



Developing a Guidebook for Communications Between Transportation & Public Health Professionals

Summary Report

Prepared for

AASHTO Committee on Environment and Sustainability

Prepared by

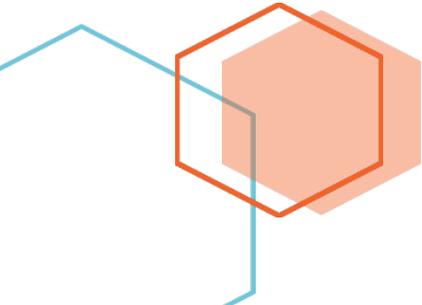
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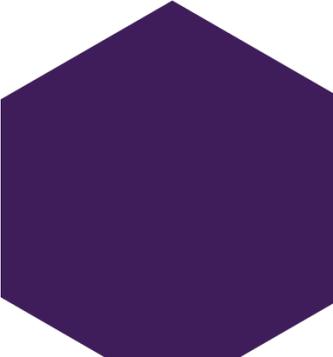
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Disclaimer

The opinions and conclusions expressed or implied are those of the research agency that performed the research and are not necessarily those of the Transportation Research Board or its sponsoring agencies. This report has not been reviewed or accepted by the Transportation Research Board Executive Committee or the Governing Board of the National Research Council.

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INTRODUCTION

Transportation and Public Health intersect in many ways, however, experts in these two sectors often work in silos. Collaboration between stakeholders in these fields is increasingly important, but there are still a number of barriers to effective communication and coordination. To address this issue, *Connecting Transportation and Health: A Guide to Communication and Collaboration* (henceforth “Guidebook”) was created.

This report details the rigorous process used to produce this Guidebook and its associated materials. Following project initiation with the NCHRP panel and the project team, the project began with a thorough review of scholarly literature and organizational resources. Web-based meetings with professionals, policy-makers, and other experts from both the transportation and public health sectors were then held to gather more information. As the Guidebook continued to develop, the project team continued regular correspondence with the panel to further refine the Guidebook.

Along with the Guidebook itself, several other supporting implementation materials were produced: an online overview presentation including guest speakers; a PowerPoint presentation with speaker notes that can be used by a variety of speakers; a brochure to promote the project and use of the Guidebook; and a marketing and dissemination plan to raise awareness for the Guidebook and implementation resources through a variety of media.

The primary goal of this project was to produce a Guidebook and supporting resources for transportation professionals that identifies and builds on best practices for reaching out to public health stakeholders and bridging communications gaps. The Guidebook, however, can also be used by public health professionals and any others who wish to learn more about the context and process of communicating around transportation and health.

LITERATURE REVIEW

The project team reviewed available literature to identify effective communication, coordination, and outreach tools and techniques that facilitate collaboration between transportation and public health agencies and stakeholders. The literature review was focused on sources that are relevant to communication and coordination strategies; sources that focused on transportation and health connections absent these strategies were generally not considered key resources. This section identifies key findings from this literature review.

METHODOLOGY

The project team began the review by leveraging literature and resources collected by the team on several previous efforts including: USDOT-CDC Transportation and Health Tool indicators, strategies, interventions and policies; health impact assessments; North Carolina DOT’s transportation and health policy; and multimodal project and research experience. The team then conducted a scan of transportation, health and related topic journals, publications, clearinghouses, toolkits, and websites from a variety of agencies, professional organizations, research organizations, non-profits, and private entities. A list of keywords and phrases was used to identify the best practice communication strategies being applied in the health and transportation fields. Both the listing of key sources to review and keywords were reviewed by the NCHRP panel and updated to reflect panel input.

The combined search efforts led to the inventory of 168 resources, of which 62 were identified as key resources. Key resources were those that included more in-depth guidance, tools, metrics, or case studies specifically relating to communication and collaboration strategies for integrating health and transportation efforts. Appendix A includes a table outlining the key resources used for this project.

A scan of state DOT websites for health-related activities was also conducted to assess the readiness of DOTs to participate in health collaboration; results are summarized below.

KEY FINDINGS

The review of available literature and resources reveals that communication and collaboration regarding transportation and health issues are increasing but are not yet routine or widespread with consistency in implementation approaches. A wide variety of collaboration techniques has been used with varying degrees of success. Key challenges to effective collaboration and suggested practices to help overcome those challenges have been identified.

Key Challenges and Opportunities Based on Review of Resources

- ***Spread exemplary local and regional transportation and health communications practices into more widespread practice across states and nationally*** – Many of the cases in the literature reflect best practices at a local or regional scale. While context will continue to frame any efforts, federal, state, and metropolitan agencies can draw from local-level best practices to broaden the integration of health in the transportation process.
- ***Continue to expand transportation and health collaboration from urban to more rural and suburban settings*** – Transportation and health coordination examples are still found more frequently in urban rather than rural and suburban settings. Resources that address specific health issues in the rural setting and examples that speak to a suburban context are needed to support a growing move to collaborate around transportation and health issues (e.g. access to healthcare and basic services).
- ***Effective collaboration on health requires moving from aiding in development of policy into supporting practice*** – The vast majority of transportation and health coordination examples still center around policy initiatives. States and metropolitan areas just beginning to tackle health considerations can draw from other collaboration examples for their policy initiatives. For agencies further along in the integration of health considerations, providing communication tools for transportation practitioners to use during project prioritization, development, and delivery can ensure that health goals are translated from the broad policy level into project outcomes.
- ***Active transportation and safety are leading the conversation, but communication is limited for other transportation and health topics*** – Projects and programs emphasizing bicycle and pedestrian activity and safety are central to the public health dialogue, especially in urban and suburban settings. Programs like Vision Zero have a laser focus on multimodal safety. At the same time there is growing recognition that access to healthcare, recreation and fitness opportunities, healthy foods, and other elements are equally critical to community health, especially for vulnerable populations (youth, seniors, low-income, low-wealth, minority, persons with disabilities, or others). This has yielded an increase in collaboration around transit and multimodal accessibility, and an interest in broader transportation and health communication.

Practitioners must ensure that the health and modal conversation is expanded to reflect stakeholder and community goals.

- ***Transportation agency communications should engage health stakeholders to help ensure a place for health in the transportation process*** – Transportation agencies are playing a lead role in many initiatives involving health, but health stakeholders are also working separately to plug into the process. Addressing the intersection of health and transportation may involve a wide variety of organizations, including not only government agencies, but also non-profits, community organizations, and the private sector. Each of these organizations has its own mission, goals, objectives, and structure that can present barriers to collaborative efforts. Transportation practitioners may have limited staff, funding, data, or other resources to address health considerations above and beyond core agency goals and operations. Having effective communications and engagement tools and strategies is essential to ensure that health can be addressed within the transportation process and to avoid creating substantial added work that may come from externally driven processes that are not coordinated.
- ***Benefits of successful communications and collaboration include partnerships and opportunities to leverage resources*** – It is helpful to clearly identify the value of collaboration in terms of specific initiatives relevant to the missions of the organizations involved. Prioritizing key policy issues across entities may provide sufficient focus to ensure resources are used wisely. Highly successful collaborations can create partnerships and opportunities to pool resources to leverage in terms of funding, joint community outreach, or technical data and analysis; these may make participation more appealing for entities facing resource limitations. Partnering meetings or overall policy frameworks like Health in All Policies may help set priorities, focus efforts, and find mutually beneficial opportunities.
- ***Guidance is needed on best practices and techniques*** – A wide variety of methods of communication and techniques for collaboration have been employed, but detailed guidance is limited. Most of the literature relates to specific case studies and focuses on results. There is little information available about how and why specific methods were chosen, what was involved in planning and developing the efforts, or factors to consider in implementation. A few practical guides are available for specific circumstances or techniques, but comparisons among techniques may be helpful.
- ***Transportation and health communications and coordination efforts have not been measured*** – Transportation agencies are generally working on more performance-based metrics across the board, but the literature shows a gap in evaluating the performance of transportation and health communication, coordination, and collaboration efforts. There is a general sense that collaboration leads to more effective programs, but there is little evidence demonstrating the effectiveness of communication or collaboration efforts. Establishing performance metrics for these efforts would help to better inform the state of the practice and ensure that techniques are improved over time. It would also help to demonstrate the value of these efforts, which may be particularly important when resources are constrained for any of the entities involved.
- ***Resources exist to help overcome language, process knowledge and other communications barriers*** – Practitioners from different fields generally do not share a common language and may

use the same or similar terms to mean different things. Participants from different organizations may not understand one another's needs or know how they can help each other, or may even be reluctant to share information, ideas, or needs. Adopting a common language to facilitate collaboration can help to address communications barriers. Several organizations have compiled references for helping transportation and health professionals understand one another, including the Robert Wood Johnson Foundation¹ the American Planning Association and the National Association of City and County Health Officials², and the National Center for Mobility Management³. Cross-disciplinary training may also foster more effective communications. Building trust among participants is critical, especially for longer-term projects or partnerships. Leveraging past successes in new efforts is one way to demonstrate value and build trust. For example, in San Francisco, key findings from a joint project eventually led to broader communication, outreach, and education efforts⁴.

- ***Communication tools are needed for State DOTs at all stages of incorporating health considerations*** – Based on a scan of DOT websites, as well as case studies in the reviewed literature, there is a wide range in the degree to which state DOTs are addressing health issues for transportation programs and projects. A range of tools and practices is needed to meet the needs of DOTs: from those DOTs that want to gain an understanding of health issues to those in the early stages of considering health to those that are more advanced in their programs.

STATE OF THE PRACTICE

This information is a snapshot of the current state of communication between transportation and public health practitioners.

Scope and Setting for Communications and Collaborative Efforts

Transportation and health communications and collaborations take many forms. Collaboration efforts occur at different geographic scales and in different settings, and they involve different modes of transportation. Most transportation and health collaborative efforts represented in key literature occur at the local or regional scale, though some are statewide or even national in scope. Most of the efforts reviewed occur in urban or mixed settings, though a number were identified that focus on rural or suburban areas and there are resources available to support consideration of and coordination around rural health issues (e.g. Rural Health Information Hub).

Most efforts found in the literature are related to policy planning and development, with long-range planning and corridor planning also represented a third or more of the time. Documented efforts relating to programming, environmental review, design, and operations appeared with some frequency in the key resources reviewed (about 1 in 5). Activities during construction were identified much less frequently than other stages of the transportation decision-making process. Collaborative efforts reviewed address bicycle and pedestrian issues in the vast majority of cases, transit with slightly less frequency, and roads

¹ (Lowe, PhD, 2018)

² (American Planning Association and National Association of City and County Health Officials, 2018)

³ (National Center for Mobility Management, 2016)

⁴ (Wier, MPH, Sciammas, Seto, PhD, Bhatia, MD, MPH, & Rivard, MS, REHS, 2009)

in about half of the cases. Documented transportation and health efforts related to rail are infrequent, and those involving aviation or maritime transportation are even less common.

