportation organizations, and law enforcement agencies.
- Grant funds are sufficient to support programmatic activities.
- Grantees have knowledge of evidence-informed interventions, can implement interventions with fidelity, evaluate their interventions, and can improve interventions based on evaluation findings.
- Sustained increases and/or enhancements in staff, collaborations, interventions, training, and communications related to pedestrian safety can lead to decreases in pedestrian injuries and fatalities.

OUTPUTS	OUTCOMES
Pedestrian Injury Prevention Workshop (Washington, DC) for State Action Teams Demonstration grants to Action Team Lead Organizations (Four total) Local trainings (12 total – three trainings per Action Team) Mini-grants to local agencies to support pedestrian injury prevention-related staff and activities (12 mini-grants total) Education, evaluation, or enforcement interventions implemented by mini-grantees (27 interventions total) Communication tools to promote pedestrian injury prevention knowledge and behaviors Action Team quarterly reports (Four reports per Action Team) Posts on the online CoP created by Safe States staff, Action Team members, and mini-grantee staff	**SHORT-TERM OUTCOMES OR "IMPACTS" (WITHIN THE TWO-YEAR PROJECT PERIOD)** Initial enhancements in Action Teams' and local mini-grantee agencies' capacity to support pedestrian safety efforts as reflected by their ability to: • Build and sustain a solid, stable infrastructure • Select, implementing, and evaluating effective program and policy strategies • Engage partners for collaboration • Effectively communicate information to key stakeholders • Provide training and technical assistance **INTERMEDIATE OUTCOMES (1-5 YEARS AFTER THE PROJECT PERIOD)** Sustained enhancements in Action Teams' and local mini-grantee agencies' capacity to support pedestrian safety efforts as reflected by their ability to: • Build and sustain a solid, stable infrastructure • Select, implementing, and evaluating effective program and policy strategies • Engage partners for collaboration • Effectively communicate information to key stakeholders • Provide training and technical assistance **LONG-TERM OUTCOMES (5+ YEARS AFTER THE PROJECT PERIOD)** • Increases in public awareness, knowledge, and positive behaviors associated with pedestrian injury prevention • Decreases in pedestrian injuries and fatalities in Action Team states and/or localities

EXTERNAL ENVIRONMENT

- Existence of state, city, and county-wide pedestrian safety action plans.
- Existence of the public and political will necessary to support the implementation and enforcement of pedestrian injury prevention programs and policies.
- Existence of highly coordinated efforts related to engineering, enforcement, education, evaluation, and equity to support pedestrian safety at state and local levels.
- Availability of sustained funding sufficient to support pedestrian injury prevention programs and policies.
- Existence and retention of well-trained staff responsible for addressing pedestrian injury prevention.

Appendix B: Evaluation Methodology, Data Sources, & Analysis

Two primary data sources were used to answer the evaluation questions:

1. **Group Discussions with Action Team Members and Mini-Grantees**

   Description
   Group discussions were conducted with Action Team members and their mini-grantees to obtain their perspectives on the Pedestrian Injury Prevention Action Team Program. A separate group discussion was originally scheduled for each of the four participating states; however, separate discussions were scheduled with specific participants to accommodate scheduling conflicts. A total of seven group discussions took place in December 2015. A semi-structured protocol was developed with 10 open-ended questions for participants to answer. The protocol was disseminated to participants prior to the group discussion in Appendix D.

   Analysis
   Group discussions were recorded and transcribed. At least two coders analyzed each transcript, and the analysis of these documents was supported by using qualitative analysis software (NVivo). Consistent patterns demonstrated through analyses of the discussion transcripts were used to generate an initial set of codes for coding the transcripts. Additional codes were allowed to emerge, and a final set of codes were created. All codes were assigned a definition to help maintain consistency within and between coders. Finally, a thematic analysis was conducted by coders to discuss and quantify (when appropriate) all emerging themes from the qualitative data.

