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Public Health Involvement in United States' Vision Zero Initiatives: A Mixed-Methods Study

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Abstract

Context: Vision Zero (VZ) aims to reduce fatalities and serious injuries from road traffic crashes to zero through multidisciplinary coordination. While public health officials are often recognized as critical to VZ, their involvement in VZ across the United States has not been quantified.

Objective: To explore how United States' public health officials were involved in VZ development and implementation.

Design: We used a mixed-method design including a quantitative assessment of VZ plans and in-depth interviewing with VZ coordinators.

Setting: United States

Participants: Twenty-two in-depth interviews with municipal (n=12) and regional (n=10) VZ coordinators and 43 VZ plans were reviewed.

Main Outcome Measure(s): Public health involvement in VZ development and implementation

Results: In the United States, 64 municipalities and 21 regional entities had first-time VZ plans published between 2014-2022. We abstracted a sample of municipal (n=22) and all (n=21) regional plans. Most plans described key groups involved in plan development (municipal 81.8%, regional 100%). About two-thirds (67.4%; 59.1% municipal, 76.2% regional) of the plans noted public health officials in the plan development. Most plans described the principles forming the foundation of their plan (83.7%), but few mentioned public health as part of the plan principles (22.7% municipal, 14.3% regional). Public health officials were involved in engaging the community (9.1% municipal, 33.3% regional) and providing data (22.7% municipal, 52.4% regional) for plan development, as documented in the plans. For proposed implementation, public health officials were identified as involved in: community engagement (31.8% municipal, 42.9% regional), sharing/analyzing data (40.9% municipal, 33.3% regional), and identifying/providing funding sources (13.6% municipal, 4.8% regional). The in-depth interviews provided further context and a more detailed understanding of public health involvement in VZ.

Conclusions: Evidence from the VZ plans and interviews provided examples of how public health officials engaged in the development and implementation of VZ initiatives.

Keywords

qualitative research; roadway safety; partnerships; plans; Safe System; traffic deaths

Introduction

Road safety is increasingly recognized as a public health-related problem.¹ Road traffic collisions are a major global hazard and one of the fastest growing causes of death and disability.² Worldwide in 2016, 1.35 million people died as a result of traffic-related crashes and 20 to 50 million suffered non-fatal injuries, some with serious disabilities.³ In the United States (US), the Department of Health and Human Services initiative “Healthy People 2030” has a goal to reduce deaths from motor vehicle crashes to 10.1 deaths per 100,000 population.⁴ In 2018 and 2019, prior to the COVID-19 pandemic, there were 11.2 and 11.1 motor vehicle deaths per 100,000 population.^{4,5} Following the start of the COVID-19 pandemic, rates of motor vehicle crash fatalities began to move against the Healthy People 2030 goal, increasing to 12.0 in 2020 and 13.3 in 2021.⁴

Vision Zero is an initiative that seeks to reduce the growing problem of serious and fatal crashes to zero using a Safe System approach. The Safe System approach is ultimately focused on embedding proactive, safety redundancies in the larger transportation system to ensure crashes do not result in death or serious injury.⁶ This approach has shown success in some countries,^{7, 8} and many are hopeful that Vision Zero efforts centered on a Safe System approach will help reverse injury and death trends in the US.^{9–11}

While this multi-disciplinary and systems-based approach is relatively new to the transportation safety field, public health and transportation integration are deeply rooted in the US. For example, Dr. William Haddon, a public health physician, was the first administrator of the US National Highway Traffic Safety Administration, the lead arm of the US Department of Transportation focused on transportation safety.¹² He was known for integrating public health approaches and epidemiologic methods into the research and

practice of transportation safety. Relatedly, Dr. Mark Hollis, the first director of the US Centers for Disease Control and Prevention, the lead public health agency for the US, was a civil engineer known for integrating engineering and health principles during his service.¹³ Despite strong foundations, public health and transportation efforts have largely co-existed in siloed arenas over the last several decades, and when collaborations occurred, most efforts focused on education and enforcement activities.