Transportation and Health Topics/Focus Areas

Collaborative efforts relating to transportation and health address a wide variety of topics. The most common are: general public health; active transportation; safety; and social or health equity. There is emerging interest by communities and health stakeholders to address issues associated with transportation access to health care services, health and recreation opportunities, and healthy foods, as well as air quality and its impacts, especially to vulnerable populations. The chart below shows the frequency with which various topics are included in collaborative efforts in key resources (note: many efforts involve multiple topics). The chart does not reflect a proportion to which these topics are addressed in all transportation initiatives, but only those that are already incorporating health that were encompassed by the key resources.

Table 1: Frequency of Transportation and Health Topics in Literature

Topic	Number of key sources that address*
Public health (general)	37
Active transportation/ physical activity from transportation	35
Safety (fatalities, injuries)	33
Social or health equity	31
Multimodal mobility/ mode share	26
Land use mix	25
Air quality/ health effects	24
Access to health care	22
Access to health/recreation opportunities	21
Complete streets	15
Access to healthy foods	18
Other	10
Aesthetics and sensory well-being	9

*64 key resources were reviewed for in-depth guidance, tools, metrics, or case studies specifically relating to communication and collaboration strategies for integrating health and transportation efforts. This table focuses on the topics covered in those resources.

Lead Agencies and Stakeholders

Collaborative efforts may be initiated or led by many types of organizations. Some efforts have a single lead entity, others have shared leadership roles. Transportation agencies played a leadership role in a substantial majority of cases reported in the reviewed key sources, while health agencies were in a leadership role about half of the time, often in coordination with a leading transportation agency. Non-profits, community organizations, planning/urban design agencies or departments, and other local government departments also frequently played a role in leading collaborative transportation and health efforts. The list of stakeholders varies widely based on the goals of the effort.

In addition to both public and private transportation agencies and health practitioners, stakeholders in transportation and health initiatives may include:

- Schools and universities;
- Local governments, including planning departments, economic development departments, regulatory units, and others;
- Law enforcement;
- Community leaders;
- Civic organizations;
- Non-profit organizations;
- Grassroots organizations;
- Retailers and private companies, such as grocers, insurance companies, healthcare systems, taxi or rideshare services, and others related to health or transportation

While the appropriate stakeholders to include depends on the scope and focus of the effort, the Guidebook identifies stakeholders that should be considered for inclusion and to which transportation agencies may reach out.

Methods and Techniques

The literature points to a wide variety of methods and techniques used for collaboration and communication. Some are documented frequently, and others are less commonly found in the key resources reviewed. In some cases, methods were described sufficiently to allow for evaluation of their effectiveness (56 instances of techniques used, but insufficient information to evaluate). The literature also reveals that a variety of techniques can be used, and the same method may be effective in one context, but less effective in another. Since most of the literature relates to best practices, there is limited data available on techniques that did not go well. Table 2 summarizes those techniques found to be highly effective or somewhat effective in key sources in the literature review where the effectiveness could be assessed based on information in the sources.

Table 2: Techniques Assessed to be Effective from Literature

Technique	Number of times assessed as Highly Effective or Somewhat Effective
Joint policies/ programs	13
Small group meetings	10
Advisory groups	9
Workshops	8
Community visioning processes	4
Consensus building	4
Expert interviews	4
Focus groups	4
Task forces	4
Joint projects	3
Panels	3
Standing committees	2
Conferences	1

Most techniques were assessed qualitatively, if at all. Practitioners must choose the technique that is right for the situation and implement it in the most effective way possible. The Guidebook provides tips to help practitioners find the most effective strategies for their efforts.

Collaborative efforts have frequently led to joint policies and programs. One framework for joint policies is known as Health in All Policies, often implemented at the state level. Health in All Policies is a collaborative approach that brings public health together with other sectors to identify mutual goals and efficiently incorporate health considerations into their policy work⁵. Other communities use partnerships, advisory committees, standing committees, or task forces to create an overall framework for integrating health and transportation efforts. Other techniques, such as small group meetings, workshops, and focus groups tend to be more focused on a specific transportation project or health issue, such as safe routes to schools or access to health care.

Other Topics in the Literature

Health Impact Assessments and topics related to public involvement were also frequently discussed in the literature. While they are not specific techniques for communication and collaboration, they do relate to transportation and public health communication. Stakeholders also mentioned the importance of these topics. The guidebook addresses these issues briefly, as described below, but does not cover them in depth.

Health Impact Assessments

A Health Impact Assessment (HIA) is a tool developed by health practitioners for evaluating the potential health effects of a proposed policy, plan, or project. HIAs have been applied across a number of sectors, and in recent years some transportation agencies have used or participated in HIAs. Transportation

⁵ (Association of State and Territorial Health Officials, 2018)

agencies have led or conducted HIAs (often in collaboration with external entities), participated in the development of HIAs by others, and used the results of HIAs for policy, planning, or project-level decision-making. Other transportation agencies have integrated health impact analysis into existing transportation planning and evaluation processes, such as development of long-range plans or community impact assessments, since many of the elements of HIA data and analysis are already incorporated within these existing transportation processes.

Numerous HIAs were reviewed to identify the communication elements of these HIA processes. In some cases, the results of an HIA have been used to inform communications with transportation decision-makers. For example, the Massachusetts Bay Transportation Authority (MBTA) conducted a HIA of proposed public transportation service cuts and fare increases in Boston. The results of the HIA were used to communicate with the state legislature and influenced policy decisions⁶. The Guidebook presents examples that incorporated HIAs and draws from them to identify successful communication methods. The Guidebook also describes the basic steps of the HIA process along with those of other health processes in Section 2.3; transportation practitioners who wish to explore any of these health planning processes can find a wealth of literature and resources available within each area of practice.

Public Input and Engaging Vulnerable Populations

Communication among practitioners and key stakeholders is critically important for integrating health and transportation; however, public input is also an important component of both transportation and health processes. Engaging vulnerable populations (low-income, minority, youth, seniors, low-wealth, persons with disabilities, or others) can be particularly important when considering health issues. Vulnerable populations may have distinct concerns and interests related to health and transportation. Practitioners engaging in public involvement efforts may benefit from collaborating across sectors to better reach these populations. The guidebook identifies opportunities for public health and transportation practitioners to work together to engage the public, to coordinate between sectors as a part of the public engagement process (with an emphasis on how transportation practitioners can facilitate this engagement), and to share information from public engagement efforts carried out by each sector. However, public engagement tools and techniques are referenced rather than detailed in the Guidebook, since there are many other resources that specifically address engaging the public and vulnerable population groups.

Collaboration Performance Measures

In the available literature, practitioners frequently cite the benefits of collaborative efforts, and are willing to share lessons learned, challenges, and pitfalls. Effectiveness is assessed qualitatively or only assessed in terms of the results of the program or project. Practitioners have generally not identified specific performance measures to gauge the effectiveness of communication or collaboration. There is a clear gap in the practice for performance measures relating to the effectiveness of collaboration. A review of the state of the practice of HIAs in 2013⁷ examined whether completed assessments included a communications plan, whether findings were disseminated, and whether the community was engaged in the assessment, which may provide a starting point for metrics to consider.

⁶ (James, Ito, Buonocore, Levy, & Arcaya, 2014)

⁷ (Rhodus, Fulk, Autrey, O'Shea, & Roth, 2018)

Case Studies

The literature provides a wealth of case studies for consideration. The project team reviewed well over 100 case studies or examples highlighting different collaborative efforts and techniques.

DOT Readiness Scan of Websites for Presence of “Health”

Websites for all State DOTs (including the District of Columbia and Puerto Rico) were reviewed for keywords related to health to assess the degree to which state agencies may address health issues and health stakeholders. Search results were reviewed to identify health-related efforts excluding standard health and safety requirements, Safe Routes to Schools, Americans with Disabilities Act (ADA), Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities programs, and other standard DOT activities for which health applies.

Results reflect only what appears on each DOT’s website, which may not account for all the activities in which an individual DOT actually engages. Some DOT websites are focused primarily on providing information to the traveling public and do not reflect the full range of programs, projects, and services the agency offers, which may include health initiatives.

Only a few DOTs had health-related policies or goals according to agency websites. In California, health is a component of high-level agency goals, and health-related performance measures have been developed. A couple of agencies were involved in health efforts across all agencies in the state, such as Health in All Policies.

Most DOTs address health in at least some of their planning efforts. Health practitioners are most commonly involved in planning for active transportation and transit programs but may also be involved in the development of the Statewide Transportation Improvement Program (STIP) or Long-Range Transportation Plan (LRTP). Several DOTs have developed Human Services Coordinated Transit Plans, which involve key stakeholders from both transportation and human service providers to: assess transportation needs for individuals with disabilities, older adults, and persons with limited incomes; identify available services and gaps; and establish coordination strategies to use resources efficiently.

Several DOTs have conducted at least one HIA or Health Risk Assessment. The Washington, D.C. DOT conducts Livability Studies that consider health-related factors. Alaska DOT includes health considerations in project evaluation criteria.

A few DOTs involved in tribal transportation efforts showed an increased focus on health in those efforts, which likely relates to the level of concern expressed by the tribes regarding health issues. A few agencies also engaged in research related to transportation and health which involved practitioners in both fields.

Even with the limited data available, it is evident that there is a wide range of approaches to incorporating health into state DOT practices. Some DOTs are advanced in incorporating broader health considerations, while others may just be in the early stages of considering health more widely in transportation decision-making, and still others have not begun reflecting health overall beyond specific issues (crashes, safety) or focused programs (Section 5310 for enhanced mobility of older adults and persons with disabilities, Safe Routes to School). The Guidebook includes a range of tools and practices appropriate to DOTs at different stages of incorporating health into their process.

WEB-BASED MEETINGS

The project team conducted online meetings on August 16 and August 20, 2018, with experts from the transportation and health fields respectively to gather input to help inform development of the Guidebook. The results of these meetings were presented in an October 2018 Summary of Transportation and Health Web-based Stakeholder Meetings.

Meeting Objectives

The objectives of the August sessions with transportation and health experts were to:

- Obtain input from guidebook users and stakeholders.
- Solicit feedback on priorities from research findings and for guidebook resources.
- Review effectiveness for communication tools and techniques.
- Discuss transportation and public health goals and process touchpoints.

