

“Health in All Policies”: Taking Stock of Emerging Practices to Incorporate Health in Decision Making in the United States

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Objective: Policies affecting the determinants of health lie largely outside the control of the health care and public health sectors. Ensuring health considerations in the formation and implementation of policies, programs, projects, and plans from all sectors, though lofty, is the overall aim of Health in All Policies. The purpose of this article was to identify categories of strategies that illustrate how Health in All Policies had been implemented in the United States. **Design:** We used a 3-phased process: (1) review of the published and gray literature; (2) analysis of case examples to identify a draft framework, which included tactics and strategies for implementing Health in All Policies; and (3) vetting the draft framework through individual and group consultation. **Results:** We identify 7 interrelated strategies for incorporating health considerations into decisions and systems: (1) developing and structuring cross-sector relationships; (2) incorporating health into decision-making processes; (3) enhancing workforce capacity; (4) coordinating funding and investments; (5) integrating research, evaluation and data systems; (6) synchronizing communications and messaging; and (7) implementing accountability structures. For each strategy, we provide illustrative examples from the United States to help public health leaders identify effective tactics for Health in All Policies implementation. **Conclusions:** Through our review, we offer a starting point for categorizing and describing the emerging practices used to work across sectors and address the determinants of health. By delineating the different types of strategies and tactics to achieve Health in All Policies, we provide public health practitioners with a “menu” of options for incorporating Health in All Policies into their work.

KEY WORDS: Health in All Policies, healthy public policy, intersectoral action on health

Health is determined by multiple factors outside the direct control of the health care sector, such as education, income, and the conditions in which people live, work, and play.¹⁻³ Research shows that differences in health care account for as little as 10% of the variability in premature deaths, whereas social, environmental, and behavioral factors account for 60%.⁴ Decisions made by multiple sectors can either positively or negatively affect the determinants of health, for example, through implementing zoning regulations, funding transportation infrastructure, adopting labor standards, increasing high school graduation rates, or making housing modifications.⁵ Public health professionals and policy makers are unlikely to achieve significant progress on the health challenges facing our nation without involving a range of sectors and

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partners such as educators, planners, employers, and manufacturers.⁵⁻⁸

Health in All Policies (HiAP) is defined as an approach that aims to integrate health considerations in decision making across different sectors that influence health, such as transportation, agriculture, land use, housing, public safety, and education.^{8,9} The phrase “health in all policies” is not meant to suggest that health be at the center of every policy; rather, HiAP emphasizes the need to collaborate across sectors to achieve common goals.⁹⁻¹¹ HiAP builds off the concepts embedded in “healthy public policy” and “intersectoral action for health” that have been promoted internationally over the past 4 decades^{8,9} and reaffirms public health’s essential role in addressing the policy and structural factors affecting health articulated by the Ten Essential Public Health Services.¹² HiAP has begun to emerge in the United States with the creation of the National Prevention Council and the California Health in All Policies Task Force^{13,14} and the increasing use of Health Impact Assessment (HIA), one frequently cited mechanism for integrating health criteria into decision making.^{15,16}

The emergence of HiAP provides a potential window of opportunity and a mechanism for public health practitioners to enhance collaboration with nontraditional partners and integrate health considerations into decisions and systems. To more fully implement HiAP in the United States, public health practitioners and policy makers could benefit from a framework that defines a set of methods and practices for implementing HiAP, illustrated by domestic case examples.^{17,18} Therefore, we sought to identify examples of cross-sector work in the United States to identify, categorize, and describe methods for implementing HiAP nationally. Although HiAP entails collaboration with multiple public and private stakeholders, we considered examples primarily within local, state, and federal government because this group represents the audience where we (authors) have the greatest expertise and opportunity to provide leadership. By articulating more specifically what HiAP is in practice, we provide practitioners with tangible implementation strategies and lay the foundation to describe and measure the effectiveness of different HiAP models and track changes in HiAP implementation over time.

● Methods

The purpose of this article is to identify categories of strategies (a framework) that illustrate how HiAP can be implemented in the United States. To accomplish this task, we used a 3-phased process: (1) review of the published and gray literature; (2) analysis of case examples

to identify a draft framework, which included tactics (methods or categories of actions to implement HiAP) and broader strategies for implementing HiAP (tactics that were thematically related); and (3) vetting the draft framework through individual and group consultation.

