Introduction to Multi-Sector Intersections and Collaborations to Advance Health Equity

Healthcare access and quality are critical components of individual health, in addition to personal health decisions. However, despite far outspending other high-income countries on healthcare, the United States lags behind its peers in various health outcomes, including infant mortality, chronic conditions, and life expectancy.[1] These outcomes are even worse for racial and ethnic minority populations.[3] Racial and ethnic minority populations also face a disproportionate burden in access to and utilization of healthcare services.[4]

For public health agencies to improve population health for all, they must address the social determinants of health (SDOH).[5] SDOH are the conditions in which people live, work, learn, and play, and are impacted by individuals, the community, and multiple public sector agencies. SDOH play an important role in the health of a community.[6] Although governmental public health agencies are vital components of a broader health system, they are limited in their ability to impact all the social and environmental factors that affect the health of individuals and communities. Consequently, cross-sector collaboration is necessary to advance population health.

ASTHO works to advance health equity in a variety of ways, including providing direct technical assistance to states, as well as through webinars and written materials. In addition to other sources, ASTHO's work on health equity is made possible through the support of the HHS Office of Minority Health (OMH), which works to "improve the health of racial and ethnic minority populations through the development of health policies and programs that will help eliminate health disparities." [2] ASTHO and OMH have been partnering to advance health equity since 2011. ASTHO is proud to support OMH's National Partnership for Action to End Health Disparities, which promotes approaches aimed at eliminating health disparities through multi-sector partnerships and coordination.[2]

Structure and support for this document came from the Triple Aim of Health Equity developed by Edward Ehlinger, 2016 president of the Association of State and Territorial Health Officials (ASTHO) and former health commissioner for Minnesota. The Triple Aim strives to improve health equity by (1) expanding our understanding of what creates health; (2) implementing a Health in All Policies (HiAP) approach with health equity as the goal; and (3) strengthening the capacity of communities to create their own healthy futures. These three concepts are bound together under the principle that no one governmental agency, organization, or institution has the ability to wholly address population health.[7] The Triple Aim encourages agencies interested in addressing health equity to develop a shared agenda among federal, state, and local public health and their sister governmental agencies to optimally address health equity.

The purpose of this document is to offer illustrations of the intersection of public health with other governmental sectors and provide guidance on ways in which public health can collaborate with other sectors to promote optimal health for all people. The areas highlighted—agriculture, economy, education, environment, housing, justice, and transportation—were chosen because they represent

major sectors whose work intersects with health and they form the basis of many SDOHs. State and local public health officials can utilize this document in developing partnerships, both within and outside of government, and across health and non-health sectors. Only through developing cross-sector partnerships can true progress occur to reduce the social and economic barriers to health at the state and community levels. [8]

What is the government's role in improving health?

All branches of the federal government have important roles in shaping health. Federal sectors have varying capabilities to shape well-being and health in communities, and they traditionally operate through distinct programs that do not allow for cross-sector interaction or fostering an explicit focus on health. For example, the U.S. Department of Transportation (DOT) is authorized by the legislative branch to support the safety, security, and accessibility of the nation's transportation system ." It implements this mandate through an intricate structure of regional, state, and local transportation-centered organizations.[9] Transportation activities connect community residents to a range of health-promoting opportunities (e.g., economic and educational opportunities), promote individual safety, and ensure access to healthcare and healthy foods. These outcomes impact individual and community well-being and health through multiple direct and indirect pathways. Ideally, transportation would collaborate with health and other sectors that its activities impact, such as education, to optimize outcomes. A HiAP approach for integrating health considerations into policymaking and programing can support non-health sectors in advancing health and health equity.

Each governmental sector's programs and policies have the potential to impact the health and well-being of individuals and communities. It is crucial for state health agencies to look for opportunities to work with other sectors at the federal, state, and local levels to ensure that they are considering health.[10] Cultivating partnerships across sectors, such as the ones mentioned below, can contribute to true progress to reduce the social and economic barriers in states and communities.[11] The following section describes governmental sectors and how they interface with health. It also provides examples of how federal and state public health agencies are working across sectors.