With the current movement toward a more holistic Safe System approach within Vision Zero initiatives, many transportation practitioners have recognized the renewed need to collaborate across disciplines and domains (e.g., engineering, land use, data integration, vehicle and technology advancement, state and local policy, culture change, medical care). Given the foundational role and involvement of public health in many of these domains, its inherent role as a critical convener in widespread health problems, and its responsibility to address the problem of road injury, public health is an important partner in comprehensive Vision Zero efforts. However, the extent of public health involvement in Vision Zero across the United States has not been adequately described.

To explore the current extent and types of public health involvement in Vision Zero development and implementation in the US, we conducted a mixed-method study involving Vision Zero plan reviews and key informant interviews. For initiatives with Vision Zero plans, we documented how public health was incorporated into plan development, guiding principles, and plan implementation. We particularly sought to better understand if and how public health's role in Vision Zero initiatives is being conceptualized across the US and how this conceptualization aligns with core public health functions.

Methods

Ascertainment of Vision Zero Initiatives

In 2020, we conducted web searches to locate US municipal Vision Zero initiatives. The search list was based on the US Census of 788 incorporated places with a population size of at least 50,000 at any time between April 2010 to July 2019.¹⁴ Similarly, in 2021 we conducted web searches to find US Vision Zero initiatives supported by metropolitan planning organizations (MPO). MPOs are planning organizations that provide the coordination of transportation, infrastructure, and land use in the US.¹⁵ They have their own structure and may be administered independently or within a municipality, county, highway commission, or some other government organization. The search list was based on the 408 MPOs identified by the US Department of Transportation and Bureau of Transportation Statistics.¹⁵ A protocol for searching was developed, piloted, and refined, with more details provided elsewhere.¹⁰ From these searches, we identified 86 municipal (out of 788 municipalities, 10.9%)¹⁰ and 16 MPO (out of 408 MPOs, 3.9%) initiatives. We also identified several other initiatives through independent searching using the terms "Vision Zero plan" that were not specifically municipal or MPO level but were generally at a larger, regional level.

Vision Zero Plan Capture and Coding

The municipal and regional (i.e., MPO, transportation planning organization, Council of Governments, and county level) Vision Zero initiatives identified from the searches, described in the prior paragraph, provided the sample from which we then sought to capture Vision Zero plans published at any time through 2022. A protocol and plan abstraction form were developed, piloted, and refined. For the abstraction, we searched the plan for “health” and “public health” (as well as other health-related abbreviations) throughout the document. We identified and coded whether public health officials were involved in the creation of the plan (i.e., plan development) or whether public health was part of the principles guiding the plan’s foundation (Supplemental Table 1). Public health involvement in implementation was assessed through the abstraction of goals, objectives, and actions. Each plan was abstracted by one of two trained coders and checked by a second trained coder.

We focused only on the first Vision Zero plan published by an initiative and therefore did not include plan updates. In total, we identified 64 municipal and 21 regional first-time Vision Zero plans. Among the regional plans, the specific designations varied: 8 counties, 5 MPO/counties, 4 MPO, 2 transportation planning organizations/agencies, and 1 Council of Governments. All regional plans were abstracted (n=21). The municipal plans were sorted by year and every third plan was sampled for abstraction (n=22).

In-depth Interviews

The municipal and regional Vision Zero initiatives identified from the searches provided the sample from which we invited a subset of Vision Zero coordinators for an in-depth interview. We chose initiatives from diverse locations across all five US Census regions.¹⁶ For the municipalities, we required a population size of at least 100,000 as there were so few initiatives in smaller populated municipalities.¹⁰ The interview guide, which is described in a prior publication,¹⁰ was designed to better understand the origin, activities, and key groups involved in Vision Zero initiatives. This study specifically analyzed responses from questions asking about whether public health officials were involved in the Vision Zero initiatives and, if so, to describe how. The interview procedures and guide were reviewed by the University of North Carolina – Chapel Hill Institutional Review Board before initiation.