Phase 1: Literature review

We began our formative research by reviewing published and gray literature to identify practice-based examples of HiAP implementation, such as HIA and cross-sector governing bodies. To make HiAP more conceptually clear, we used current definitions of HiAP^{8,9,17} to define HiAP as: incorporating health into decision making by (or working with) non-health sectors. In our work, examples of HiAP implementation did not have to be explicitly classified as “Health in All Policies.” As described in our results, various actors (government, academia, community-based organizations) currently apply a number of approaches to address the determinants of health by targeting policy processes. Although not explicitly called HiAP, these approaches could be considered a part of a HiAP “toolkit.” Therefore, search terms included “Health in All Policies,” “healthy public policy,” “intersectoral action on health,” “social determinants of health,” and “cross-agency/cross-sector efforts.” Much of the gray literature used in our review was drawn from existing collaborations and partners, including work conducted by the National Prevention Council and the California Health in All Policies Task Force, and organizations funded by the Centers for Disease Control and Prevention related to HiAP, including the National Association of County and City Health Officials, the Association of State and Territorial Health Officials, the National Network of Public Health Institutes, and the American Public Health Association.

Phase 2: Analysis of case examples

Our literature review yielded 76 resources (guidance documents, peer-reviewed publications, Web sites, or project narratives). One member of the study team conducted a content analysis of the resources to identify examples of HiAP implementation. Case examples were included in this study if they provided concrete methods or case studies of how to increase use of health criteria/considerations in decisions (ie, policies, programs, projects, plans) by non-health governmental actors. The identified examples were then independently reviewed by all members of the project team for themes to identify tactics for implementing HiAP (eg, conducting HIA, issuing joint cooperative agreements, establishing integrated data systems). After team members individually identified

tactics, the team met to share tactics and, through discussion, grouped these tactics ($n = 27$) into 6 categories (strategies). The team developed a bulleted list of the tactics and strategies (draft HiAP framework).

Phase 3: Vetting with experts

We then vetted the draft HiAP framework with experts through both individual ($n = 13$) and group consultations ($n = 5$ groups, representing 103 individuals). Individual experts were identified using purposive sampling in order to obtain input from those who had extensive experience working with other sectors to integrate health criteria into decision making (eg, conducting HIAs, leading cross-sector task forces). Individual experts were sent a copy of the draft HiAP framework and asked to provide written feedback on (a) the ways in which HiAP strategies were grouped and framed, (b) missing concepts or components of HiAP implementation, and (c) additional examples of HiAP implementation. All 13 experts who were contacted provided feedback. Group consultation was conducted through presentation of the draft framework at 4 standing workgroups and a roundtable discussion at the Inaugural National Health Impact Assessment Meeting (April 2012). We used a protocol with scripted domains to solicit feedback on (a) the ways in which the identified HiAP strategies were grouped and framed, (b) missing concepts or components of HiAP implementation, and (c) the relevance/utility of the work for a public health audience.

Feedback from all consultations was analyzed thematically by 2 members of the project team, with the aim of identifying additional tactics for implementing HiAP not included in the draft framework. After independent analysis, the team members agreed on 12 additional tactics. The framework was modified to include these tactics (for a total of 39) and one additional strategy (Table, columns 1 and 2). To help illustrate the application of each strategy, we included an example of its implementation at the national, state, or local level (identified through literature review or provided by the experts). Illustrative examples were chosen to reflect the topical, geographic, and methodological variety of identified examples (Table, columns 3-5).

● Results: Strategies for Implementing HiAP

We identified 7 interrelated strategies for implementing HiAP (Figure). These strategies were applied to multiple topics (eg, obesity, environmental quality, children's health) and often used in combination. We describe each strategy and provide an example of how it has

been employed at the national, state, and local level (Table).

Developing and structuring cross-sector relationships: Identify who needs to be involved and how interaction with diverse partners will be organized. Identified tactics for developing and structuring cross-sector relationships ranged from formal establishments, such as committees, councils or task forces, memorandums of understanding, and permanent structures for management, to informal mechanisms, such as temporary workgroups or teams, voluntary networks, and consultative mechanisms.^{8,19,20} Such governing structures can serve to coordinate work toward common goals and facilitate decision making. Formal structures can help ensure accountability; however, they may lack flexibility (eg, locking a group into a specific policy focus or set of partners). The majority of the formal governing structures we identified were created by a mandate (eg, executive order, legislation), served as a platform to launch HiAP work in the jurisdiction, and involved primarily governmental actors.