Health and Agriculture

The U.S. Department of Agriculture (USDA) defines its mission as providing "leadership on food, agriculture, natural resources, rural development, nutrition, and related issues based on public policy, the best available science, and effective management."[12] USDA nutrition programs aim to ensure a safe and adequate food supply to combat malnourishment in children and the elderly. This mission accounts for 80 percent of the department's entire budget[13] and is achieved through several key programs.

Agriculture and health are linked in many ways, both directly and indirectly. Direct linkages to health occur through USDA's work to ensure access to healthy food and materials for goods and shelter. Indirect linkages are through programming that creates jobs in low-income communities. In all pathways, there are opportunities for the agriculture sector's activities to negatively impact well-being and health. For example, the production and availability of food is directly linked to individuals' diets, which are a major contributing factor to chronic conditions, such as obesity, diabetes, and hypertension. Despite these linkages, the health and agriculture sectors have not historically been well-coordinated.[14]

Intersections of Health and the Agriculture Sector

Federal Initiatives

- USDA's National School Lunch Program and School Breakfast Program provide nutritionally balanced free or low-cost meals to low-income children, many of whom would be in danger of malnutrition and other food-linked health problems without them. [15] Proper nutrition enables students to focus on their studies and improve their academic performance, another factor linked to positive health outcomes.[16]
- The Supplemental Nutrition Assistance Program Education (SNAP-Ed) provides education about proper nutrition, how to effectively spend food dollars, physical activity, and local issues like lead poisoning to people who are eligible for or currently using SNAP benefits. Partnerships with community organizations are key to SNAP-Ed's success.
- In 1992, Congress established the Special Supplemental Nutrition Assistance Program for women, infants, and children (WIC) Farmers Market Nutrition Program (FMNP) to allow states to authorize farmers markets to accept FMNP coupons through USDA. In states that have authorized FMNP, WIC beneficiaries can use FMNP coupons to purchase fresh, unprepared locally grown fruits, herbs, and vegetables at local farmers markets.
- USDA and the National Institute of Food and Agriculture jointly administer Food Insecurity Nutrition Incentive (FINI) program grants. FINI grants support low-income families in obtaining more nutritious foods. FINI brings stakeholders together from across the food system.

State Initiatives

- In Arkansas, the Fair Food Network's Double Up Food Bucks program helps lower-income residents purchase fruits and vegetables grown in the state. As the name implies, participants' SNAP dollars are worth twice as much for purchases of fruits and vegetables grown in-state. This helps individuals and families of limited means purchase healthy foods, while also supporting the state's agricultural sector by increasing local demand for food grown in-state.[17]

Health and the Economy

Healthcare is one of the largest economic sectors in the United States and is projected to represent over 20 percent of the total economy by 2025.[18] Inequities in health drive up that percentage because health disparities have been estimated to cost the United States hundreds of billions of dollars in both direct and indirect costs.[19]

Wage stagnation and a decline in the value of the minimum wage have been linked to increased inequities in the United States.[20] Increased income is associated with better health outcomes, such as lower likelihood of disease and premature death.[21] **The economic well-being of a community, population, or nation has a profound impact not only on the ability to access healthcare, but also on educational opportunity. A community's economic welfare directly influences its social and physical environments, which impact health status.** Many federal entities are involved in setting economic

policy, including the [U.S. Department of the Treasury](#), [Federal Reserve System](#), and [Department of Commerce](#).

Intersections of Health and the Economic Sector

Federal Initiatives

- As part of its mission, the Department of Commerce oversees the [U.S. Census Bureau,](#) which collects data on U.S. demographics, including racial and ethnic background, socio-economic status, native language, and degree of health insurance coverage.[22] Several survey instruments, specifically the American Community Survey, Annual Social and Economic Supplement of the Current Population Survey, and Survey of Income and Program Participation, provide states with up-to-date information on health insurance coverage and access to care.[23] These data are vital to the operations of many state health equity programs, providing information on the size, needs, and diversity of their target populations.
- The U.S. Department of the Treasury and Federal Reserve work through banks to promote community and local economic development. They work with localities and enterprises to support and create a more innovative economy.[24]
- The Federal Reserve System of regional banks has collaborated with the Robert Wood Johnson Foundation to create the [Healthy Communities Initiative](#) to encourage stronger linkages between the health and financial sectors.[25]
- In April 2016, CDC published a [study](#) looking at the return on investment of its Communities Putting Prevention to Work program, which focuses on reducing obesity, tobacco use, and exposure to secondhand smoke. The study found that "large investments in community preventive interventions, if sustained, could yield cost savings many times greater than the original investment over 10 to 20 years and avert 14,000 premature deaths."[26]
State-level departments of commerce have a vested interest in healthcare access and well-being in communities in their state. Businesses are more likely to operate in vibrant economic areas that provide a high quality of life to employees. Access to healthcare is an important variable in quality of life.[27]