2. **Document Review of Project Proposal Supplement Forms and Action Team Quarterly Reports and Supporting Materials**

   Description: Project Proposal Supplement Forms
   Prior to the start of the demonstration grant period (which occurred from August 2014 – November 2015), Action Team Lead Organizations were required to submit "Project Proposal Supplement Forms" to the Safe States Alliance. These forms were used to provide detailed information about each of the local agencies that Action Teams selected to receive a mini-grant. These forms included mini-grantee information (e.g., agency name, contact, grant award amount, rationale for why the agency was selected, etc.), as well as detailed descriptions of mini-grantee interventions. These documents also provided foundational information for the customized report templates that Action Team Lead Organizations were required to complete quarterly.

   Description: Action Team Quarterly Reports and Supporting Materials
   During the demonstration grant period, all four Action Teams were required to submit detailed quarterly reports. Through these reports, Action Teams could provide details on: progress related to mini-grantees' interventions (including an overview of efforts, partners involved, and evaluation activities undertaken), challenges or changes related to the work of mini-grantees, materials developed during the reporting period by mini-grantees, details on the mandatory local trainings that took place, and descriptions of technical support provided to mini-grantees by Action Team members.

   Analysis
   To extract data from project proposal supplement forms and quarterly reports, data abstraction instruments were developed. These abstraction instruments were used to capture essential information in each of the documents as systematically as possible. Once draft versions of the data abstraction instruments were developed, they were piloted on 2-3 documents and updated as needed. Final versions of the instruments were used to capture data from all project proposal supplement forms and reports. This information was systematically summarized for inclusion in the evaluation report.

Appendix C: Action Team Lead Organizations, Mini-Grantee Agencies, and Interventions

State Action Team Lead Organization	Mini-Grantee Agency	Communities of Focus	Highlights of Interventions Implemented
California Department of Public Health	**California Walks**	Humboldt County (Hoopa Valley Indian Tribe and McKinleyville, CA)	• Organized a community walk audit with the Hoopa Valley Tribe and McKinleyville populations to determine dangers, risks, and threats to pedestrians residing in the targeted area. • Convened school-based and older adult community groups with the Hoopa Valley Indian Tribe and McKinleyville populations to strategize on educational interventions. • Provided technical assistance for implementation of interventions in the school-based and older adult communities with the Hoopa Valley Indian Tribe and McKinleyville populations.
	San Luis Obispo Public Health Department	San Luis Obispo, CA	• Implemented an intervention to increase pedestrian safety and Safe Routes to school at C.L. Smith Elementary School. • Recruited and trained community volunteers to conduct a walk audit, discuss identified safety concerns for pedestrians, and prioritized issues to be put forward after the walk audit.
	County of Sonoma Department of Health Services	Sonoma County (Santa Rosa, CA)	• Implemented a distracted walking education campaign/driver awareness campaign with a focus on youth and Spanish speaking populations.
	Walk San Francisco	San Francisco, CA	• Organized a community driven walk audit of a well-known high pedestrian collision corridor, 19th Avenue. • Organized a Pedestrian Safety Audit and Walk for the 19th Avenue/M Ocean View Project.
University of Kentucky Research Foundation for the Kentucky Injury Prevention and Research Center	**Lexington-Fayette County Division of Police**	Lexington-Fayette County, KY (Lexington, KY)	• Collected local collision and injury data to inform a driver and pedestrian education and enforcement campaign, which included walkability assessments, as well as plans to utilize driver and pedestrian awareness signs on the University of Kentucky campus and at a nearby community college. • Conducted an enforcement effort to complement the education campaign, which was intended to reduce pedestrian endangering behaviors through the distribution of "warning" notices to drivers and pedestrians exhibiting endangering behaviors.