By laying the foundation for meaningful collaboration, public health practitioners can set the stage for successful HiAP implementation. For example, one of the first steps taken by the California Health in All Policies Task Force was to develop a shared vision of a healthy community and establish a dialogue with all member agencies to learn about their perspectives.¹⁴ The goals addressed by governing structures may or may not be explicitly health focused; for example, the North Carolina Sustainable Communities Task Force was created to “use resources to plan and accommodate healthy and equitable development without compromising natural systems and the needs of future generations of North Carolinians.”²¹ Having both health and non-health focused goals may allow a broader range of partners to see their role in the collaboration. Governing structures are more successful when they have clearly defined roles and responsibilities, high levels of political support, stable funding sources, and a backbone organization to coordinate participating agencies.^{7,19,22}

Incorporating health into decision-making processes: Identify mechanisms through which health can be considered when developing and implementing policies, programs, projects, and plans. Our assessment revealed a variety of tactics—and multiple time points—through which health can be integrated into decision-making, including strategic planning, development of common goals or objectives, health lens analysis, community needs assessments, HIA, checklists, guides or protocols, and embedding health considerations into existing initiatives. In our review, joint planning processes (strategic planning, developing common goals/objectives) were a common initial step in implementing a HiAP approach. For example, the first step in implementing

TABLE ● Examples of Health in All Policies Implementation at the Nation, State, and Local Levels**Illustrative Examples of Implementation of the Strategy^a**

Strategy	Tactics	National	State	Local
Developing and structuring cross-sector relationships	Formal committee, council, or task force Temporary workgroups or teams Voluntary networks Informal or formal consultation mechanisms Memorandums of understanding Permanent structures for management	The National Prevention, Health Promotion, and Public Health Council provides coordination and leadership at the federal level and among all executive agencies regarding prevention, wellness, and health promotion practices. It comprises the heads of 17 federal agencies and is chaired by the Surgeon General. ¹³	California's Health in All Policies Task Force provides a venue for state agencies and departments to advance multiple goals to support a healthier and more sustainable California. Created under the Governor's Executive Order, the task force seeks to improve the health of Californians while advancing the goals of the California Strategic Growth Council. ¹⁴	The Baltimore cross-agency health task force is charged with promoting cross-sector efforts to support Baltimore's priority health areas. Each agency is charged with promoting health through policies, programs, standard operating procedures, and practices that reflect their agency's mission and build from existing organizational infrastructure. The end goal of this process is to build agency champions to promote HiAP in order to make Baltimore a city where every resident realizes his or her full health potential. ⁵⁵
Incorporating health into decision-making processes	Cross-sector strategic planning and priority setting Development of common goals or objectives across sectors Health lens analysis Cross-sector community needs assessments Health Impact Assessment Checklists, guidelines, or protocols that integrate health criteria Embedding health considerations (goals, objectives, metrics) into existing initiatives	The America's Great Outdoors Initiative aims to conserve outdoor spaces and reconnect Americans to the outdoors. Twelve federal agencies worked together to develop a report that outlined a common vision, set of goals and recommendations, as well as specific action items for federal agencies to work together to implement. ²³	The Children's Health in All Policies Workbook serves as a resource for state and local-level policy makers by providing guidance for applying a Health in All Policies approach. The Kansas Health Institute, in partnership with a 21-member advisory committee, worked together to develop the workbook. ⁵⁶	San Francisco Department of Health's Healthy Development Measurement Tool serves as a set of evaluation and planning tools for use in urban development planning. The tool provides metrics to consider health in urban plans and associated community input processes. ⁴⁷
Enhancing workforce capacity	Training or cross-training Cross-sector curriculum development Networking meetings Joint conferences Hiring "nontraditional" staff	The United States Department of Transportation has created and sponsored the Transportation Planning Capacity Building Program to help decision makers, transportation officials, and staff resolve the increasingly complex	The New Jersey Department of Transportation trains newly hired Civil Engineers in Complete Streets, including policy adoption, implementation, and design. This training helps ensure that department employees are equipped with the skill sets needed to implement the	County Health Departments in Oregon can apply for HIA capacity building grants. The grants help fund HIA training for county health department and other departments and help support the completion of an HIA in the community. The