State Initiatives

- The Washington State Department of Commerce has partnered with the state departments of health and ecology to provide technical assistance to small, rural communities that are required to attain the same public health standards as larger cities. This program, the [Small Communities Initiative](#), also provides support to local elected officials and their staff to strategically invest in infrastructure projects and attain appropriate funding.[28]
- The Colorado Department of Public Health and Environment, together with the Colorado Office of Economic Development and International Trade and state DOT, commissioned a [study](#) about the health and economic benefits of walking and bicycling. The study found that walking and bicycling "save Colorado more than $3 billion in health costs, and contributes $1.6 billion to the local economy through household spending, manufacturing, exports, and tourism."[29]

Health and Education

Education and health are closely linked, especially in childhood and adolescence. Many of the barriers to school completion, including poverty, drug use, teen pregnancy, violence, and hunger, are impediments to health. One survey found that the average 25-year-old woman with less than a high school education had a life expectancy 8.6 years shorter than a peer with a Bachelor's degree or higher.[30] For men, that number was 7.4 years.[31] In fact, every additional year of education is associated with better health outcomes and healthier behaviors, such as increased exercise and decreased substance use.[32] Income, which on its own has a positive effect on health, is also tied to educational achievement. Educational success is also associated with higher earnings, jobs with healthcare benefits and paid leave, reduced stress, and better social skills and networks.[33] The mission of the U.S. Department of Education is "to promote student achievement and preparation for global competitiveness by fostering educational excellence and ensuring equal access."[34]

Intersections of Health and the Education Sector

Federal Initiatives
- One example of inter-agency community-based programming is the Safe Schools/Healthy Students initiative, which provides grants to community-based organizations to promote community-wide approaches to support safe and drug-free schools and healthy childhoods.[35] The types of projects that this program funds are intended to be flexible to meet the needs of the community, but many address violence prevention, alcohol and substance abuse prevention, behavioral and emotional support, mental health services, and early childhood. This program is jointly funded and administered by the departments of education, justice, and health and human services.
- At the local level, school-based health clinics are collaborations between a school and local health department or community organization, such as a community health center or hospital.[36] School-based health centers offer primary health care and other services, such as mental health and oral health, and have demonstrated success in improving educational and health outcomes. They can also be effective in advancing health equity because children from racial and ethnic minorities are less likely to have a consistent source of medical care.[37] Mainly located in schools for children in grades 6–12, the school becomes a supportive environment where children, youth, and families may receive health education and preventive healthcare in rural or underserved communities.

State Initiatives
- The Virginia Department of Health-Office of Health Equity partners with the Danville Public Schools and Pittsylvania/Danville Department of Health to conduct the Danville Youth Health Equity Leadership Institute (Danville YHELI) in Danville, VA. The Danville YHELI is an afterschool and summer program that offers health promotion education and leadership training activities to minority and under resourced high school students with the goal of increasing their on-time

graduation rates. The project addresses educational attainment as a social determinant of health and health disparities.

- In Washington state, the departments of health and education work together on several initiatives to promote the social and emotional well-being of students and leverage trauma-informed approaches. One such approach, the Compassionate Schools Initiative, provides training to school staff in gaining skills to help students impacted by trauma and toxic stress reach their social and emotional goals. Compassionate Schools has a community partnership component and encourages schools to partner with their local health jurisdictions or health maintenance organizations to serve the student population's needs. Washington state has been a leader in addressing adverse childhood experiences (ACEs), and the Compassionate Schools Initiative aims to support the whole child, including a focus on addressing ACEs as a strategy for academic achievement and social and emotional skill development.