Municipal interviews were conducted between December 2020 and June 2021 and regional interviews were conducted between October 2021 and December 2021. Interviews were recorded, with permission, and transcribed verbatim. A codebook was developed from the interview questions and then expanded as themes emerged. The transcripts were entered into ATLAS.ti (version 8) for coding and analysis. The data were reviewed line-by-line with codes assigned by two team members and discrepancies were resolved through consensus. To examine the alignment between public health efforts within Vision Zero initiatives and foundational public health functions, we assigned findings to the updated ten Essential Public Health Services framework, describing where and how Vision Zero work was related to and aligned with core public health functions.¹⁷

Results

Vision Zero Plans

We identified a total of 64 municipalities with Vision Zero plans, of which a sample of 22 were abstracted, and 21 regional entities with Vision Zero plans. Plans were published between 2014 to 2022, with more first-time plans published in recent years (Supplemental Table 2). Plans were identified in all five US Census regions, with more municipal plans in the Pacific (36.4%) and South (36.4%), and more regional plans in the South (52.4%).

Most plans described key group involvement in developing the plan for both municipal (81.8%) and regional (100%) plans (Table 1). About two-thirds (67.4%) of the plans involved public health officials in the plan development, with a higher percentage for regional (76.2%) compared to municipal (59.1%) plans. Most plans described the principles forming the foundation of their plan (86.4% municipal, 81.0% regional). Only a few plans mentioned public health as part of its principles (22.7% municipal, 14.3% regional). Some examples included:

- “The plan is underpinned by several key principles: Traffic deaths and injuries are a preventable, public health issue. Any traffic death is too many.” (Austin, TX; 2016)
- “Human life and public health are prioritized within all aspects of the transportation system.” (Hawaii County, HI; 2020)
- This “plan elevates health as a priority in the city’s future growth and development. The Health Atlas, a data-driven analysis of health outcomes in Los Angeles, supports and prioritizes the goals, objectives, and strategies outlined in the Plan.... [and] highlights the geographic concentration of health disparities...” (Los Angeles, CA; 2017)
- “The city of Savannah has committed to providing reasonable protections for the health, safety, and welfare of its residents, including access to safe streets, sidewalks, and transportation.” (Savannah, GA; 2022)
- “Human life and health should be the highest priority within all aspects of transportation systems.” (Sonoma County, CA; 2022)

Public health officials were specifically identified in the Vision Zero plan development process through community engagement (e.g., conducting community-oriented focus groups; 9.1% municipal, 33.3% regional) and providing data (22.7% municipal, 52.4% regional; Table 1). All plans included a description of goals, objectives, and/or actions. Public health was specifically referenced or officials were implicated in about half of the plans’ goals, objectives, or actions (45.5% municipal, 57.1% regional). They were also identified as responsible for several implementation tasks including future community engagement (31.8% municipal, 42.9% regional), future data efforts (40.9% municipal, 33.3% regional), and mentioned as a source of future funding (13.6% municipal, 4.8% regional). Specific detailed examples of current and future public health involvement in Vision Zero work, as recorded in the plans, are provided in Table 2.

Assessment of Vision Zero Plan Sampling

Since we abstracted a sample of municipal Vision Zero plans (22 of 64), we compared characteristics (e.g., plan publication year, number of plans published, US Census region,¹⁶ US Census population from 2019) of those selected to those not selected and highlighted absolute differences of at least 5%. We found a relatively similar distribution of plans by year of publication (Supplemental Table 2). We only abstracted the first plan and found that a lower percentage of municipal plans abstracted had second or third plans compared to those not abstracted (9.0% vs. 28.6%). Fewer abstracted municipal plans were from the Midwest (4.5% vs. 16.7%) and West (4.5% vs. 14.3%), and more municipal plans were from the Pacific (36.4% vs. 28.6%) and South (36.4% vs. 26.2%) census regions compared to plans not abstracted. Abstracted municipal plans were less likely to have a population size of at least 150,000 compared to those that were not abstracted (59.1% vs. 78.6%).

In-Depth Interviews

The in-depth interviews provided more context around public health involvement in Vision Zero initiatives. We conducted 12 interviews with municipal-level coordinators and 10 interviews with regional-level coordinators (Supplemental Table 3). The majority of both the municipal and regional level initiatives were located in the South (33.0% municipal, 40.0% regional) and West (33.0% municipal, 40.0% regional) census regions. Almost half of both municipal (42.0%) and regional (40.0%) level initiatives participating in the interviews had Vision Zero plans.

Most initiatives either involved or planned to involve public health officials at the local level. However, one municipal Vision Zero coordinator stated, “Our state Department of Health is very involved in transportation issues.” They went on to describe key state-level involvement in training, education, and funding for their Vision Zero initiative.