State Action Team Lead Organization	Mini-Grantee Agency	Communities of Focus	Highlights of Interventions Implemented
University of Kentucky Research Foundation for the Kentucky Injury Prevention and Research Center	**Louisville Metro Department of Public Works**	Louisville, KY Metro Area	• Created an educational video to supplement a pre-existing citywide pedestrian safety media campaign known as "Look Up Louisville." • Worked with the University of Louisville and Jefferson Community College to implement the "Oh Cell No!" distracted walking and driving campaign originally developed for university students and staff by Eastern Kentucky University (EKU), the Madison County Health Department, and the Madison County Safety Coalition.
	Madison County Health Department	Madison County, KY (Richmond, KY)	• Initiated educational and enforcement campaigns to prevent distracted driving and distracted walking. • Collaborated with Eastern Kentucky University (EKU) and the Madison County Safety Coalition to develop the "Oh Cell No!" educational campaign, which included: (1) Developing unique prevention messaging specifically intended for university students; (2) Creating and distributing posters and brochures with prevention messaging in partnership with business owners, law enforcement, and university students and staff; and (3) Working with law enforcement to distribute "warning" tickets to pedestrians and motorists around the EKU campus that were identified to be texting while walking or driving.
Oregon Health Authority	**Asian Pacific American Network of Oregon (APANO) and Oregon Walks**	Portland, OR	• Planned and promoted two Walk & Talks in the Jade Community at Oregon Walk's signature Walktober event series. • Conducted small business organizing and educate business owners on pedestrian safety. • Collected, filmed, and published community traffic safety stories.
	City of Eugene	Eugene, OR	• Developed an educational ad campaign about crosswalk laws. • Collaborated with regional Safe Routes to Schools and Point2Point Solutions to expand the reach of the messaging to parents and students.
	Lincoln City and Lincoln City Community Sustainability Committee	Lincoln, OR	• Created a public service announcement (PSA) campaign explaining the responsibilities of both pedestrians and motorists. • Supplied PSAs to police officers to hand out to drivers during enforcement stops.

State Action Team Lead Organization	Mini-Grantee Agency	Communities of Focus	Highlights of Interventions Implemented
Rhode Island	**City of Newport, Bike Newport, and Social Venture Partners**	Newport, RI	• Engaged the community in the discussion of pedestrian safety issues and solicit input on educational messages and outreach tactics. • Developed and implemented messages for variety of medium, including signage, written materials, social media, newspaper articles, banners, etc. • Provided training to police officers on enforcement of existing pedestrian safety laws.
	City of Providence, Healthy Communities Office and Department of Planning	Providence, RI	• Developed inventories of walking environments (including safety concerns) in Bailey, Young-Woods, Lima school zones. • Updated existing assessments at Fogarty and D'Abate schools using a checklist to record conditions of the overall school zone, including crosswalks, sidewalks, obstructions, and circulation problems, and created a final report and action plan for addressing identified issues. • Completed an educational video that presents messages on driving safely within school zones.

Appendix D: Local Trainings Hosted by Action Teams & Mini-Grantee Agencies

State	Host Agencies	Training Location	Date	Primary Audiences
California	San Francisco Walks	San Francisco	January 29, 2015	City and county transportation agencies, community members, and law enforcement
	California Walks	Humboldt County	April 28-29, 2015	Hoopa Indian Tribe members and community partners
	County of Sonoma Department of Health Services and CDPH	Santa Rosa	May 8, 2015	Sonoma County Safe Streets Coalition Members: LHD staff, County staff, City Public Works staff, Law Enforcement (local police departments and CHP), Bicycle Coalition members, Pedestrian/Bicyclist Advocacy non-profit agencies
	County of San Luis Obispo Public Health	San Luis Obispo	June 24, 2015	Twelve families attending the Food Bank Summer Lunch Series at C.L. Smith Elementary School
	County of San Luis Obispo Public Health	San Luis Obispo	July 22, 2015	Five families attending the Food Bank Summer Lunch Series at C.L. Smith Elementary School
Kentucky	Lexington-Fayette County Division of Police	Lexington	September 16, 2014	Public safety agency representatives (including law enforcement), planning/ engineering and street department officials, state highway department officials, university representatives, neighborhood association representative
	Louisville Metro Department of Public Works	Louisville	September 23, 2014	Primarily engineers and planners, though participants also included community representatives, an elected official (city council member), a mass transit representative, and other non-public works personnel
	Madison County Health Department	Richmond	October 21, 2014	Public health representatives, state and local highway engineers, city planning and zoning director and community development coordinator, small business owners, university representatives, YMCA director, Family and Consumer Sciences extension agent, university representatives, private engineering company representative, public school system and community services agency representatives