Participants

The web-based meetings solicited input from experts with experience in transportation and health communications and coordination efforts. Potential participants for the web-based meetings were identified by leading experts on the NCHRP research panel and through an extensive review of relevant resources and literature. A total of 17 transportation stakeholders and 15 health stakeholders were invited to participate in the sessions, facilitated by members of the research team; 14 transportation stakeholders and 9 health stakeholders participated. The following organizations were represented in the sessions:

Transportation stakeholders:

- Arkansas DOT
- Caltrans
- Clackamas County Department of Transportation and Development
- Delaware DOT
- East Central Wisconsin Regional Planning Commission
- EMBARK Transit, Oklahoma City
- Federal Highway Administration (FHWA)
- MetroPlan Orlando
- Safe Routes to Schools National Partnership
- Southeast Michigan Council of Governments
- Tennessee DOT
- Volpe Center
- Public Health and Transportation Planning Consultant

Health stakeholders:

- Active Living By Design
- American Public Health Association*
- Centers for Disease Control and Prevention (CDC)

* Participated in the August 16 call with Transportation Stakeholders based on schedule.

- Idaho Department of Health and Welfare
- Montana State University
- Mountain Area Health Education Center
- University of Washington School of Public Health**
- Utah Department of Health
- Washington State Department of Health

Overview of Meetings

Once participants confirmed their intent to participate in the meetings, the team sent a set of advance materials to each group of stakeholders to prepare them for participation in planned meeting activities. Items shared included: meeting objectives; a brief overview of key findings from the review of literature and resources; and an outline of Guidebook sections, tools and resources. The session on August 16 was focused on gathering input from transportation practitioners as potential users of the Guidebook. The session on August 20 was focused on the perspective of public health stakeholders. Both sessions followed a similar format, but there were some differences in the requests for feedback.

The meetings were conducted as interactive online forums utilizing presentations, polling questions, and interactive exercises. Presentation slides highlighted the literature review, Guidebook development process, and proposed outline, resources, and tools. One participant was invited to share a case example at each session of successful transportation and health collaborations to prompt discussion and dialogue. Melissa Kraemer Badtke with the East Central Wisconsin Regional Planning Commission presented a number of regional transportation and health planning efforts and highlighted the region's Fox Valley Thrives initiative during the transportation meeting on August 16. Chris Kochtitzky with CDC presented examples of local level collaboration and published resources available for supporting health planning and engagement during the health meeting on August 20. Feedback was solicited on potential communications touchpoints between transportation and health, clarifications needed on public health objectives, processes and stakeholders, and tools, case examples, and resources that can support effective communications with health stakeholders. The raw results of the meeting exercises were shared with participants following the sessions.

GUIDEBOOK DEVELOPMENT

The literature review, web-based meetings, and early NCHRP project panel calls provided most of the information needed for developing the draft Guidebook. NCHRP input guided revisions for the final guidebook. The Guidebook is separately available, but this report describes the high-level goals and overall framework for the Guidebook.

GOALS

Three key research goals drove the development of the Guidebook and its accompanying materials:

- Build on best practices for transportation and health collaboration.
- Create an accessible, practitioner-ready communications guidebook.

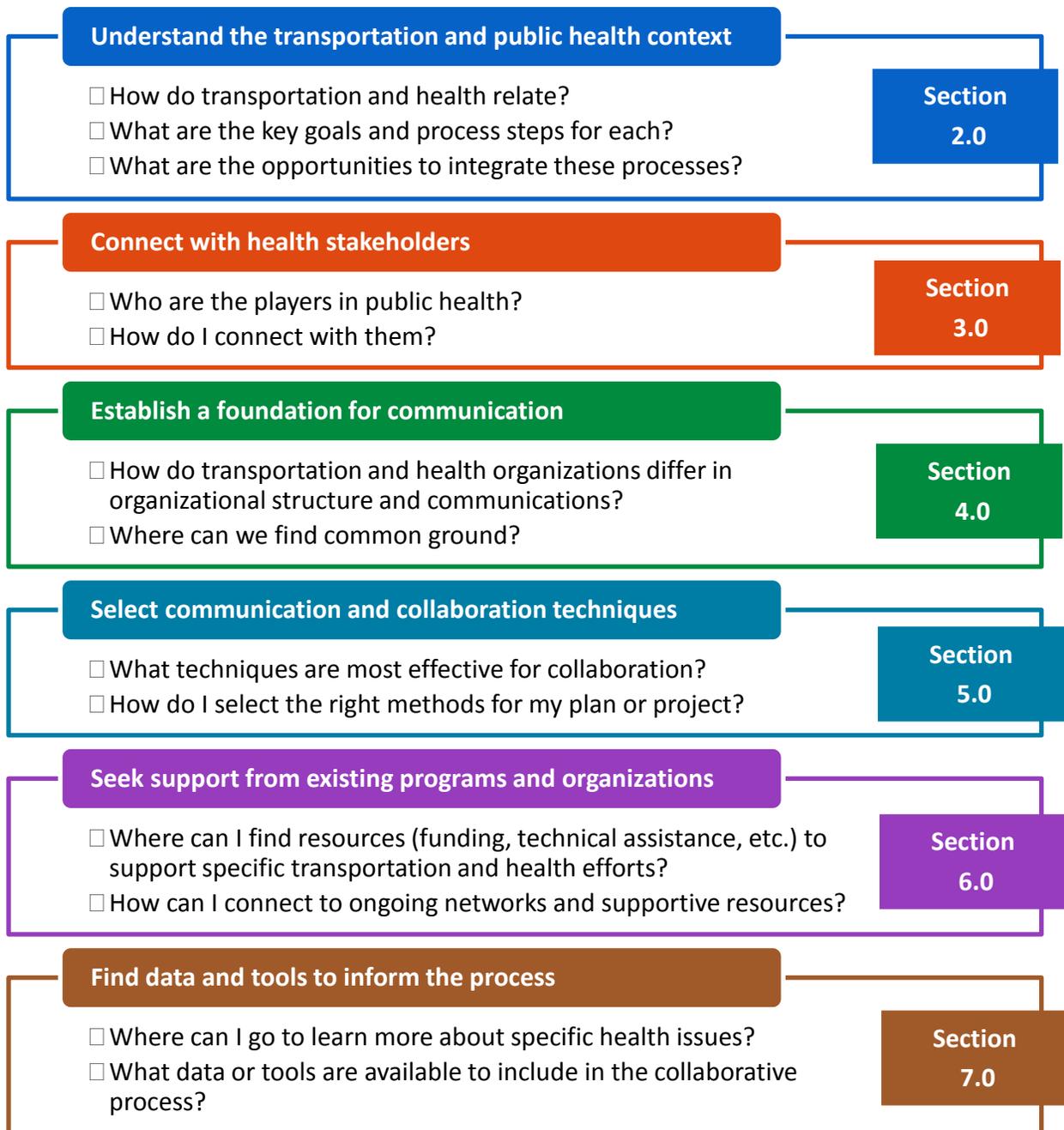
** Provided input by phone on August 14.

- Provide resources to support effective communications for a wide range of users.

ORGANIZATION AND FRAMEWORK

To make the Guidebook user-friendly and easily navigable, the project team developed an overall framework for the transportation and health communication process that presents the organization and corresponds with the sections of the guidebook. Key questions were identified for each component of the framework so that Guidebook users would be able to identify the information available in each section at a glance. The Guidebook framework and key questions are presented in Figure 1.

Figure 1: Transportation and Health Communication and Collaboration Steps and Guidebook Sections



To make the Guidebook accessible and easy-to-use, additional graphical elements were thoughtfully employed to orient the reader. Sections are differentiated with unique color schemes as was reflected in Figure 1, and icons are used to call out specific types of tools and information. Figure 2 shows the icons used and information featured throughout the Guidebook.

Figure 2: Icons and Featured Information



The tools and resources indicated by the icons are embedded throughout the Guidebook and briefly described below.

Tips, Tools and Resources

The tips, tools and resources icon indicates information that directly supports practitioners in communicating around transportation and health. These resources may include “how-to” or guidance that would help plan or carry out a communication effort such as tips for reaching out to health partners, glossary of key terms, and a matrix for selecting communication and collaboration techniques for a given effort.

Process Steps and Integration Opportunities

The process steps and integration opportunities icon indicates information that will help practitioners gain an overall understanding of transportation and public health processes, how the goals of each sector relate to one another, and most importantly where there may be opportunities for integration between the two that reflect critical communication points.

Fundamentals

The fundamentals icon indicates basic information on goals, definitions, or concepts such as common transportation, public health and cross-sector goals, as well as key terms and concepts in public health that may be unfamiliar to transportation professionals.

Case Examples

The case examples icon indicates brief descriptions of real-world examples that demonstrate how others have approached transportation and public health communication efforts. These brief case examples are incorporated as call-out text boxes throughout each section of the Guidebook to illustrate applications of specific steps and elements of the communication process.

QUICK REFERENCE

Select tools and resources from the Guidebook also available as a standalone Quick Reference that practitioners can extract for easy use. These include:

- Transportation and Health Intersections table
- Integrating Transportation and Health Processes table
- State and Local Health Stakeholders table
- Public Health Stakeholder Contact Guide
- Perspectives on Key Intersections between Transportation and Health
- Communication and Collaboration Techniques Matrix
- Health Organization and Program Resources table
- Transportation and Health Data Sources and Tools table

IMPLEMENTATION RESOURCES

Several implementation resources were prepared to promote and support use of the Guidebook. The implementation resources highlight information from the guidebook to entice practitioners to turn to the Guidebook for more details. The resources are available at the project web page:

<http://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=4101>.

ONLINE OVERVIEW PRESENTATION

A live online overview presentation is planned for April 2019 as a primary activity to launch the Guidebook. This presentation will help transportation professionals understand how the Guidebook works and provide an opportunity to interact with presenters to ask questions germane to public health interests or issues. The presentation will be geared toward the “how to use” aspect of the Guidebook. Stakeholders involved in compelling transportation and health collaboration successes featured in the Guidebook will present and provide peer learning opportunities for participants.

PRESENTATION SLIDES

A PowerPoint presentation, including speaker notes, was developed to provide an overview of the Guidebook. The presentation will be available for any organization to use to introduce the Guidebook. The presentation describes research goals and objectives, guidebook development, and research findings, but does not require detailed knowledge about the process to deliver. It introduces the Guidebook structure and contents, including the resources available for users. The presentation also provides two case examples to demonstrate transportation and health collaborations in practice. This presentation is designed for easy customization by users, including placeholder slides for presenters to enter local case examples in addition to or in lieu of the provided examples.

BROCHURE

A brochure has been designed as a primer for those interested in transportation and health communications while engaging the curiosity of its readership to encourage use of the Guidebook. The brochure provides an overview of the Guidebook sections and contents, presents the key transportation and health intersections, and highlights the resources available for users. The brochure provides a case example of transportation and health communications in practice. The graphic appearance of the brochure helps reach a wider audience to promote broad awareness of the guide.