We categorized public health involvement in Vision Zero initiatives according to the ten Essential Public Health Services framework.¹⁷ Interviewers discussed how public health officials were involved in their Vision Zero initiative with quotes that aligned with eight services: assess and monitor population health; investigate, diagnose, and address health hazards and root causes; communicate effectively to inform and educate; strengthen, support, and mobilize communities and partnerships; create, champion, and implement policies, plans, and laws; enable equitable access; build a diverse and skilled workforce; and improve and innovate through evaluation, research, and quality improvement (Supplemental Table 4). Of the ten essential services, public health was not identified to utilize legal and regulatory actions nor to build and maintain a strong organizational infrastructure for public health.

Several Vision Zero initiatives did not presently incorporate public health officials into their work. Reasons included that the pandemic took time spent on this initiative, lack of staff qualified to act as a liaison, and staff turnover such that those previously involved were not replaced. Two regional entities described less emphasis on current public health involvement. One interviewee stated, “We work closely with our public health department when I worked for a city and I was part of Public Works, and we work closely with

Planning as well. ... For us, because we're an MPO, [it] is a bit different, right? We do have, you know, partnerships with public health agencies in our region. They are ... practitioners who attend our working group meetings.... They're concerned about bicyclists and pedestrian safety as well. They have high injury networks that they have developed, and so the partnerships exist but you have to think, again, at a scale like ours, of [xx] million people..." [the partner engagement is less]. Another interviewee stated, "I wouldn't say it's something that... I have heard emphasized a lot. It's something that I would like to see emphasized more, not just in our work but in planning, and specifically transportation planning generally, but... we don't have anybody on staff who's got a public health or epidemiology skill set. I would love to have that capability. I think it's really important and I think it is kind of where we're going. But we're not there yet."

Discussion

This project explored public health involvement in the United States' Vision Zero initiatives in the plan development and implementation phases. To accomplish this, we collected all Vision Zero plans published through the year 2022. We identified 64 municipal and 21 regional first-time plans, reflecting the growing spread of Vision Zero, starting in 2014 with the New York City plan.¹⁸

Nearly all Vision Zero plans described the partners involved in plan development, and about two-thirds of the plans specifically identified public health involvement. This involvement was lower for municipal plans compared to regional plans, which may reflect the larger number of options for partnerships at a larger scale. From analysis of both the plans and interviews, the public health department was most often identified at the local level, with only a few initiatives involving state level public health. Prior Vision Zero plan guidance stresses the importance of both horizontal integration (e.g., municipality working with local-level partners) and vertical integration (e.g., municipality working with state-level partners),¹⁹ and given the different roles, responsibilities, and resources of the state versus local public health professionals, including both in plan development and implementation could be beneficial.

Vision Zero is underpinned by a Safe System approach, a holistic framework that guides the initiative and centers coordinated and collaborative action.²⁰ Most of the plans we reviewed identified core principles underlying their plans, often calling out the Safe System approach. A few plans also more directly incorporated health into their foundational principles, such as by identifying traffic fatalities and serious injuries as a public health issue, recognizing that the transportation system is a key contributor to human health and quality of life. Articulating clear principles that integrate health as the foundation of the plan can lay important groundwork for partner connection and ownership over plan goals and actions.

Public Health Services

While public health officials may serve different roles at a local compared to a regional or state level, public health can generally be framed according to the major functions described by the ten Essential Public Health Services.¹⁷ This framework includes equity placed in the center of the ten functions broadly grouped into (i) assessment, (ii) policy development, and

(iii) assurance. From the interviews, we assigned functions described or assigned to public health officials using this framework and identified quotes aligning with eight of ten core functions. Quotes from the Vision Zero plans also supported many of these functions. Next, we further synthesize and discuss key takeaways according to these functions.