- The North Carolina Division of Public Health partnered with the North Carolina Department of Public Instruction to advance school health policies and practices.[38] One strategy from North Carolina's Plan to Address Obesity is to expand opportunities for physical activity, including encouraging the use of community resources, such as schools, parks, and recreation facilities. The partners promoted joint use agreements by developing a guide to ensure that local-level public health, education and government agencies, boards, and community members have clear, state-specific guidance.

- The Minnesota Department of Health and state Department of Education are providing schools with information on quality physical education and activity through the Physical Activity: Moving Matters School Implementation Toolkit." The strategies have been successfully implemented in many schools across Minnesota and the nation and are based on best practices from national campaigns such as the [former] First Lady's Let's Move! Active Schools campaign."[39]

Health and the Environment

Air pollution, poor drinking and recreational water, toxic and hazardous chemicals, and inadequate heating and sanitation pose clear risks to human health, while positive changes in the physical environment, such as sidewalks and parks, can improve health.[40] Some states include environmental health within their state public health agencies. Approaching environmental health in the context of health equity allows state public health departments to more proactively address environmental issues that have disparate impacts across social groups, such as lead contamination. EPA's mission is "to protect human health and the environment."[41] The agency further defines its purpose as ensuring that "all Americans are protected from significant risks to human health and the environment where they live, learn and work."[42]

Intersections of Health and the Environmental Sector

Federal Initiatives

- Asthma is a chronic respiratory disease that can be trigged or exacerbated by indoor and outdoor environmental pollutants. EPA's asthma program "promotes scientific understanding of environmental asthma triggers and ways to manage asthma."[43] With partners across the federal government and national organizations, EPA supports local asthma control programs and provides education on how to prevent and manage asthma. EPA works closely with CDC, the National Institutes of Health, and the U.S. Department of Housing and Urban Development (HUD) to advance asthma control and care. States and localities are also essential partners in enhancing environmental health.

State Initiatives

- South Carolina provides environmental public health services with a focus on social justice.[44] The South Carolina Department of Health and Environmental Control's commissioner chaired the South Carolina Environmental Justice Advisory Committee, which is made up of 14 state agencies. This committee identified programs and services on which the participating state agencies could collaborate to support communities across the state. In its final report, the committee recommended, among other things, the development of an environmental justice policy that multiple state agencies could adopt.[45] In 2008, South Carolina won EPA's Environmental Justice Achievement Award for its efforts.[46]
- Arkansas has been working over the past decade to create a strong foundation for oral health among all its residents, regardless of race or socioeconomic status, by advancing water fluoridation efforts. Seventy-six percent of Arkansas residents have access to fluoridated water, thanks in part to a fluoridation bill that was passed in 2010.[47]
- The Colorado Department of Public Health and Environment strongly encourages projects to have components that provide health equity and environmental justice benefits. Supplemental Environmental Projects (SEPs) are projects that are funded through environmental enforcement actions and benefit the environment or public health. SEPs can cover a wide variety of activities, such as home energy efficiency improvements for low-income residents, lead testing in school water taps, trail-building projects that improve public access to recreation, or community hazardous waste collection events. SEPs benefit communities that are negatively impacted by environmental violations.
- The California Natural Resources Agency uses Cap-and-Trade proceeds as a funding stream for green infrastructure projects through the state's Urban Greening Program. These programs strive to reduce greenhouse gases and address environmental inequalities by "convert[ing] built environments into green spaces that improve air and water quality and provide opportunities for walking, biking, and recreation.[48]"

Health and Housing

Access to safe, affordable housing provides a wide range of health benefits, including reduced risk of respiratory and cardiovascular diseases from indoor pollution, reduced risk of illnesses and deaths from temperature extremes and other weather conditions, reduced risk of communicable disease spread through poor living conditions, and increased access to key social services.[49] A lack of stable housing has been linked to increased emotional and behavioral problems in children,[50] and people who receive governmental housing assistance are more susceptible to the negative impacts of smoking and secondhand smoke exposure.[51] HUD's mission is "to create strong, sustainable, inclusive communities and quality affordable homes for all."[52]