MARKETING AND DISSEMINATION PLAN

The marketing and dissemination plan found in Appendix B further describes the intent of the implementation resources while detailing additional methods that can be used to raise awareness. As part of the development of this plan, a wide list of contacts was created including DOTs, MPOs, transit agencies, and public health and other organizations (professional, nonprofit, community). Target audiences were categorized as follows:

- Primary audiences: Transportation staff and decision-makers at State DOTs, regional and metropolitan planning organizations, transit agencies, and USDOT divisions.
- Secondary audiences: Local transportation professionals, transportation advocacy groups and non-profit organizations.
- Other interested parties: State health agencies, health and transportation foundations, health based non-profit organizations, and health-based advocacy organizations.

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APPENDIX A

KEY RESOURCES

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source								
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
1	Evaluating Complete Streets Projects	AARP, Smart Growth America, National Complete Streets Coalition	2015	AARP	http://www.dot.state.mn.us/planning/completestreets/pdf/evaluating-complete-streets-projects.pdf	This resource discusses performance measures that can be used for achieving Complete Streets goals. It provides case studies that discuss the transportation and public health collaboration.	X		X						
2	Connecting the Dots Between Health and Transportation in the Linn-Benton Region	Oregon Department of Transportation and the Oregon Department of Land Conservation and Development	2016	Oregon DOT and the Oregon Department of Land Conservation and Development	http://www.ocwcog.org/wp-content/uploads/2016/04/Health_Transport_Final_web_noappendices.pdf	This report details the findings from a workshop which 100 community members and leaders convened to discuss healthy communities and lay the foundation towards building them in Oregon's Linn and Benton Counties.	X								
3	Public Health Terms for Planners & Planning Terms for Public Health Professionals	American Planning Association and National Association of County and City Health Officials	n.d.	APA website	https://planning-org-uploaded-media.s3.amazonaws.com/legacy_resources/research/healthy/pdf/jargonfactsheet.pdf	This fact sheet is a resource for planners, public health professionals, and other interested stakeholders for collaboration between planners and public health officials. It defines public health terms and planning terms so that both communities can overcome any jargon or language barriers.	X								
4	Environmental Health In All Policies Transportation Policy Guides	Association of State and Territorial Health Officials	2018	Association of State and Territorial Health Officials website	http://www.astho.org/programs/hiap/environmental-hiap/transportation/	This series of guides relate to the Health in All Policies approach, and include specific guides related to transportation issues.	X								

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
5	Building a Culture of Health through Cross Sector Collaboration	Melvin J. Houser, Julie Willems Van Dijk, Patricia Harrison, Kevin Schiller	2017	National Association of Counties Legislative Conference	http://www.naco.org/sites/default/files/documents/Building%20Health%20Through%20Cross%20Sector%20Collaboration_Feb%2027%20presentation.pdf	This conference proceeding combines several presentations related to building a culture of health. The first presentation discusses county health rankings and roadmaps. The second discusses how Fairfax County has addressed health through cross sector collaboration. This presentation includes a few key slides relating to challenges and solutions for cross-sector collaboration and identifies success factors. The final presentation discusses a collaboration that addresses homelessness and health concerns for high-risk populations.						X		
6	Resource Guide for Conversations Between Transportation and Healthcare Professionals	National Center for Mobility Management	2016	National Center for Mobility Management Health and Transportation website	https://nationalcenterformobilitymanagement.org/wp-content/uploads/2014/09/NCMM_Healthcare_Business_Case_Conversation_Starters.pdf	This resource establishes general guidelines for conversations between transportation and healthcare professionals. It begins with suggestions for who a transportation professional might contact to begin meaningful discussions, suggestions for how to engage healthcare professionals in the conversation, settings and opportunities for interactions, and conversation starters.	X							
7	Progress Along the Pathway for Transforming Regional Health: A Pulse Check on Multi-Sector Partnerships	Jane Erickson, Bobby Milstein, Lisa Schafer, Katy Evans Pritchard, Carly Levitz, Creagh Miller, and Allen Cheadle	2017	ReThink Health	https://www.rethinkhealth.org/wp-content/uploads/2017/03/2016-Pulse-Check-Narrative-Final.pdf	This report summarizes the status of multi-sector partnerships related to health based on a voluntary, internet-based survey. 237 different partnerships responded, with a wide variety of lead sectors, missions, and structures. The report identifies five phases of development that partnerships may experience over time and identifies the pitfalls and momentum builders associated with each phase. It also includes key recommendations for partnerships to consider based on the phase of development they are in.								Survey results and analysis led by non-profit foundations

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
8	Integrating Planning and Public Health (PAS 539/540)	Marya Morris, AICP, with Valerie Rogers, Jessica Solomon, and Karen Roof	2006	APA	https://planning-org-uploaded-media.s3.amazonaws.com/publication/download_pdf/PAS-Report-539-540.pdf	Is the form of American cities to blame for the shape of Americans? With obesity rates climbing ever higher, planners are reconsidering how the built environment affects public health — not only obesity, but also asthma, cardiovascular disease, water quality, air pollution, pedestrian safety, and mental health. Integrating Planning and Public Health examines collaborations between planners and public health professionals committed to building healthy communities. It outlines the five strategic points of intervention at which planners and public health professionals can coordinate their efforts: visioning and goal setting, plans and planning, implementation tools, site design and development, and public facility siting and capital spending. Case studies illustrate the specific tools — including health impact assessments — used in such collaborations. The report also examines the role of universal design in creating healthy communities.	X							
9	Social Vulnerability Index Mapping Dashboard	CDC	n.d.	CDC website on Social Vulnerability Index	https://svi.cdc.gov/Index.html	This online tool allows the user to identify a zip code and then see the Social Vulnerability Index (overlay of 16 census tract factors related to social determinants of health) for census tracts within that zip code.					X			
10	Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups	CDC National Center for Environmental Health	2018	CDC	https://svi.cdc.gov/Documents/Publications/SVI_Community_Materials/atriskguidance.pdf	This report outlines the use of the Social Vulnerability Index to identify and engage at-risk populations with a city. The SVI is a tool using 16 different census tract datasets to identify "hot spots" of at-risk population. Social vulnerability is defined in terms of the characteristics of a person or group that affect "their capacity to anticipate, cope with, resist, and recover from the impact" of a discrete and identifiable disaster in nature or society. A person's vulnerability to disaster is influenced by many factors. The following six categories are among the most commonly accepted: socioeconomic status, age, gender, race and ethnicity, English language proficiency, and medical issues and disability. While this document focuses on disaster recovery and preparedness, the use of SVI to identify and engage vulnerable populations on transportation projects is similar and provides a useful tool.	X	X						

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
11	A Social Vulnerability Index for Disaster Management	Barry E. Flanagan, CDC/ATSDR Edward W. Gregory, CDC/ATSDR Elaine J. Hallisey, CDC/ATSDR Janet L. Heitgerd, CDC/NCHHSTP Brian Lewis, CDC/ATSDR	2017	Journal of Homeland Security and Emergency Management	https://gis.cdc.gov/grasp/svi/A%20Social%20Vulnerability%20Index%20for%20Disaster%20Management.pdf	Social vulnerability refers to the socioeconomic and demographic factors that affect the resilience of communities. While focused on disaster management, the use of census data related to social determinants of health is a similar method that can be undertaken to better understand social vulnerability of neighborhoods where new transportation investments are proposed. This paper describes the development of a social vulnerability index (SVI), from 15 census variables at the census tract level, for use in emergency management. It also examines the potential value of the SVI by exploring the impact of Hurricane Katrina on local populations.	X	X			X			
12	Planning & Zoning for Health in the Built Environment	APA	2016	APA website	https://planning-org-uploaded-media.s3.amazonaws.com/document/EIP38.pdf	This Essential Info Packet (EIP) offers planners a collection of resources to help them better understand the connections between health and the built environment and integrate community health considerations into their planning and zoning work. The EIP is an annotated resource list that allows users to click through to the various websites, APA resources, and non-APA documents collected for this packet. The first part of this EIP (Sections I through VI) offers a collection of background resources and how-to guidance on integrating health issues into the policy and regulatory documents that help shape the built environment. The rest of the packet (Sections VII through XII) offers examples of local policies and ordinances from communities across North America integrating public health into planning and zoning documents and regulations. Transportation-specific topics are covered.					X			
13	The impact of community design and land use choices on public health: A scientific research agenda	Dannenberg, A., Jackson, R., Frumkin, H., Schieber, R., Pratt, M., Kochtitzky, C., & Tilson, H.	2017	American Journal of Public Health	https://ajph-aphapublications-org.mutex.gmu.edu/doi/pdf/10.2105/AJPH.93.9.1500	This journal article presents the results of a workshop designed to help develop a scientific research agenda to determine the next steps and research priorities associated with how the built environment influences health. This research agenda, developed by CDC and external experts in May 2002, outlines many different areas of health inequities caused at least in part by the built environment and potential research questions and solutions.						X		

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source							
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
14	Active Seattle: Achieving walkability in diverse neighborhoods	Deehr, R. C., & Shumann, A.	2006	American Journal of Preventive Medicine	https://doi-org.mutex.gmu.edu/10.1016/j.amepre.2009.09.026	In this intervention, walking audits were carried out in select diverse neighborhoods to gather data so that recommendations to policymakers could be made. This project, Active Seattle, advocated for policies and projects in diverse communities to support an overall more walkable city.				X				
15	A time of opportunity: Local solutions to reduce inequities in health and safety	Cohen, L.	Continuing online	Prevention Institute	https://www.preventioninstitute.org/sites/default/files/publications/IOM_Time%20of%20Opportunity_040511.pdf	This paper presents several policies that communities should implement to help reduce inequities. Transit-related interventions include improving the safety and accessibility of public transportation, encouraging walking, and bicycling to help increase physical activity, reduce traffic injuries, and reduce the illness that result from poor air quality.	X							
16	Before and after a new light rail stop: Resident attitudes, travel behavior, and obesity	Brown, B. B., & Werner, C. M.	2009	Journal of the American Planning Association	https://www.tandfonline-com.mutex.gmu.edu/doi/abs/10.1080/01944360802458013	This research project measured the rates of obesity and physical activity for 51 residents of Salt Lake City, UT, before and after the opening of a new light rail stop using body mass index and accelerometer data.				X				
17	Transportation and Public Health Peer Exchange Summary of Key Findings	ICF International	2015	AASHTO Center for Environmental Excellence		On December 16, 2014 the Center for Environmental Excellence by AASHTO hosted a Transportation and Health Peer Exchange to facilitate a discussion among state department of transportations (DOTs) on how to better understand and coordinate efforts within AASHTO to support the linkages between health and transportation. A survey was initiated and sent to 14 committee liaisons, and 4 Standing Committees which revealed the most popular areas of interest included identifying performance measures, identifying positive health impacts, and the role of state DOTs. A national peer exchange was held including FHWA and 25 people representing 12 state DOTs. Session focused on health impact assessment and NEPA, planning, highway traffic safety, and public transportation. Three key themes emerged from the peer exchange including a focus on clarifying the roles of state DOTs in collaborating with health agencies; cultivating two-way communications through committees and working groups; as well as,							Peer exchange white paper	