Assessment: Based on documentation from the Vision Zero plans, public health officials were involved in the provision of crash-related data in about one-quarter of municipal and one-half of regional initiatives, both of which are likely an underestimate since the source of data was not always acknowledged. Public health officials were also identified for future data efforts for both municipal and regional Vision Zero initiatives. Examples of proposed future actions included: creating a crash database; combining crash data sources; ensuring the crash data were complete; improving the use of the data to foster transparency and trust; and creating a dashboard to allow key groups to perform queries. Additional tasks included reviewing with a team the crashes in the area, supporting pedestrian and bicycle counts, evaluating crash locations, and identifying correlates of crashes. While not mentioned in the plans or interviews, the use of a Community Readiness Assessment, a commonly used public health tool, may assist communities in starting an initiative and engaging a broader set of partners in their work.²¹

Accurate, timely data and meaningful measures, centered in equity, are critical to informing Vision Zero work. Public health officials are in a unique position in their ability to combine diverse data sets (e.g., emergency medical service data, hospital and medical record data, death certificate data, self-report data on seat belt use, impaired driving, and physical activity) to more completely understand transportation safety issues and inform intervention prioritization to reach Vision Zero.

Policy Development: Based on documentation from the Vision Zero plans, public health officials were often involved in engaging the community, both during plan development and more frequently identified in plan implementation. Examples included fostering community support, identifying survivors to share their stories, and conducting outreach through media and events. Other activities included promotions, education, and programming. Public health was also occasionally identified as a potential source for funding initiatives.

Public health's shift over the last several years to understanding and intervening on problems from a root cause approach (e.g., a social determinants of health approach) is directly aligned with a Safe System approach that focuses on interconnected underlying factors (e.g., environmental design, culture, policy) that produce road traffic injury and death.²⁰ Public health officials are well-positioned to lead or contribute to communication, education, and cultural change efforts that support partners and the public in rethinking intervention efforts to shift towards deeper system contributors (e.g., environmental change), as compared to proximal individual behavior change (e.g., sporadic enforcement patrols). In at least one interview it was noted that public health "helped with some of our culture of safety efforts." Additional work to develop resources to support such culture change work and case studies that highlight these efforts might help Vision Zero initiatives across the country better conceptualize their critical work in this space.

Assurance: From Vision Zero plans, public health officials were charged to understand inequities, create a vision and monitor progress towards that vision, and participate in both research and quality improvement. One plan described the involvement of public health in workshops to learn about Vision Zero. Public health often serves as a convener and evaluator across health issues. Given that diverse partner coordination and cooperation is a central tenet of Vision Zero and Safe System work, ensuring one or more partners possess this skill set is critical, and public health is generally known for serving in this role. An example of this is the North Carolina Vision Zero Leadership Institute led by transportation, public health, and systems science experts.²² The institute brings together multi-disciplinary teams from local Vision Zero initiatives to support strategic planning and goal setting for newer initiatives and implementation for more mature initiatives. Over the first three offerings, 19 initiatives participated at least once, with improvements documented in relevant skills and self-efficacy. The institute fosters within- and between-community collaboration through the use of specific programming and Safe System tools.²²

Additionally, as previously summarized (Supplement 3),¹⁰ municipal-level interviewees made recommendations on needed supports to grow Vision Zero work. These included themes around data, management and communication, external and internal change, best practices, funding, the need for resources on specific issues, and the need for national guidance. While these ideas and needs were not specifically framed around public health involvement, many of these are roles that public health entities could fill. For example, serving as a lead convener, integrating health and demographic data, and synthesizing and recommending best practices backed by research, as well as conducting research and evaluation to support the initiative, are all natural areas for public health involvement.

Strengths and Limitations

This project had several strengths and limitations. First, we searched systematically for US municipal and regional Vision Zero initiatives and their plans. Nevertheless, we still may have missed an initiative or plan based on dates of our searches, particularly from a Vision Zero initiative in the early stages of development. However, our identification of plans and initiatives are similar to methods reported by others with a differing methodologic approach over an overlapping time period.²³ Second, while we abstracted all first-time regional Vision Zero plans, we sampled municipal plans for abstraction. While the year of plan publication was similar, there were some differences in the number of plans, US census region, and population size between plans selected compared to those not selected for plan abstraction (Supplemental Table 2). Third, reliance on plans to understand the contribution of public health may not capture the full breadth of their engagement or the specific types of public health partners involved in the initiative. The addition of in-depth interviews helped to provide further context and understanding of public health involvement in Vision Zero. We encourage initiatives to provide more detail in plans about the involvement of experts in their plan development. Fourth, although we aimed to include a diverse set of initiatives, the interview sample may not reflect the breadth of Vision Zero initiative experiences since by design we did not include initiatives in the early development phase and focused on initiatives at municipalities with a population size of at least 100,000 persons. Further

exploration would be worthwhile to identify adaptations of Vision Zero with small-to-mid-sized municipalities.