State	Host Agencies	Training Location	Date	Primary Audiences
Oregon	City of Eugene, Transportation Option and Oregon Public Health, Injury & Violence Prevention	Eugene	March 16, 2015	Representatives from agencies in Eugene, Springfield and Safe Routes to School programs in the region
	APANO, Oregon Walks, and Oregon Public Health, Injury & Violence Prevention	(Lane County)	March 17, 2015	Community representatives serving the Jade District (82nd and Division, Portland, Oregon), including APANO Steering Committee Members, APANO staff, and community members
	Lincoln City Sustainability Committee and Lincoln City Planning and Oregon Public Health, Injury & Violence Prevention	The Jade District (82nd and Division, Portland)	April 8, 2015	Sustainability Committee members, Lincoln County Bike and Pedestrian Advisory Committee members, City Police Chief, City Urban Renewal staff, Mayor, Public Works staff, ODOT staff, Safe Routes to School representatives, and The News Guard reporter
Rhode Island	City of Providence's Health Communities Office and Department of Planning	Providence	November 12, 2014	Representatives from target schools and various community partners who are working with the schools on Walking School Bus programs and community outreach; representatives from the various City departments whose responsibilities include school and pedestrian safety; and RI Action Team members
	Bike Newport, Newport Bicycle/ Pedestrian Safety Commission, City of Newport Police Department	Newport	February 24, 2015	Pedestrian and bicycle safety stakeholders, including municipal staff, community-based organizations, police, churches, and residents
	Bike Newport	Newport	April 29, 2015	Residents, community-based organizations, businesses (including tourism industry), municipal departments, visitor center

Appendix E: Group Discussion Protocol

Greetings, everyone:

Thank you for agreeing to participate in today's group discussion. The goal of our discussion today is to learn more about your perspectives on the *Pedestrian Injury Prevention Action Team Program* and its related activities. This is an opportunity for you to provide us with feedback on the activities in which you were involved, as well as provide input on aspects of the program that went well or were challenging. The information from this conversation will be used to inform an impact evaluation of the *Pedestrian Injury Prevention Action Team Program* that will be shared with our partners at the National Highway Traffic Safety Administration and program participants.

Today's conversation will last up to one hour and 30 minutes. Since we are conducting this group discussion virtually, from time to time I may call on specific individuals to make sure that everyone has had an opportunity to share their perspectives. I hope you feel comfortable sharing your thoughts and experiences during our discussion, but if at any time you don't want to answer a question, that is fine. Please note that this conversation is being recorded for data analysis purposes only and our conversation will be transcribed after the call. If you like, we can send you a copy of the transcript once it's created. Finally, the information acquired will only be used to support the evaluation and will not be used by the Safe States Alliance or NHTSA to influence future funding decisions.

Do you have any questions before we begin? Great – let's get started.