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
						data sources to better understand how transportation investments affect health outcomes.									
18	FOOD FOR ALL: Inclusive Food Planning in Austin, Texas	American Planning Association	n.d. (2017 is latest citation)	American Planning Association	https://planning-org-uploaded-media.s3.amazonaws.com/document/Plan4Health-Case-Study-Food-for-All-Austin-Texas.pdf	With support from Professors Erin Lentz and Raj Patel of the Lyndon B. Johnson School of Public Affairs, Austin’s Office of Sustainability created Food for All: Inclusive Neighborhood Food Planning in Austin, using an approach that pilots the development of inclusive neighborhood food system planning. This Plan4Health project focused on engaging directly with residents, retailers, and community leaders to develop a positively framed set of policy interventions that address barriers to accessing healthy food. Framing discussions around “what is great about your community” rather than “what is wrong with it” helped to identify key assets in the community—churches, families, and community groups—and to better understand the challenges faced by the area’s residents. Research included a comprehensive analysis, survey area food retailers, lead focus groups, interview community leaders, and present policy recommendations and solicit community feedback.				X	X				

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source							
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
19	METRICS FOR PLANNING HEALTHY COMMUNITIES	Anna Ricklin, Sagar Shah	2017	American Planning Association	https://planning-org-uploaded-media.s3.amazonaws.com/document/Metrics-Planning-Healthy-Communities.pdf	With the aim to strengthen multisector coalitions and integrate health into planning practices and decisions, The American Planning Association (APA) has developed a set of Healthy Planning Metrics that can be used to assess, measure, monitor, and report progress toward healthy planning goals. The tool leverages existing indicator systems, indexes, interactive maps, and literature about social determinants of health. Based on the research and feedback from the advisory committee, APA has identified the following five domains where planners could intervene to improve health: 1) active living, 2) healthy food system, 3) environmental exposure, 4) emergency preparedness, and 5) social cohesion. These five domains are further divided into 14 different subdomains based on different topics.					X			
20	Healthy Environments Collaborative Policy Analysis: Transportation Focused Policy Issues and Potential Solutions	NC DPH Staff	2011	NC DPH		NC was awarded two years of American Recovery and Reinvestment Act (ARRA) funding to develop an inter-departmental policy initiative related to physical activity environments in the state. The NC Communities Putting Prevention to Work (CPPW) project began February 2010 and will end February 2012. The goal of the project is to help each of four state agencies address policy issues that will improve and increase access to places for physical activity – such as sidewalks, bike lanes, greenways and parks - throughout the state. The project is facilitated by the Physical Activity and Nutrition (PAN) Branch in the NC Division of Public Health (NC DHHS) and relies on a working collaboration with three other state agencies (NC Dept of Transportation; NC Dept of Environment and Natural Resources; and NC Dept of Commerce). The inter-departmental collaboration is called the Healthy Environments Collaborative (HEC).	X							

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
21	Regionally Coordinated Transportation Plan	Permian Basin MPO and the Regionally Coordinated Transportation Planning Committee	2013	Permian Basin MPO	http://permianbasinmpo.com/images/documents/2013_Regional_Plan-Amended_03092016.compressed.pdf	Regional coordination in regard to public transportation has been in existence since 2006, due to the passage of House Bill 3588 of the Texas Legislature. The process has been a group effort as public, private, and nonprofit agencies have been committed to solving the transportation issues that plague the state. The Regionally Coordinated Transportation Planning (RCTP) document serves to codify the existing practices that demonstrate continued communication, collaboration and coordination that is already evident in the region. Also, it is the intent of the Regional Stakeholders to pursue funding for projects outlined in the RCTP plan, as well as to continue to examine, evaluate and implement updates and revisions as appropriate to all items identified in the report.	X							
22	Use of Health Impact Assessment for Transportation Planning	Andrew L. Dannenberg, Anna Ricklin, Catherine L. Ross, Michael Schwartz, Julie West, Steve White, and Megan L. Wier	2014	Transportation Research Record: Journal of the Transportation Research Board	https://trjjournalonline.trb.org/doi/abs/10.3141/2452-09	A health impact assessment (HIA) is a tool that can be used to inform transportation planners of the potential health consequences of their decisions. Although dozens of transportation-related HIAs have been completed in the United States, the characteristics of these HIAs and the interactions between public health professionals and transportation decision makers in these HIAs have not been documented. A master list of completed HIAs was used to identify transportation-related HIAs. Seventy-three transportation-related HIAs conducted in 22 states between 2004 and 2013 were identified. The HIAs were conducted for projects such as road redevelopments, bridge replacements, and development of trails and public transit. Policies such as road pricing, transit service levels, speed limits, complete streets, and safe routes to schools were also assessed. Five HIAs in which substantial interactions between public health and transportation professionals took place during and after the HIA were examined in detail and included HIAs of the road pricing policy in San Francisco, California; a bridge replacement in Seattle, Washington; new transit lines in Baltimore, Maryland, and Portland, Oregon; and the BeltLine transit, trails, and parks project in Atlanta, Georgia. Recommendations from the HIAs led to changes in decisions in some cases and helped to raise awareness of health issues by transportation decision makers in all cases. HIAs are now used for many topics in transportation. The range of involvement of transportation decision makers in the conduct of HIAs varies. These			X	X				

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
						case studies may serve as models for the conduct of future transportation-related HIAs, because the involvement of transportation agencies may increase the likelihood that an HIA will influence subsequent decisions.								
23	How to Engage Low-Literacy and Limited-English-Proficiency Populations in Transportation Decisionmaking	Anne Morris	2006	FHWA	https://www.fhwa.dot.gov/planning/publications/low_limited/index.cfm	This report documents “best practices” in identifying and engaging low-literacy and limited English-proficiency populations in transportation decision-making. These “best practices” were collected and organized into a six-step process that planning and project-development practitioners can employ during planning, project development, right-of-way acquisition, construction, operation and maintenance. This process provides a range of references, tools, techniques, insights, and/or approaches.	X							
24	SECURING FUNDING FOR SAFE ROUTES TO SCHOOL, BICYCLING AND WALKING: Coalitions, Connections, and Creativity	Margo Pedroso	2016	Safe Routes to School National Partnership	https://www.saferoutespartnership.org/sites/default/files/resource_files/ds-11789_vfhk_case_studies_campaigns.pdf	This case study includes highlights and lessons learned from six different funding campaigns for Safe Routes to School, bicycling, and walking in Colorado, Illinois, Minnesota, Pennsylvania, Washington, and the Portland, Oregon region. In part, it summarizes communication strategies involved in these campaigns. This info brief includes highlights and lessons learned from six different funding campaigns that took place in the past five years to help inform and advance future efforts to secure more funding for Safe Routes to School, bicycling, and walking.			X					

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
25	Health Impact Assessment: Ortiz Avenue Road Widening	Margaret E. Banyan, Ph.D., Vitor Hugo Suguri, MPA	n.d. (2013 is latest citation date)	Pew Charitable Trusts	http://www.pewtrusts.org/en/~/media/assets/external-sites/health-impact-project/ortizaveroadwideninghiarreport	Health Impact Assessment (HIA) are increasingly being applied outside of health. This paper provides several case study examples where 'Rapid HIAs' were used to influence project changes to mitigate negative effects or enhance favorable outcomes.									NGO guidance document
26	Bicycle Road Safety Audit Guidelines and Prompt Lists	Dan Nabors, Elissa Goughnour, Libby Thomas, William DeSantis, Michael Sawyer	2012	FHWA	https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa12018/fhwasa12018.pdf	The use of bicycle safety audits is growing advocates and other organizations. The guidance by FHWA on conducting Bicycle Road Safety Audits is useful in identifying what types of things designers look at and how to communicate the terms that designers use. The guide also provides quick reference to bicyclist safety needs and perceptions about safety bicyclists have while riding. Road Safety Audits (RSAs) are a formal safety examination of an existing or future roadway or off- road facility and are conducted by an independent, experienced, multidisciplinary team. The purpose of the Bicycle Road Safety Audit Guidelines and Prompt Lists is to provide transportation agencies and RSA teams with a better understanding of the safety of cyclists in the transportation system when conducting an RSA. These Guidelines present the RSA team with an overview of basic principles of the safety of cyclists and potential issues affecting cyclists. They also provide information on how to conduct an RSA and effectively assess the safety of cyclists. Prompt lists describe safety considerations when conducting a cyclist- specific RSA. These Guidelines will help RSA teams evaluate and suggest a multimodal approach to safety by improving the safety of cyclists and all roadway users.									