Conclusion

While public health and transportation are two distinct disciplines, both rely on community engagement, use data to inform decisions, pilot projects to inform future decisions, and ultimately work to keep populations safe.^{17, 24, 25} We found public health entities were involved in assessment, policy development, and assurance for Vision Zero initiatives. Integration of public health into Vision Zero efforts will enhance the success of overlapping goals from each discipline related to improved public safety and ultimately a reduction in serious and fatal traffic-related crashes.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Implications for Policy & Practice

- Vision Zero efforts are enhanced through engagement with public health officials at both the local and regional level.
- We found public health officials were involved in Vision Zero plan development, including conducting community engagement and providing data for the plan, and were implicated in many aspects of plan implementation.
- Public health's focus on the social determinants of health is directly aligned with a Safe System approach that underlies Vision Zero. Therefore, public health officials are well-positioned to lead/contribute to communication, coordination, and cultural change efforts.

Table 1.

Percent and number of Vision Zero plans with the characteristic, overall and by type of plan

	Overall (n=43)		Municipal Plan (n=22)		Regional Plan (n=21)	
	n	%	n	%	n	%
Year plan was published						
2014-2016	4	9.3	4	18.2	0	0.0
2017-2019	15	34.9	8	36.4	7	33.3
2020-2022	24	55.8	10	45.5	14	66.7
Plan Development and Foundation						
Public health stakeholders involved in plan						
Yes	29	67.4	13	59.1	16	76.2
No	10	23.3	5	22.7	5	23.8
Stakeholder groups not described in the plan						
Yes	4	9.3	4	18.2	0	0.0
Public health mentioned in the plan principles						
Yes	8	18.6	5	22.7	3	14.3
No	28	65.1	14	63.6	14	66.7
Principles not described in the plan						
Yes	7	16.3	3	13.6	4	19.1
Public health involved in community engagement	9	20.9	2	9.1	7	33.3
Public health involved in data for the plan	16	37.2	5	22.7	11	52.4
Plan Implementation						
Public health mentioned in goals/objectives/actions						
Yes	22	51.2	10	45.5	12	57.1
Public health proposed for future community engagement						
Yes	16	37.2	7	31.8	9	42.9
Public health proposed for future data efforts						
Yes	16	37.2	9	40.9	7	33.3
Public health mentioned as source of future funding						
Yes	4	9.3	3	13.6	1	4.8

Table 2. Selected examples of public health responsibility (either actual or proposed) from Vision Zero municipal and regional plans