(continues)

TABLE ● Examples of Health in All Policies Implementation at the Nation, State, and Local Levels (Continued)

Illustrative Examples of Implementation of the Strategy^a

Strategy	Tactics	National	State	Local
	Incentives (eg, criteria in performance evaluations, promotions) that reward cross-sector efforts Colocating staff or facilities	issues they face when addressing transportation needs in their communities. This program provides training, technical assistance, and support through such efforts as the “Supporting Sustainable Rural Communities” guide (developed in collaboration with USDA and HUD). ³⁸	Complete Streets Policy throughout the state. ⁵⁷	funding and technical assistance provides the platform for future application of HIAs. ³⁴
Coordinating funding and investments	Joint cooperative agreements, contracts, grants, or other financial support mechanisms Coordinated investments in communities Criteria for making funding decisions based on health objectives and performance measures Cross-sector review of funding announcements or applications	The Rural Jobs and Innovation Accelerator challenge aims to spur job creation and economic growth in distressed rural communities. This \$15 million multiagency competition is funded by the US Departments of Commerce and Agriculture, the Delta Regional Authority, and the Appalachian Regional Commission. This program is associated with the Partnership for Sustainable Communities which works to coordinate federal housing, transportation, water, and other infrastructure investments. ⁵⁸	The North Carolina Sustainable Communities Task Force, established through state legislation, is a collaborative effort between the Departments of Commerce, Environment, Natural Resources, Transportation, Administration, Health and Human Services, and the North Carolina Housing Finance Agency. The Task Force is charged to plan and accommodate healthy and equitable development following several principles, including coordinating and leverage state policies and coadministering the North Carolina Sustainable Communities Grant Fund. ²¹	The Mid-Ohio Regional Planning Commission passed a Complete Streets Policy mandating that all projects funded by the commission accommodate all users including pedestrians, bicyclists, users of mass transit, people with disabilities, and the elderly. All applications for funding from the commission, including new construction projects and reconstruction, must meet this requirement. The policy references the positive impacts of Complete Streets on economic growth, public health and fitness, air quality, and job growth. ³⁷
Integrating research, evaluation, and data systems	Integration of cross-sector data and indicators into common systems Cross-sector evaluation (eg, inclusion of health indicators in non-health program evaluation) Research or evaluation of the impact of “non-health” policies on health Validation of health performance measures	The County Health Rankings and Roadmaps program ranks the overall health of nearly every county in the US. In addition to indicators of morbidity and mortality, the rankings also include indicators and data on a broad array of factors that contribute to a community’s	The Florida Environmental Public Health Tracking Portal integrates health data and environmental data and makes it available to policy makers, public health officials, and other state agencies. The Florida Department of Environmental Protection, Agency for Health Care Administration, University of Florida, and NASA have used the portal to	The cross-agency Boston Health in All Policies Task Force formed a data-sharing subcommittee as 1 of 3 initial steps to ensure that health, community resilience, and health equity are considered in all planning and development plans. The data-sharing subcommittee is collaborating to identify data and

(continues)

TABLE ● Examples of Health in All Policies Implementation at the Nation, State, and Local Levels (Continued)

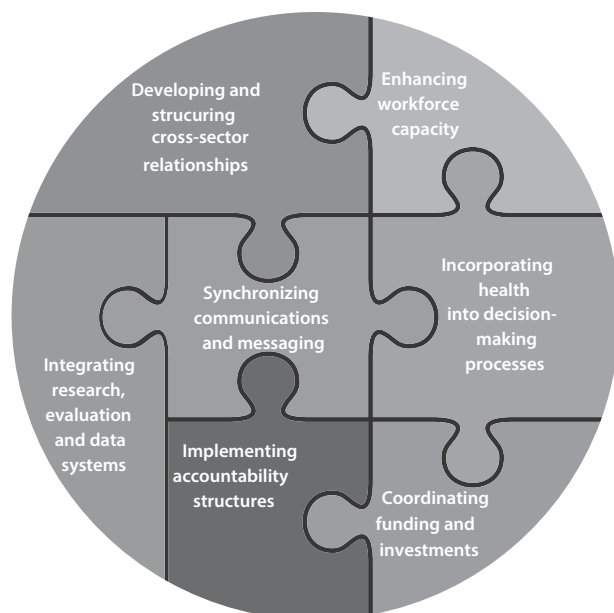
Illustrative Examples of Implementation of the Strategy^a