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source								
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
27	Understanding and Improving Arterial Roads to Support Public Health and Transportation Goals	Carolyn McAndrews, PhD, MCP, MS, Keshia M. Pollack, PhD, MPH, David Berrigan, PhD, MPH, MS, Andrew L. Dannenberg, MD, MPH, and Ed J. Christopher, MUPP	2017	American Journal of Public Health	https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2017.303898	Arterials are types of roads designed to carry high volumes of motorized traffic. They are an integral part of transportation systems worldwide and exposure to them is ubiquitous, especially in urban areas. Arterials provide access to diverse commercial and cultural resources, which can positively influence community health by supporting social cohesion as well as economic and cultural opportunities. They can negatively influence health via safety issues, noise, air pollution, and lack of economic development. The aims of public health and transportation partially overlap; efforts to improve arterials can meet goals of both professions. Two trends in arterial design show promise. First, transportation professionals increasingly define the performance of arterials via metrics accounting for pedestrians, cyclists, transit riders, and nearby residents in addition to motor vehicle users. Second, applying traffic engineering and design can generate safety, air quality, and livability benefits, but we need evidence to support these interventions. We describe the importance of arterials (including exposures, health behaviors, effects on equity, and resulting health outcomes) and make the case for public health collaborations with the transportation sector.				X					Linked from the TRB Task Force on Arterials and Public Health
28	MountainElements: A Health Impact Assessment	Kostelec, D. and Chris Danley, via MountainWise	2015	MountainWise	http://mountainwise.org/wp-content/uploads/2014/01/20141101_MountainElements_HIA-DRAFT-LowRes.pdf	The regional HIA for rural, southern Appalachia was intended to a long-term communication tool for continued health policy, funding and project interventions in an 8-county area of Western North Carolina. Specifically, for communication, the HIA reviewed all county- and municipal-level transportation, land use, parks/rec/open space, and economic development plans within the region, and synthesized the likely cumulative effects of those efforts into what would be likely health impacts if implemented, or what might be necessary to alter as a result of the HIA. The communication tools used were key informant interviews, data analysis of census-tract level data from the US Census, the NC Department of Health and Human Services, and other various data sources including NC Department of Transportation. A key communication element was data confirmation or conflict identification through key informant interviews to validate the findings of the tract-	X					X			

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
						level analysis. The HIA tied topics such as food systems planning to transportation and land use. It also identified transportation-specific priorities, such as linking active transportation networks and identifying that NCDOT did not comply with requirements of the Americans with Disabilities Act in its design and construction practices.								
29	A Health Impact Assessment of Proposed Public Transportation Service Cuts and Fare Increases in Boston, Massachusetts (U.S.A.)	James P, Ito K, Buonocore JJ, Levy JI, Arcaya MC.	2014	International Journal of Environmental Research and Public Health.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4143846/	Transportation decisions have health consequences that are often not incorporated into policy-making processes. Health Impact Assessment (HIA) is a process that can be used to evaluate health effects of transportation policy. We present a rapid HIA, conducted over eight weeks, evaluating health and economic effects of proposed fare increases and service cuts to Boston, Massachusetts’ public transportation system. We used transportation modeling in concert with tools allowing for quantification and monetization of multiple pathways. We estimated health and economic costs of proposed public transportation system changes to be hundreds of millions of dollars per year, exceeding the budget gap the public transportation authority was required to close. Significant health pathways included crashes, air pollution, and physical activity. The HIA enabled stakeholders to advocate for more modest fare increases and service cuts, which were eventually adopted by decision makers. This HIA was among the first to quantify and monetize multiple pathways linking transportation decisions with health and economic outcomes, using approaches that could be applied in different settings. Including health costs in transportation decisions can lead to policy choices with both economic and public health benefits.	X			X				

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source							
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
30	A New Way to Talk About The Social Determinants of Health	Jane Isaacs Lowe, PhD, Robert Wood Johnson Foundation	2010	Robert Wood Johnson Foundation	https://societyforhealthpsychology.org/wp-content/uploads/2016/08/rwjf63023.pdf	While this is geared more toward working with legislative policy-makers and grantees of RWJF, it has merit in terms of communicating the concepts of social determinants of health to those who do not work with those factors and related data. While social determinants were well established in academic circles and have been the subject of considerable study, they quickly discovered that the concept didn't work on the ground. The grantees—most of whom were dealing with real challenges at the community level, didn't necessarily resonate with this frame of reference regarding social determinants. For some it was so patently obvious that it became a truism. And as unsuccessful as the concept was for existing grantees, it made even less sense to organizations that approached the team for funding who hadn't worked with RWJF before. The document outlines terms and phrases that can be used to articulate social determinants for a variety of political contexts. It also outlines effect ways to use health facts to counter skepticism on the topic.								Foundation document
31	Developing a Livability Program for Indian Reservations: A Methodology and Case Study	Sanjay Pokharel; Debbie S. Shinstine, P.E., Ph.D.; Khaled Ksaibati, Ph.D., P.E.	2015	Mountain-Plans Consortium	https://www.ugpti.org/resources/reports/downloads/mpc15-293.pdf	Livability is a fairly new concept well understood in urban areas, but less so in rural areas and Indian reservations. A methodology was developed to identify the important livability issues for Tribal communities and consists of data collection, analysis, and development of the program. The methodology was implemented on the Wind River Indian Reservation (WRIR). Data was collected from a needs determination survey known as the WINDS III, and also from stakeholder and resident surveys. Common livability themes from the different sources of information were discovered. A definition was formulated, which focuses on a community having well-maintained roads with safe pedestrian/bicycle facilities that benefit people by providing access to jobs, health care, and recreational activities and by preserving the culture and sovereignty. The final step in the methodology was to develop a livability program that includes the existing programs and projects. It also will include other programs for future consideration, which address identified issues. Coordination and collaboration is important to the success of a practical livability program and includes engaging the community for feedback and			X					

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
						review. This methodology can be implemented on other Indian reservations across the United States and will require coordination with other states, tribal governments, Local Technical Assistance Program (LTAP), and Tribal Technical Assistance Program (TTAP) centers. The commonalities from a broader implementation will provide comparisons and analysis of important issues of livability on Indian reservations, which will help guide tribes to make decisions and better allocate resources for transportation, economic development, and improved quality of life.								
32	Walkable Communities Expert Roundtable Report	Association of State and Territorial Health Officials (ASTHO)	2015	ASTHO	http://www.astho.org/Programs/Prevention/Obesity-and-Wellness/Walkable-Communities-Expert-Roundtable-Report/	As per the introduction: "ASTHO held the Walkable Communities Expert Roundtable Meeting on March 19, 2015, in Arlington, Virginia. The agenda revolved around the following three primary goals: 1. Learn from state and local challenges and successes to achieve walkable communities. 2. Identify current areas of research that can support these challenges. 3. Identify gaps and areas for needed research to support state and local community policies to promote walking."								Summary of expert opinions and gathering

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
33	Exploring Opportunities for Engaging Public Health Organizations in Transportation Planning	Jianling Li, Colleen Casey, and Lou K. Brewer	2015	Public Works Management & Policy	http://journals.sagepub.com/doi/abs/10.1177/1087724X14559520?journalCode=pwma	Despite a call for collaboration, there remain challenges to engaging the public health community in the regional transportation planning process. Using an integrated framework of network theory and collaborative planning, we explore collaboration barriers and opportunities between transportation and public health communities. Analysis of primary data collected from a focus group and secondary data from 43 national case studies suggests that major perceived barriers include a lack of formal and informal mechanisms and knowledge management practices that facilitate collaboration. Coordination of policies at multiple levels, leadership, trust, and data sharing are recognized as important tools for collaboration. Implications are discussed.				X				
34	Transportation Matters: A Health Impact Assessment in Rural New Mexico	Michelle Del Rio, William L. Hargrove, Joe Tomaka, and Marcelo Korc	2017	International Journal of Environmental Research and Public Health	http://www.mdpi.com/1660-4601/14/6/629	This Health Impact Assessment (HIA) informed the decision of expanding public transportation services to rural, low income communities of southern Doña Ana County, New Mexico on the U.S./Mexico border. The HIA focused on impacts of access to health care services, education, and economic development opportunities. Qualitative and quantitative data were collected from surveys of community members, key informant interviews, a focus group with community health workers, and passenger surveys during an initial introduction of the transit system. Results from the survey showed that a high percentage of respondents would use the bus system to access the following: (1) 84% for health services; (2) 83% for formal and informal education opportunities; and (3) 81% for economic opportunities. Results from interviews and the focus group supported the benefits of access to services but many were concerned with the high costs of providing bus service in a rural area. We conclude that implementing the bus system would have major impacts on resident's health through improved access to: (1) health services, and fresh foods, especially for older adults; (2) education opportunities, such as community colleges, universities, and adult learning, especially for young adults; and (3) economic opportunities, especially jobs, job training, and consumer goods and services. We highlight the challenges associated with public transportation in rural areas where there are: (1) long distances to travel;				X				

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						(2) difficulties in scheduling to meet all needs; and (3) poor road and walking conditions for bus stops. The results are applicable to low income and fairly disconnected rural areas, where access to health, education, and economic opportunities are limited.								
35	Advocating for Safe and Healthy Public Transportation: Increasing Health Participation within a Multisectoral Framework	Mirta Roses-Periago, Socorro Gross-Galiano, Luiz Augusto C. Galvão, Alberto Concha-Eastman, Eugênia Maria Silveira Rodrigues	2009	Pan American Health Organization		Transportation systems are very complex and require consideration of a large number of variables and approaches from different sectors as well as an understanding of multiple and interacting contexts. And while transportation systems are useful to and needed by society, they can be hazardous to human health. The text opens with a discussion of the complex interactions that exist within transportation systems. It then describes how different modes of transportation produce distinct benefits as well as risks and proceeds to focus on how well-integrated multimodal public transportation systems can produce the greatest number of benefits. Incorporating the participation of public health professionals in all aspects of transportation systems facilitates the opportunity for the promotion of healthy behaviors, since this group can provide expert guidance in the prevention of negative health outcomes and a proper response to health events. A key concept is that many of the health consequences that come out of the design and use of transportation systems have multiple causes. Some of these are	X							

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						immediate, and most are frequently modified by more long-term structural causes (environmental design or system functioning) that can be examined and acted upon to improve human health.								
36	Using Health Impact Assessments to Enhance the Environmental Regulatory Process: Case Studies and Key Messages	Kathy Dolan, K., Wyss, K., Condon, S. Vanderslice, R., Baker, A., White, J.D.	2017	ASTHO	http://www.astho.org/Environmental-Health/Using-HIA-to-Enhance-the-Environmental-Regulatory-Process/	The document is a summary of case studies on HIA's conducted, many of which were transportation based. Each case study discusses the project and how the HIA process informed the final iteration, recommendations made, and the collaboration had throughout. Many cases gave indication of the HIA value when compared with EIS and the lessons learned from those outside public health.			X					
37	Emerging issues in improving food and physical activity environments: Strategies for addressing land use, transportation, and safety in 3 California-wide initiatives	Aboelata, M., & Navarro, A.	2010	American Journal of Public Health	https://ajph-aphapublications-org.mutex.gmu.edu/doi/10.2105/AJPH.2010.193466	This paper provides an overview of three community process strategies that may be associated with the successful development and implementation of long-term community improvement efforts—engaging local advocates, linking safety to health, and collaborating with local government officials.				X				