Responsibility	Municipal Plan (n=22)	Regional Plan (n=21)
Assess and monitor population health	“City Staff to work with San Mateo County Health to improve the completeness of existing crash data by working to obtain injury data from local hospitals.” (Daly City, CA); The DOH is identified as a key partner to “improve the use, collection, and organization of data to allow for evaluation and reporting that fosters transparency and creates trust with all stakeholders and residents.” (Alameda, CA); “Encourage Alameda County Public Health to create a crash database...” (Alameda, CA); “Explore ways to incorporate and expand proxy data sources such as hospital records” (Nashville, TN); “Work with TX DOT to link crash data and draw down Austin/Travis County Health and Human Services Department, EMS, and hospital and trauma registry data.” (Austin, TX)	“...enhance data collection, management, analysis, and surveillance; conduct routine evaluation, research, and analysis to understand traffic safety trends and impacts to Vision Zero projects” (Los Angeles County, CA); DOH identified as one of several key implementers to “build capacity for improved data collection and sharing.” (Hawaii County, HI); Public health and advocates are identified to “continue to improve data collection and reporting of vulnerable users, including: collecting and making crash data on race and ethnicity of victims available; supporting and developing programs to coordinate and collect bicycle and pedestrian count data; evaluate motorcycle, pedestrian, and bicycle crash locations and risk factors through analysis of existing data and development of new data sources.” (Portland MPO, OR)
Reporting	“Include traffic fatalities and injuries and prevention messages in public health reports.” (New York City, NY)	“Collaboration with the Hawai‘i County Police Department and the State DOH yielded data on all traffic crashes and fatalities on Hawaii Island roads.” (Hawaii County, HI)
Reviewing data	“We will continue to analyze collision, public health, land use, and an array of other data as we build a Transportation and Public Health Database.” (Los Angeles, CA)	“Participate in a quarterly, interdisciplinary review of all critical crashes. Team members include local police, state police, transportation engineers/planners, public health representatives, and a County manager representative.” (Arlington County, VA); DOH was a key implementer to “develop a data portal and dashboard to allow stakeholders working to advance roadway safety and Vision Zero to view crash data and perform basic queries.” (Maui MPO, HI)
Funding	DOH is a key representative appointed to “ensure equity in funding safety improvements.” (Harrisburg, PA); “Grant money comes from revenues generated by automated traffic enforcement, state DOT programs, public health department through the Centers for Disease Control and Prevention, and city funds.” (Anchorage, AK)	Potential funding sources included “Safe Routes to Schools program and miscellaneous public health grants.” (Space Coast TPO, FL)
Promotions	“Engage community public health partners in promotion Vision Zero goals.” (New York City, NY); The PA DOH and DOT were assigned to “provide promos on pedestrian and driver safety for Channel 20, website, social media.” (Harrisburg, PA)	“...implement a communications campaign to heighten awareness and understanding of traffic safety among the public, agencies, and the media.” (Los Angeles County, CA); “Work with media partners to more accurately report traffic crashes to avoid victim blaming and report crashes in the context of Vision Zero.” (Sonoma County, CA); “Identify and partner with public health professionals to promote active transportation, mode choice to get to everyday destinations, and health benefits.” (Space Coast TPO, FL)
Community engagement and support	The DOH is identified as a key partner to “foster community support and responsibility for the safety of people traveling within Alameda.” (Alameda, CA);	“Develop comprehensive engagement strategies that prioritize communities, create personal connections to Vision Zero, and encourage drivers to safely share the road with other users.” (Sonoma County, CA);

Responsibility	Municipal Plan (n=22)	Regional Plan (n=21)
	Public health was assigned to “work to identify survivors willing to share their stories.” (Los Angeles, CA); DOH is a key representative appointed for “listening to a broad representation of communities.” (Harrisburg, PA); DOH will “conduct traffic safety outreach through media and events” (Hoboken, NJ)	Public health assigned to help “increase community engagement for traffic safety projects” (Los Angeles County, CA); “[P]ublic Health and Public Works engaged stakeholders on the topic of traffic safety. Staff attended community events and meetings; met with community-based organizations, special interest groups, and non-profit agencies; and administered a survey on traffic safety experiences and perceptions.” (Los Angeles County, CA)
Education and programming	DOH assigned as the administering agency for “community education” (Daly City, CA); DOH will “distribute evidence-based publications, resources, and data to residents regarding the dangers of impaired and distracted driving” (Hoboken, NH)	“Work with media partners to more accurately report traffic crashes to avoid victim blaming and report crashes in the context of Vision Zero” (Sonoma County, CA); Public health will “implement programs focused on eliminating fatal and severe injury collisions involving youth and older adults.” (Los Angeles County, CA); Public health is one of several partners identified to “provide culturally and age-appropriate ongoing education of traffic laws and street designs.” (Portland MPO, OR)
Implementation	“An Executive Committee composed of the Planning and Zoning, Transportation, Police, Health and Human Services, Public Works, EMS, Law, and Fire departments will oversee and coordinate implementation of City actions in the Action Plan.” (Austin, TX)	DOH a key implementer to “support and implement the State of Hawai‘i Physical Activity and Nutrition Plan actions, including increasing bicycle and pedestrian infrastructure and changing land use policies to support active transportation.” (Maui MPO, HI); The County Health Department was identified to “implement driver education programs to reduce aggressive and risky behavior by drivers.” (Burlington-Graham MPO, NC)
Vision Zero plan development	“An interdisciplinary focus group provided comments on the Sunnyvale Vision Zero planning process during one meeting. The group included the Sunnyvale Planning Department and Department of Public Safety, Santa Clara County of Public Health, Santa Clara Valley Transportation Authority, Sunnyvale School District, and the Cupertino Union and Santa Clara Unified School Districts.” (Sunnyvale, CA)	“Key staff from Public Works and Public Health (Policies for Livable Active Communities and Environments (PLACE) Program)... formed a Coordinating Team that led the day-to-day operations involved in developing the Vision Zero Action Plan.” (Los Angeles County, CA)
Understanding inequities	“City staff to work with San Mateo County Health to better understand inequities in the City to deliver Vision Zero safety improvement projects and programs equitably.” (Daly City, CA); The DOH is identified as a key partner to “ensure that the Vision Zero Policy and Action Plan are implemented equitably and fairly for all people.” (Alameda, CA); DOH is a key representative appointed for “balancing (1) a data-driven approach to identifying high risk crash locations and (2) an equitable distribution of geographical (and community) locations.” (Harrisburg, PA)	Public health “has the lead for creating the structure to oversee implementation of the Vision Zero action plan; implement programs and amend existing county policies to ensure certain populations are not unduly burdened.” (Los Angeles County, CA)
Creates vision and monitors progress	DOH is part of the group to “create a multi-agency Vision Zero Task Force that meets regularly to review traffic crash data, equity, transportation system performance, funding, and action plan progress.” (Anchorage, AK)	The Pedestrian Safety Review Board has a member from public health on it and is “charged with finding ways to make all of county roads, streets, and alleys safe for pedestrians.” (Macon-Bibb County, GA)
Staff training		“Conduct Vision Zero workshops for engineering, planning, and public health staff. Vision Zero will be more readily implemented when understood by the government staff asked to implement the policies.” (Space Coast TPO, FL)
Research		“Convene a research consortium to harness the collective capabilities of major corporate partners..., the medical community... [DOH], universities, and local government agencies to conduct research and help analyze data for safety purposes. In partnership with research