Strategy	Tactics	National	State	Local
Synchronizing communications and messaging	Framing activities in terms of interconnectedness between sectors or the potential for multiple sectors to benefit Common messages across sectors Shared platforms (newsletter, Web site, or database) for cross-sector success stories or innovative practices Intersectoral commitment statements (eg, integration into vision/mission)	health, including education, jobs, income, and the environment.⁴⁶ The National Drug Control Strategy frames drug use as affecting “every sector of society, straining our economy, our healthcare and criminal justice systems, and endangering the futures of our young people.” The Web site provides links to perspectives from multiple partners, including law enforcement officials, social service organizations, community coalition members, and those affected by drug use. The Web site links to a number of federal agencies that play an active role in implementing the strategy.⁵¹	link environmental air quality data and asthma hospitalization data to better understand associations and to inform potential interventions.⁵⁹ The Healthy Minnesota Partnership, a multisector group of community leaders, developed and published The Health of Minnesota. This report frames the public health challenges in 2 sections: (a) upstream factors (physical, social, and behavioral), and (b) health outcomes. With this framing, the Healthy Minnesota Partnership provides an opportunity for non–health sectors to see their relevance in ensuring the health of Minnesotans. The report provides the basis for collaboratively creating a Healthy Minnesota 2020 statewide health plan with strong engagement from health and non–health sectors.⁶¹	information needs for city agencies to systemize data sharing across city agencies and partners.⁶⁰ The Davidson Design for Life (DD4L) initiative serves as a structure for the Town of Davidson to coordinate messages, funding requests, and activities in support of enhancing the health of residents across sectors. By framing health in terms of physical, mental, and emotional well-being, DD4L has been able to bring on a range of partners including health professionals, planners, educators, environmental and public health advocates, community leaders, and media specialists.⁶²
Implementing accountability structures	Shared objectives or performance measures with health implications Cross-sector monitoring and enforcement of existing laws Oversight or management structures Established roles for systematic consideration of health criteria Cross-cutting budget spending reviews Mandatory or voluntary policies Public reporting	The 1969 National Environmental Policy Act serves as “a national policy [to] encourage productive and enjoyable harmony between people and the environment.” All major federal investments or policies must undergo analysis for potential significant effects to the quality of the human environment.⁶³	The Massachusetts Healthy Transportation Compact, signed into law in 2009, is an interagency initiative to facilitate transportation decisions that balance the needs of all transportation users, expand mobility, improve public health, support a cleaner environment, and create stronger communities. The compact, cochaired by the Secretaries of Transportation and Health and Human Services, is charged with several interagency activities, including outlining measurable goals.⁶⁴	San Francisco’s Office of Labor Standards Enforcement and Department of Public Health collaborate to enforce the local labor laws. Restaurant permits issued by the San Francisco Department of Public Health are revoked or suspended when there is evidence of minimum wage violation or inadequate workers’ compensation insurance.⁶⁵

Abbreviations: HIA, Health Impact Assessment; HIAP, Health in All Policies; HUD, Housing and Urban Development; NASA, National Aeronautics and Space Administration; USDA, United States Department of Agriculture.

^aExamples are provided in order to help illustrate implementation of the strategies. While the examples selected often contained multiple strategies, the components of the work most relevant to the strategy are emphasized in this table.

FIGURE ● Strategies for Implementing Health in All Policies



America's Great Outdoors Initiative was for 12 federal agencies to work together to develop a report that outlined a common vision, goals, recommendations, and action items.²³ Defining measurable goals, objectives, and action items as a part of the planning process supports accountability.²⁴⁻²⁶

Other planning tools, such as cross-sector community needs assessment, which examines health and non-health data and needs, and health lens analysis, which aims to identify key interactions and synergies between the work of different sectors, can help inform program, policy, or plan development. For example, the Nashville Area Metropolitan Planning Organization included a health lens when developing its long-range regional transportation plan. As a result, 60% of the selection criteria for infrastructure project selection (eg, improving and expanding transportation choices, preserving and enhancing existing roadway corridors) are related to health, safety, congestion reduction, and active transportation.²⁷