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
38	Health, traffic, and environmental justice: Collaborative research and community action in San Francisco, California	Wier, M., Sciammas, C., Seto, E., Bhatia, R., & Rivard, T.	2009	American Journal of Public Health	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2774185/	This case study brought together the grassroots organization People Organizing to Demand Environmental and Economic Right; the San Francisco Department of Public Health; and the University of California, Berkeley in collaboration to conduct a case study assessment of the health impacts of the construction of an intra-urban freeway in southeast San Francisco, CA.				X				
39	Bicycle helmet promotion among low income preschool children	Britt, J., Silver, I., & Rivara, F.	1998	Injury Prevention: Journal of the International Society for Child and Adolescent Injury Prevention		This study used observations of helmet use changes before and after an intervention for both case and control sites of children enrolled in Preschool Head Start programs with a home-visiting component (244 children in 1996 and 188 children in 1997 for the case, 149 control children).			X					
40	Elevating health & equity into the Sustainable Communities Strategy (SCS) process; SCS health & equity performance metrics.	Human Impact Partners	2011	Human Impact Partners	https://saferoutescalifornia.files.wordpress.com/2011/09/scs-health-equity-indicators-report_8_29_11.pdf	SCS health & equity performance metrics.: This paper is the result of research conducted to develop metrics to measure the implementation of California’s SB375, a bill intended to decrease emissions of greenhouse gases. These metrics were developed by Human Impact Partners and a statewide group of public health advocates.	X							
41	TRB ADA60 - Communicating the Connection of Transportation and Public Health, 2016	Trailnet, Northwest Air Quality Communicators, Utah Department of Transportation, Southern California Environmental Health Sciences Center/Children's Environmental Health Center, University of Southern California	2016	TRB Committee ADA 60: TRB Committee on Public Involvement	https://sites.google.com/site/trbcommitteeada60/jipcompetition/2016-communicating-the-connection-transportation-and-public-health	Results of a competition on fresh and creative methods for communicating technical transportation issues with 'John and Jane Q. Public' to share with others in the profession, focusing on communicating the connection between transportation and public health. Four recipients were selected for the competition showcase for their successful communication efforts.				X		X		

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
42	Potential strategies to eliminate built environment disparities for disadvantaged and vulnerable communities	Hutch, D. J., Bouye, K. E., Skillen, E., Lee, C., Whitehead, L., & Rashid, J. R.	2011	American Journal of Public Health	https://ajph-aphapublications.org.mutex.gmu.edu/doi/10.2105/AJPH.2009.173872	This paper presents the outcomes of the 2006 Federal Collaboration on Health Disparities Research project, including a conceptual framework of the built environment and disparities in health.				X				
43	Three primary: How Does Transportation Impact Health?, Designing for Active Transportation, Do Health Impact Assessments Make a Difference?,	Robert Wood Johnson Foundation	2012, 2005, 2014	Robert Wood Johnson Foundation	https://www.rwjf.org/en/library/research/2012/10/how-does-transportation-impact-health-.html https://www.rwjf.org/en/library/research/2005/02/designing-for-active-transportation.html https://www.rwjf.org/en/library/research/2014/04/do-health-impact-assessments-make-a-difference-.html	How does transportation impact health?: Provides resources on the hidden costs of transportation, and highlights the benefits of walkable, bikeable, transit-oriented communities Designing for Active Transportation: Highlights hazards of physical inactivity, and emphasizes that planning, community design, and health behavior studies often find that the built environment influences whether people drive, use transit, or walk/bike. Provides a list of references to support the argument. Do Health Impact Assessments Make a Difference?: Introduces Health Impact Assessments to a non-expert audience. Highlights the way HIAs can lead to stronger cross-sector relationships. Evaluated 23 HIAs, some funded by the RWJF, some funded by other sources, and found that in 11 out of the 23, the HIA contributed to the decision-making process. This document provided the best information on communication or coordination strategies and is the focus of subsequent questions on this survey.				X				
44	A Review of Health Impact Assessments in the U.S.: Current State-of-Science, Best Practices, and Areas for Improvement	Rhodus J, Fulk F, Autrey B, O’Shea S, Roth A.	2013	Environmental Protection Agency	http://www.pewtrusts.org/en/~/media/assets/external-sites/health-impact-project/reviewhia.pdf	This review focused on HIAs from the four sectors that the U.S. Environmental Protection Agency’s (EPA’s) Sustainable and Healthy Communities Research Program has identified as target areas for empowering communities to move toward more sustainable states. These four sectors are Transportation, Housing/Buildings/Infrastructure, Land Use, and Waste Management/Site Revitalization.	X							

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
45	FHWA Health in Transportation website, especially Framework for Better Integrating Health into Transportation Corridor Planning	FHWA: Office of planning Environment, & Realty (HEP)	2017	FHWA	https://www.fhwa.dot.gov/planning/health_in_transportation/	Document targeted at transportation agencies seeking to integrate health into corridor planning studies. Steps can be matched to an existing corridor planning process. Step 1: define transportation problems and public health issues; step 2: identify transportation and health needs, resources, and priorities; Step 3: develop goals and objectives that promote health in the community; step 4: establish evaluation criteria that include public health; step 5: develop and evaluate alternatives and their health impacts; step 6: identify alternatives that support health in the community. Each step includes a list of questions targeted at transportation practitioners to consider whether appropriate stakeholders are part of the process, consider how to engage stakeholders, consider health objectives, etc. Data sources (wide-ranging list of resources including the Census, CTPP, Strava) are included, as well as examples from practice (such as the California Health in All Policies Task Force, the North Carolina Healthy Environments Collaborative, the Minnesota Department of Transportation's Corridor Investment Management Strategy, and others).	X		X		X			
46	Community Vision and Interagency Alignment: A Community Planning Process to Promote Active Transportation	Sarah Timmins DeGregory, MPH, Nupur Chaudhury, MPH, MUP, Patrick Kennedy, MUP, Philip Noyes, MPH, MA, and Aletha Maybank, MD, MPH	2016	American Journal of Public Health	https://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2015.303024	In 2010, the Brooklyn Active Transportation Community Planning Initiative launched in 2 New York City neighborhoods. Over a 2-year planning period, residents participated in surveys, school and community forums, neighborhood street assessments, and activation events—activities that highlighted the need for safer streets locally. Consensus among residents and key multisectoral stakeholders, including city agencies and community-based organizations, was garnered in support of a planned expansion of bicycling infrastructure. The process of building on community assets and applying a collective impact approach yielded changes in the built environment, attracted new partners and resources, and helped to restore a sense of power among residents.				X				

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
47	Community Engagement	Oregon Office on Disability and Health	n.d.	Oregon Office on Disability and Health website	https://www.ohsu.edu/xd/research/centers-institutes/oregon-office-on-disability-and-health/programs/health-care-access/community-engagement.cfm	The Community Engagement Initiative brings together individuals with disabilities, disability organizations and advocates, local governments, health care providers, and transportation providers to solve barriers to health care related to transportation, facility access and services, and provider issues. The process includes town hall meetings, infrastructure meetings, and community mobilization strategies. The CEI guide and workbook have practical tools that may provide a foundation for other transportation and health collaborative efforts.	X								
48	HealthTran Links Transit to Health	Rural Health Information Hub	2018	Rural Health Information Hub website	https://www.ruralhealthinfo.org/project-examples/859	This case study describes a transportation to fill a gap between transportation and health care in rural Missouri. The program is based on a partnership between a number of transit and health providers and has been highly successful. It has improved healthcare access and has reduced the cost of healthcare and improved outcomes for most patients.			X						
49	Paris Metro Transportation	Rural Health Information Hub	2017	Rural Health Information Hub website	https://www.ruralhealthinfo.org/project-examples/954	This brief case study describes a partnership among a Council of Governments, Regional Medical Center, City, College, non-profits, and private companies to establish a public private partnership to improve transit options for health care in Paris, Texas.			X						
50	A Regional Government Primer for Practitioners	Safe Routes to School National Partnership	n.d.	Safe Routes to School National Partnership website	http://www.saferoutespartnership.org/sites/default/files/pdf/RegionalGovernmentPrimerforPractitioners-v5.pdf	This is a brief guide that provides people working with SRTS with general communications guidance relevant to regional governments. It provides an overview of regional government, including MPOs, and their role in transportation projects.	X								
51	A Primer to Understanding the Role of the Municipal Transportation Department	Safe Routes to School National Partnership	n.d.	Safe Routes to School National Partnership website	http://www.saferoutespartnership.org/sites/default/files/pdf/Primer-to-Understanding-the-Role-of-Municipal-Transportation-Departments.pdf	This is a guide to help SRTS advocates understand the role of local transportation agencies and how to communicate with them. There is practical guidance for communication that may apply to broader health and transportation collaborative efforts (e.g. "align talking points with the stated priorities of municipal transportation departments").		X							

Resource No.	Resource title	Author(s)	Publication year	Publication	Web link(s)	Brief abstract	Resource source							
							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
52	Vision Zero Action Plan and Equity	Portland Bureau of Transportation	n.d.	City of Portland website	https://www.portlandoregon.gov/transportation/article/657943	This page describes how equity has been incorporated into Portland's Vision Zero Action Plan. The plan was developed by a 26-member task force representing agency and community stakeholders. It has links to more information about the Task Force, including its charter and members.		X						
53	San Francisco Department of Public Health Central Corridor Project	Centers for Disease Control	n.d.	Centers for Disease Control website	https://www.cdc.gov/healthyplaces/stories/san_francisco.htm	This is a HIA case study for San Francisco's Municipal Railway (Muni). The HIA used the Sustainable Communities Index in combination with resident feedback from multiple sources.			X					
54	Incorporating Health in Transportation Decisions	American Public Health Association	2017	Webinar	https://www.apha.org/events-and-meetings/apha-calendar/webinar-events/2017/health-in-transportation	This APHA webinar presents case studies using the THT.						X		
55	Health Metrics to Shape Transportation Investment	American Public Health Association and Centers for Disease Control	n.d.	American Public Health Association	https://www.apha.org/-/media/files/pdf/topics/transport/2017_tht_florida.ashx?la=en&hash=4E0FBCFED8FE7B31550CA37F14C85EF3BA95E251	This is a case study example of using the Transportation and Health Tool to integrate health into long-range planning and corridor studies in Central Florida. Metroplan is considering using up to 10 indicators in the THT to support objectives, goals, and performance measures in the long-range plan. They are building on examples of using the THT in corridor studies and collaborations for HIAs.			X					
56	Transportation Health Tool Workshop	East Central Wisconsin Regional Planning Commission	2016	Workshop website	http://www.ecwrpc.org/2016/09/20/transportation-health-tool-tht-workshop/	The goal for this workshop was to bring together transportation and health professionals to identify ways that they can work together and discuss how the health in transportation tool can be used for performance measures. This is a useful case study to show what a workshop to launch collaborative efforts might look like.						X		