1. How or to what extent did the *Pedestrian Injury Prevention Action Team Program* increase or enhance your agency's capacity to address pedestrian injury prevention? The term "capacity" can refer to your agency's ability to provide staff support, participate in collaborative efforts, implement and evaluate interventions, conduct or participate in trainings, or implement communication activities.
2. Thinking about the projects and interventions you implemented through the *Pedestrian Injury Prevention Action Team Program*, what are some key outcomes or successes that stand out for you?
3. In your efforts to implement and evaluate your projects and interventions, do you feel you were able to build the evidence base for pedestrian injury prevention? If so, how?
4. Several trainings were supported through the *Pedestrian Injury Prevention Action Team Program*. These included a March 2014 training that the Safe States Alliance hosted for Action Teams in Washington, DC, as well several trainings that Action Team members and mini-grantees have hosted for local partners and collaborators *(Refer to the chart below, if needed)*. Overall, what value do you think that these trainings had for you or your training participants?
5. The *Pedestrian Injury Prevention Action Team Program* was led by the state public health department, who partnered with us at Safe States and NHTSA.
    a. In your view, is it important to have public health agencies lead pedestrian injury prevention efforts?
    b. If so, what value or advantages do you think that public health leadership brings to pedestrian injury prevention efforts?
6. Thinking broadly, what elements, circumstances, or structures do you think supported or where helpful to your participation in the *Pedestrian Injury Prevention Action Team Program* activities?
7. Did you encounter any challenges that adversely impacted your participation in the *Pedestrian Injury Prevention Action Team Program*? How did you address these challenges?
8. Do you think the *Pedestrian Injury Prevention Action Team Program* activities had any sustainable impact on advancing pedestrian injury prevention efforts in your state or city? If so, how?
    a. What are one or two key takeaways or lessons learned from participating in this experience that have resonated with you?
9. Based on your experiences participating in this program, what information, tools, or resources do you wish existed to help you better or more effectively address pedestrian injury prevention in your state, region, or community?
    a. What gaps emerged for you as you did this work, and what resources do you think would help address them?
10. This concludes all of our questions for you. Did you have any final thoughts, feedback, or takeaways that you'd like to us to consider as we conduct the evaluation of this program?

REFERENCES

[1]National Highway Traffic Safety Administration. Pedestrians. Available at: http://www.nhtsa.gov/Driving-Safety/Pedestrians

[2]Building Safer States: Core Components of State Public Health Injury and Violence Prevention Programs. (2013). Atlanta (GA): Safe States Alliance. Available at: http://www.safestates.org/?page=BuildingSaferStates

[3]U.S. Department of Transportation, National Highway Traffic Safety Administration. Traffic Safety Facts: Pedestrians, 2014 Data. Available online from: https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812270

[4]Schieber, R.A., Vegega, M.E. eds., "Reducing childhood pedestrian injuries – Summary of a multidisciplinary conference," Injury Prevention, Vol. 8 Supplement 1, June 2002.

[5]National Highway Traffic Safety Administration. "Pedestrian Safety." Available at: https://www.nhtsa.gov/road-safety/pedestrian-safety

[6]Building Safer States: Core Components of State Public Health Injury and Violence Prevention Programs. (2013). Atlanta (GA): Safe States Alliance. Available at: http://www.safestates.org/?page=BuildingSaferStates

[7]Goodwin, A., Thomas, L., Kirley, B., Hall, W., O'Brien, N., & Hill, K. (2015, November). Countermeasures that work: A highway safety countermeasure guide for State highway safety offices, Eighth edition. (Report No. DOT HS 812 202). Washington, DC: National Highway Traffic Safety Administration.

[8]Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Injury Prevention & Control: Data & Statistics (WISQARS). Available at: https://www.cdc.gov/injury/wisqars/.

[9]Centers for Disease Control and Prevention, Program Performance and Evaluation Office (PPEO). A Framework for Program Evaluation. Available at: https://www.cdc.gov/eval/framework/index.htm.

[10]Thompson NJ, McClintock HO. Demonstrating Your Program's Worth: A Primer on Evaluation for Programs To Prevent Unintentional Injury. Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 1998. Available at: http://www.orau.gov/cdcynergy/Web/ba/Content/activeinformation/resources/Dypw-feb.pdf

[11]Centers for Disease Control and Prevention, Office of the Associate Director for Policy. Policy Evaluation. Available at: http://www.cdc.gov/policy/analysis/process/evaluation.html.

[12]U.S. Department of Transportation, U.S. Department of Housing and Urban Development (HUD), and Environmental Protection Agency. Partnership for Sustainable Communities. About Us. Updated March 2, 2015. Available at: https://www.sustainablecommunities.gov/mission/about-us

The Safe States Alliance
2200 Century Parkway, Suite 700
Atlanta, Georgia 30345
(770) 690-9000
info@safestates.org