Health criteria can also be incorporated when considering specific policies, programs, projects, and plans. HIAs can be used to assess the potential effects of pending decisions and provide recommendations on monitoring and managing the potential health effects.^{15,16,28,29} HIAs are most effective when completed with strong stakeholder participation and within the decision-making time period.^{15,28} The impact of a HIA can extend beyond the specific decision it is used to assess. For example, in San Francisco, HIAs

(eg, assessing the impact of changes to the living wage ordinance, housing policies, and zoning policies) have helped increase public awareness of the determinants of health, routine monitoring of these determinants, cooperation among institutions, health-protective laws and regulations, and organizational networks for health advocacy and accountability.³⁰

Checklists, guidelines, or protocols can be used when best practices for maximizing positive health impacts of specific decisions exist. For example, New York City's Active Design Guidelines provides architects and urban designers with a manual of strategies for creating healthier buildings, streets, and urban spaces based on the latest academic research and best practices in the field.³¹ However, for many areas, research is lacking on specific ways to maximize positive health outcomes.

Health considerations (goals, objectives, metrics) can also be imbedded into existing initiatives. Periodic assessments of ongoing initiatives can identify ways to bring other sectors on board, without the need to start from scratch in developing a new initiative, thus, potentially saving resources and time. For example, the US Environmental Protection Agency, in collaboration with the Department of Energy, issued guidance that provides a set of best practices for improving or maintaining indoor air quality when performing energy upgrade work in homes. By incorporating health assessment protocols and activities into energy upgrade work, home energy upgrade contractors, trainers, and program administrators can help improve the quality of their work while promoting occupant health and safety.³²

Enhancing workforce capacity: Empower staff to effectively work across sectors. Our review identified a number of tactics to increase the ability of staff to work across sectors, including providing formal training (training or cross-training, cross-sector curriculum development), creating opportunities for diverse staff to interact (networking meetings, joint conferences), implementing hiring or reward practices that incentivize cross-sector collaboration, (hiring "nontraditional" staff, providing incentives that reward cross-sector efforts), and implementing physical changes (colocating staff or facilities). Implementing HiAP requires building capacity among both the health and non-health workforces (frontline to executive) to develop new skills as well as a common language and an understanding of each other's priorities (ie, political agendas, administrative imperatives).³³ The Oregon Department of Public Health strives to address both these goals through their trainings that bring together staff from local departments of planning, energy, transportation, and environmental quality to build their capacity to conduct HIAs.³⁴

To implement HiAP, the public health sector, in particular, needs to take on new responsibilities, including creating regular platforms for dialogue and problem solving with other sectors and evaluating the effectiveness of intersectoral work.⁵ To help facilitate this work, management can exhibit leadership in identifying creative approaches to work across portfolio boundaries.³⁵ Having a central entity (office or sector) responsible for supporting and coordinating skill development can help ensure consistency and facilitate culture change and practice development.¹⁹ For example, the US Department of Transportation created the Transportation Planning Capacity Building Program to provide training, technical assistance, and support to decision makers and transportation officials across its funded programs.³⁶

Coordinating funding and investments: Identify mechanisms to incentivize and support cross-sector work. Coordinating financial resources and responsibility across sectors can be achieved through a range of approaches, including jointly issuing funding announcements, coordinating investments in communities, building health criteria into funding announcements, scoring criteria or performance measures, and reviewing funding applications of partner agencies.^{9,20} For example, the Mid-Ohio Regional Planning Commission built health criteria into its funding mechanisms by mandating that each of its funded projects accommodate all users, including pedestrians, bicyclists, people with disabilities, and the elderly.³⁷ Increasingly, public health funders are requiring applicants to work with nontraditional partners.^{38,39}

Grant makers (government agencies or institutions) can use resources more effectively and reduce duplicative efforts by using shared objectives or geographic locations.⁴⁰ For example, the US Department of Housing and Urban Development's Choice Neighborhood Program, which aims to transform distressed neighborhoods, is coordinating investments with the Department of Education's Promise Neighborhoods, the Department of Justice's gang prevention and prison reentry program, and the Department of Health & Human Services' Health Center Program to look holistically at the needs of a community.⁴¹