Responsibility	Municipal Plan (n=22)	Regional Plan (n=21)
		consortium, conduct periodic evaluations of Go Safe policies’ impact on transportation system safety.” (McLean County Regional Planning Commission, IL.)

Abbreviations: DOH, Department of Health; DOT, Department of Transportation; EMS, emergency medical services; MPO, metropolitan planning organization; TPO, Transportation Planning Organization

Quotes were taken from the following Vision Zero plans.

Alameda, CA (2021) <https://doi.org/10.15139/S3/SO9OQA>

Anchorage, AK (2018) <https://doi.org/10.15139/S3/DTK8SR>

Arlington County, VA (2021) <https://doi.org/10.15139/S3/OIAUCB>

Austin, TX (2016) <https://doi.org/10.15139/S3/KMQDBH>

Burlington-Graham MPO, NC (2022) <https://doi.org/10.15139/S3/YJAKKW>

Daly City, CA (2020) <https://doi.org/10.15139/S3/FH1REW>

Harrisburg, PA (2019) <https://doi.org/10.15139/S3/QB5RC2>

Hawaii County, HI (2020) <https://heyzine.com/flip-book/e77b6ed2ea.html>

Hoboken, NH (2021) <https://doi.org/10.15139/S3/LVUUSV>

Los Angeles, CA (2017) <https://doi.org/10.15139/S3/XNRGIQ>

Los Angeles County, CA (2019) <https://doi.org/10.15139/S3/O5WV6N>

Macon-Bibb County, GA (2020) <https://doi.org/10.15139/S3/ZYTAVQ>

Maui MPO (2021) <https://doi.org/10.15139/S3/EHXR8C>

McLean County Regional Planning Commission, IL (2021) <https://d2gfvfkk60hy7j.cloudfront.net/file/922/Adopted%20GoSafe-Report.pdf>

Nashville, TN (2022) <https://doi.org/10.15139/S3/NNNDNTF>

New York City, NY (2014) <https://doi.org/10.15139/S3/2XHAZR>

Portland MPO, OR (2018) <https://doi.org/10.15139/S3/P2D73K>

Sonoma County, CA (2022) <https://doi.org/10.15139/S3/DED5ND>

Space Coast TPO, FL (2020) <https://doi.org/10.15139/S3/POXAUZ>

Sunnyvale, CA (2019) <https://doi.org/10.15139/S3/OMKM8K>