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)	
57	New Data and Strategies to Shape Major Streets Plan	American Public Health Association and Centers for Disease Control	n.d.	American Public Health Association	https://www.apha.org/-/media/files/pdf/topics/transport/2017_tht_chattanooga.ashx?la=en&hash=1CD42C23C45B6271F78AF9FBC9149F9D950C92B2	This is a case study description showing how the Transportation and Health Tool is being used to support a new approach to the regional major streets plan by the Chattanooga-Hamilton County/North Georgia Transportation Planning Organization. The TPO is reviewing street classification and considering inclusion of health factors in its proposed classification system and evaluation criteria.			X						
58	Statewide Transportation Planning for Healthy Communities	William Lyons; Lindsey Morse; Logan Nash; Rachel Strauss	2014	Volpe Center FHWA	https://rosap.ntl.bts.gov/view/dot/12055	This white paper presents a framework for DOTs to integrate public health considerations into transportation planning and decision-making.	X								
59	Collaboration Multiplier	Prevention Institute	n.d.	Prevention Institute website	https://www.preventioninstitute.org/tools/collaboration-multiplier	Collaboration Multiplier is an online tool to help analyze collaborative efforts across fields. It is intended to help organizations identify partners and engage them, help those that already work together identify activities for shared goals, and create shared understanding in general.					X				
60	Ten Principles for Building Healthy Places	Eitler, Thomas W., Edward T. McMahon, and Theodore C.Thoerig.	2013		http://uli.org/wp-content/uploads/ULI-Documents/10-Principles-for-Building-Healthy-Places.pdf	This report discusses how the physical design of a place affects our mental and physical well-being. The report focuses on a workshop that confronts a primary challenge in creating healthy places - a lack of common language between the medical and land use community.									Summary Report of Workshop
61	METROPOLITAN AREA TRANSPORTATION PLANNING FOR HEALTHY COMMUNITIES	William Lyons, Haley Peckett, Lindsey Morse, Monisha Khurana, Logan Nash	2012	U.S. Department of Transportation Office of Planning, Environment, and Realty	https://www.planning.dot.gov/documents/Volpe_FHWA_MPOHealth_12122012.pdf	This white paper provides an approach for Metropolitan Planning Organizations to integrate health into the transportation planning process. The paper discusses how health can be considered during all stages of the transportation planning process. It evaluates how health considerations play a role in active transport, safety, air pollution, and access to opportunities that support healthy lifestyles. The paper also includes summaries of policies, regulations, and programs of which MPOs could incorporate health.	X								

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							Agency/government guidance document	Agency/government plan or policy document	Case study	Journal/ periodical article	Online tool	Presentation (conferences, webinars, etc.)	Thesis paper/ dissertation	Other (please specify)
62	The central role of public health in Vision Zero	Fleisher, Arielle	2016	Vision Zero Network	https://visionzeronetwork.org/the-central-role-of-public-health-in-vision-zero/	This report provides three case studies demonstrating how Vision Zero Focus Cities use public health tools in their Vision Zero efforts.			X					

APPENDIX B

MARKETING AND DISSEMINATION PLAN

Background

To help foster an environment where transportation processes are informed, considerate, and inclusive of public health conditions, a guidebook and resources have been developed to support effective transportation and public health stakeholder communications under this research. The NCHRP 25-25 Task 105 *Connecting Transportation and Health: A Guide to Communication and Collaboration* (“Guidebook”) and associated implementation pieces provide accessible, transportation practitioner-ready resources that describe the conditions under which such communications may occur and how they can take place most effectively. With a completed Guidebook and resources in place, an accompanying effort is needed to ensure the Guidebook is used by transportation practitioners and decision-makers throughout the United States. Public health agencies and other interested parties may also find the Guidebook useful and should be made aware of its availability even though they are not the focus audience. To this end, a brief outreach and dissemination plan is needed inclusive of the tasks, steps, and timetables to effectively communicate the existence and value of the Guidebook and other resources.

Purpose

The main determinant of the success of the Guidebook will be reaching the right audiences and providing them with resources that support active use of the Guidebook. The purpose of the dissemination plan is to achieve this outcome by outlining an approach for promoting and communicating the release and availability of the Guidebook and resources. The dissemination plan identifies planned and potential future methods of communication that can be used to publicize and promote the Guidebook, target audiences for these communications, key messages for communicating around the Guidebook, and how to assess the effectiveness of the dissemination strategies. The dissemination plan is accompanied by a preliminary list of the strategic partners and contacts who can assist in unveiling the guidebook.

Objectives

- Support the release of the Guidebook and supplementary resources
- Raise awareness of the release and availability of the Guidebook and resources
- Generate interest and promote active use of the Guidebook
- Educate and inform transportation professionals and planning partners about how to plan and carry out effective transportation and health coordination and communications
- Convey potential benefits for Guidebook implementation

Audiences

- Primary audiences: Transportation staff and decision-makers at State DOTs, regional and metropolitan planning organizations, transit agencies, and USDOT divisions.

- Secondary audiences: Local transportation professionals, transportation advocacy groups and non-profit organizations.
- Other interested parties: State health agencies, health and transportation foundations, health based non-profit organizations, and health-based advocacy organizations.

Communication Methods

The recommended Guidebook communication strategy of AASHTO and Guidebook partners entails a multi-pronged approach to communicate the availability and utility of the Guidebook through primary planned methods and optional methods that leading and participating agency representatives may undertake. The methods are identified below.

Primary Methods

- A **live online overview presentation** to provide an overview of the Guidebook, present the Guidebook sections, tools and resources, discuss how to use the Guidebook, and answer any questions from participating transportation professionals. Speakers involved in compelling transportation and health communication examples featured in the Guidebook will present and provide peer learning opportunities to online overview presentation participants. A recording will be made of the live online overview presentation and provided to be made available online and marketed to transportation audiences.
- A **PowerPoint presentation** to be used by sponsor agency staff and partners to help promote the Guidebook along with speakers notes to facilitate use and to ensure consistent messaging. The presentation will be flexible with a format to allow a presenter to highlight locally relevant examples if desired.
- A two-page **summary brochure** designed to serve as a primer and engage the interest of potential Guidebook users and to encourage use of the guidebook. The brochure will be developed in digital format and can be available for posting online and distribution by NCHRP and partner agency websites. It can be reproduced in hardcopy format as well for additional distribution.
- **Posting** research products on the TRB project website. The web link to this project will be featured in the online overview presentation and PowerPoint presentation.

A limited marketing campaign will be conducted via email and social media announcements to announce the Guidebook, share the date of the live online overview presentation, and provide a copy or link to the brochure to individuals on the target audience list. A separate contact list was developed to help panel members, NCHRP staff, and others involved with the project identify links with individuals and organizations from the target audiences. These links will help ensure that information is shared with the target audiences.

Under the existing research effort an announcement of the release and link to the Guidebook and resources will be shared with individuals who participated in web-based meetings of expert

transportation and health stakeholders with an encouragement for these interested individuals to share these resources within their organizations and with their partners.

Optional/Future Methods

Further marketing and dissemination of this Guidebook as an NCHRP product is reliant on the participating and partner agencies represented in the project panel, expert contributors, project team, and oversight team. The following are various strategies that could be implemented by participating and partner agencies represented. These strategies fall beyond the scope of the Guidebook development and core implementation tasks and are therefore suggested, optional actions.

- Create press releases to support launch of the Guidebook and resources.
- Provide notices for posting on USDOT, state DOT, and other key partner's websites.
- Consider cross-posting links to the Guidebook page on other relevant websites, such as AASHTO's active transportation site, FHWA's health website, TRB committee websites, or CDC's health tool website.
- Share postings to announce the Guidebook via social media outlets, including key agency partners.
- Promote the Guidebook via blogging or guest blogs.
- Post on RSS feeds and sharing notice of the Guidebook through listservs and mailing lists.
- Highlight the Guidebook through publications, articles, and features in key transportation publications and newsletters.
- Promote the Guidebook at relevant conferences using the presentation. A preview of the Guidebook is planned was presented at the 2019 Transportation Research Board Annual Meeting. Other conferences and meetings to consider for presentation include: the American Association of State Highway and Transportation Officials (AASHTO); Association of Metropolitan Planning Organizations (AMPO); American Public Transportation Association (APTA); and other organizations reaching primary Guidebook audiences. The presentation might also be shared through conference opportunities reaching secondary audiences or other interested parties, such as the American Planning Association (APA), Association of American Public Health Association (APHA), and others.
- Create content for a live/recorded video to be shared via YouTube/Vimeo including Guidebook tutorials and highlighted case studies.
- Conduct podcasts with popular industry groups.
- Use discussion forums.
- Prepare additional in-depth case studies that feature aspects such as key factors for successful transportation and health communications, performances measures for transportation and health communications success or emerging topics and practices.
- Conduct implementation workshops demonstrating use of the Guidebook and resources in applied contexts (similar to CDC-USDOT Transportation and Health Tool workshops).

Key Messages:

- AASHTO’s Committee on Environment and Sustainability identified a need for a communications guidebook, which was delivered through NCHRP 25-25, a quick-response research program designed to develop improvements to methods, procedures, and techniques employed by environmental practitioners.
- Professionals will learn about the intersecting interests and issues between transportation and health including at a minimum: safety and injury prevention; physical activity and active transportation; air quality; connectivity and access; evacuation and emergency response; and equity.
- The transportation sector has a number of opportunities within its typical processes for the inclusion of public health considerations. Public health can be considered within each phase (planning, policy development, corridor planning, programming, project development) and for projects large and small.
- The public health sector is vast and transportation officials will better understand the various organizations involved in public health and their areas of focus, as well as a range of common public health planning processes.
- For those who are still investigating the potential participation of public health in transportation processes, a section of the Guidebook is dedicated to exploring the various health-based organizations, advocacy groups, and on-going collaborations that transportation members can tap into and learn from so they can learn more about the various elements of public health.
- Guidebook users will understand the communication and collaboration strategies to optimize the participation of individuals and the agencies or constituents they represent. The Guidebook identifies typical collaboration strategies and describes their effectiveness and ideal use.
- The Guidebook has sufficient information for secondary audiences and interested partners in the transportation and health sectors to better understand processes, roles and opportunities associated with communications and coordination between transportation and public health stakeholders.
- Benefits of implementing the Guidebook for Communications between Transportation and Public Health Communities include: increased involvement of health stakeholders in transportation processes; better quality health data to support transportation decisions; communications that facilitate coordinated planning and goal-setting; and opportunities for joint/leveraged investments with health partners.

Assessing dissemination and communications

As the dissemination plan is implemented, progress can be monitored, and the approach and messaging adjusted as needed to optimize success of guidebook implementation. The questions below could guide the development of future metrics to assess the success of this plan.

Questions to consider as a part of this process:

- How well are we achieving our dissemination plan and audience outreach objectives?
- Are we adequately reaching our target audience members with different dissemination strategies?
- What feedback have our target audiences provided on the materials and products we disseminate?
- Are we hearing about increased communication between the two sectors through our partners?
- Are requests for additional presentations or resources being made? Are they by sector, within specific areas of transportation or health, regional or local?
- Is there need for more research or related guidebook or tools as a result of the feedback?