Integrating research, evaluation, and data systems: Establish systems to generate and share knowledge and data across sectors. In our review, tactics for integrating and disseminating knowledge and data included cross-sector research and evaluation, use of common systems for data and indicators, and validation of health performance measures. Research and evaluation can help identify opportunities to maximize the positive health impacts of non-health policies.^{16,42} For example, the US Task Force on Community Preventive Services has produced evidence-based recommendations, including ratings of

the available evidence, for improving health through full-day kindergarten programs⁴³ and tenant-based rental assistance programs.⁴⁴ Policy-linked indicators that quantify the effects of potential policies and interventions on population health are needed to help decision makers make better informed choices.^{24,45}

Monitoring systems for social, economic, and environmental determinants of health can be used to support research and evaluation, as well as to support assessment and accountability. Implementing mechanisms for data sharing and standards for data collection, privacy protection, and analysis may help alleviate concerns about costs and confidentiality and ensure access to high-quality, timely information.²⁷ Data are often reported in ways that portray health problems as resulting solely from individual choices versus their being the result of a complex interplay of multiple health determinants.²⁶ Integrating economic, social, environmental, and health data—as done by the County Health Rankings, the United States Department of Agriculture Food Environment Atlas, Healthy People 2020, and the National Environmental Public Health Tracking Network—can help illustrate these interrelationships. Ranking the health of nearly every county in the nation, the County Health Rankings provides the data as well as an action center of what can be done to create healthier places to live, learn, work, and play, thus assisting in integrated planning and assessment.⁴⁶ Comprehensive indicator systems can also expose sources of disparities in health within places. For example, health and sustainability indicators in San Francisco, which are collected and mapped at a neighborhood scale, reveal differences in attributes such as air pollution, school quality, and park access.⁴⁷

Integrating data can also support accountability.^{9,32,48} For example, municipalities implementing a CitiStat model for more data-driven government may incorporate health performance measures for each agency, thereby providing a mechanism for continued tracking and addressing the impact of health in the sectors under city agencies' purview.⁴⁹

Synchronizing communications and messaging: Communicate the importance and cobenefits of working across sectors. Tactics to synchronize communication and messaging include framing activities in terms of interconnectedness between sectors, developing common messages across sectors, establishing a shared platform for cross-sector communication, and developing intersectoral commitment statements. Communication serves as the foundation for collaborative efforts and includes building a common vision and language. To help potential partners understand their connection to health and the need for HiAP, it is important to show how environments affect health, for example, through cause mapping, which challenges partners to draw out

the multiple chains of interconnecting causes that lead to a problem.⁵⁰

Actions that promote health tend to serve multiple social goals. For example, improving physical fitness among children not only improves health but can also improve academic performance.⁶ Identifying and capitalizing on cobenefits (ie, “win-win” opportunities) helps illustrate common priorities and enables policy makers from different sectors to develop integrated strategies.²⁴ For example, connections can be drawn between a policy to make streets safer for bicycles and pedestrians to increase physical activity as well as to decrease traffic congestion and improve air quality. Developing common messages or joint communication products (eg, newsletters, issue briefs, Web site) can increase buy-in and ownership among partners.

Articulating the effects of health improvement on other domains, and society as a whole, illustrates the interrelationship between sectoral goals.^{5,26} For example, the National Drug Control Strategy frames drug use as affecting “every sector of society, straining our economy, our healthcare and criminal justices systems, and endangering the futures of our young people.”⁵¹ By defining the problem of drug use as one that is shared by individuals and systems places the responsibility to address this issue on a broader range of partners (eg, law enforcement, schools, parents, community members).^{24,52} Effective communications and messaging can help build and maintain a robust governing structure and enhance workforce capacity to effectively work across sectors, illustrating the interrelationships between strategies.

Implementing accountability structures: Foster joint responsibility. Examples of accountability structures include oversight or management structures, budget spending reviews, shared objectives or performance measures, established roles for systematic consideration of health criteria, mandatory or voluntary policies, cross-sector monitoring or enforcement of laws, and public reporting. Accountability structures provide direction and oversight for intersectoral work and, combined with executive or political leadership, support long-term sustainability of HiAP efforts.^{19,33} Accountability structures provide ongoing mechanisms to implement HiAP and assign responsibility. Accountability structures are often integrated with other strategies. For example, Section 4001 of the Patient Protection and Affordable Care Act created the National Prevention Council (governing structure), required development of the National Prevention Strategy (planning and assessment), and required ongoing accountability through delivery of an annual status report (accountability structure).¹³

● Discussion

HiAP provides a possible mechanism for public health practitioners to enhance collaboration with nontraditional partners and integrate health considerations into decisions and systems. As illustrated through our review, implementing HiAP can take many forms and requires changing not only the way we think about policy development but also the way we conduct research, build data systems, train our staff, distribute funding, and communicate. By delineating the different types of strategies and tactics to achieve HiAP, we provide public health practitioners with a “menu” of options for incorporating HiAP into their work.

HiAP implementation faces a number of challenges at the local, state, and national levels, including public health’s limited connectivity to other sectors, organizational and technical barriers (eg, information systems, planning horizons, funding mechanisms), and intersectoral differences in values and cultures.^{5,24,46} Furthermore, intersectoral collaboration can be resource intensive, particularly in terms of staff time and expertise, which is a challenge in an era of decreasing public resources across government agencies.⁴⁸ HiAP is likely to be adopted when there is recognition of the importance of social and environmental determinants of health among the public and policy makers, awareness of the limits of single-sector work, a clear articulation of how non-health sectors can contribute, and public health leadership and vision.^{16,24,53,54}

In our work, we did not encounter one core set of processes for implementing HiAP; rather, agencies implemented a variety of tactics and strategies that were adapted and tailored on the basis of organizational, political, and technical circumstances. Public health leaders at the local, state, and national levels can consider which strategies best align with their work, help them achieve their goals, and can most feasibly be implemented. Many of the strategies described in this article align with the Ten Essential Public Health Services; however, in many cases, a broader focus on the full range of the determinants of health is needed. To implement HiAP in a resource-strained environment, it may be possible to build on existing public health efforts, for example, augmenting a coalition to include a larger range of sectors; expanding a data collection system to include social, economic, and physical environmental variables; or providing data to decision makers on the potential health impacts of non-health policies.

Implementing the HiAP strategies has the potential to increase cross-sector collaboration, use of multi-objective solutions to address the determinants of health, and the representation of health issues and interests in decision-making processes, and, in the long

term, to improve population health and reduce health disparities.^{9,19} Because HiAP works across agency boundaries, HiAP can help streamline government activities, reduce duplication, and contain costs.^{5,9} The Institute of Medicine recommends implementing a HiAP approach to more fully address the determinants of health, better coordinate efforts across sectors, and more effectively use public resources.⁵

Through our review, we offer a starting point for categorizing and describing the emerging practices used to work across sectors and address the determinants of health; however, we note a number of limitations. We have attempted to identify all appropriate literature on HiAP but know that we missed some information, especially accounts from the unpublished literature. Second, because we relied on our current networks for expert input and consultation, we likely excluded many examples of cross-sector work. Additional work is needed on many fronts, including understanding the contextual drivers of HiAP adoption and policy change and identifying strategic opportunities to influence decision-making processes. Further research is needed to identify the optimum strategies of HiAP implementation, for example, what strategies are more or less important, what constitutes strong and weak implementation of HiAP, and what distinguishes HiAP from other similar efforts (eg, place-based policies, joined-up government approaches). Also, more work needs to be done to identify promising practices and the outcomes of HiAP implementation, including its impact on health, decision-making processes, accountability, and transparency. Likewise, tools and resources to increase the capacity of practitioners, especially public health staff, to implement HiAP are needed.

Addressing complex problems, such as the determinants of health, in a coordinated way across a large number of fragmented organizations requires innovative approaches.⁵ As emphasized by the Institute of Medicine, public health leaders and practitioners need to listen to their colleagues in other sectors, understand their priorities, and identify mutually beneficial approaches. Public health leaders and practitioners must also learn to compellingly convey the linkages between health and other societal objectives, such as prosperity, productivity, and competitiveness.⁶

At its core, HiAP not only asks what other sectors can do to promote health but also pushes all partners to think critically about how they can create a healthier, stronger nation. The public health sector should be prepared to play a central, facilitative role, but it needs to be sensitive to non-health sectors' priorities, make the case for ways the health sector (and improved health) can support partners' objectives, and identify where there are strategic opportunities for collaboration.

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