Intersections of Health and the Housing Sector

Federal Initiatives

- HUD's Healthy Homes Program was launched in 1999 to address environmental and safety hazards in the home, especially the homes of children.[53] The program gives grants to research and low-cost assessment and intervention methods, as well as public education in the community. The initiative takes a comprehensive approach to these hazards to address them in a coordinated manner to reduce the risk of a number of environmental health and safety concerns, including mold, lead, allergens, asthma, carbon monoxide, home safety, pesticides, and radon. In December 2016, HUD issued a final rule requiring smoke-free policies in all federally funded public housing.
- CDC's Healthy Homes and Lead Poisoning Prevention program, which is distinct from the HUD program, focuses on preventing lead poisoning and reducing environmental exposures such as mold and cockroach dander. CDC works to protect people from these exposures through research, surveillance, and the disseminations of guidelines and recommendations.[54]
- The federal Healthy Homes Work Group consists of seven federal agencies that work together to create a federal strategy for actions on healthy housing. The strategy outlines five goals:
    1. Establish healthy homes recommendations.
    2. Encourage adoption of healthy homes recommendations.
    3. Create and supporting training and workforce development to address health hazards in housing.
    4. Educate the public about healthy homes.
    5. Support research that informs and advances healthy housing in a cost-effective manner.
- Unfortunately, in addition to some Americans living in unsafe or unsanitary housing, over half a million Americans do not have a home at all.[55] The homeless population in the United States faces poor health outcomes and often lacks access to consistent, quality healthcare. In fact, poor health is often the cause of homelessness, and the experience of being homeless only exacerbates the problem.[56] An increasing number of lesbian, gay, bisexual, transgender, and questioning youth are also experiencing homelessness, necessitating a response from federal, state, and local government agencies.[57] The U.S. Interagency Council on Homelessness

coordinates the country's response to homelessness. The council is comprised of 19 federal member agencies working together on a shared vision. The council provides support to governors, mayors, and other local officials to end homelessness in their communities.

<u>State Initiatives</u>

- The Maryland Department of Health has partnered with the Green and Healthy Homes Initiative to release videos on best practices for preventing and treating lead poisoning. The Maryland Department of Health updated lead screening and testing guidelines in 2016 and designed these videos to raise awareness about the updates.[58]
- The Iowa Department of Public Health has created cross-sector partnerships to reduce exposure to secondhand smoke in low-income housing through the Smoke Free Homes program. The Iowa Department of Public Health engaged local health departments, property managers, and national policy advisors to implement the smoke-free housing initiative.[59]
- The Utah Office of Health Disparities (OHD) has worked to address health disparities by identifying high-need residential areas. OHD has administered surveys to gather baseline data on community residents' living conditions and access to medical and oral health services.[60]

Health and Justice

There are a number of areas through which health and justice intersect, including on the matter of the healthcare of incarcerated individuals, a disproportionate number of whom are racial/ethnic minorities or otherwise at risk for poor healthcare outcomes. The disproportionate number of individuals from racial/ethnic minority populations in the criminal justice system negatively impacts their communities. A record of incarceration can prohibit individuals from receiving government services such as housing assistance, student loans, and employment, all of which impact socioeconomic status and health. In addition to the federal government's administration of the law through the federal judiciary, the mission of the U.S. Department of Justice (DOJ) is "to enforce the law and defend the interests of the United States according to the law, ensure public safety against threats foreign and domestic, provide federal leadership in preventing and controlling crime, seek just punishment for those guilty of unlawful behavior, and to ensure fair and impartial administration of justice for all Americans."[61]

Intersections of Health and the Justice System

<u>Federal Initiatives</u>

- The National Institute of Justice (NIJ) is a research agency within DOJ. NIJ is currently supporting a study on whether expanding and enhancing school-based mental health programs can promote school safety and improve the well-being of students.[62] Previous research has shown a reduction in behavior problems among children who received school-based mental health services, as well as a concurrent improvement in the overall school climate for all students.[63]
- The Office of Juvenile Justice and Delinquency Prevention (OJJDP) operates a program, Disproportionate Minority Contact (DMC), that is designed to address the high number of youth

from communities of color who encounter the juvenile justice system. OJJDP facilitates the sharing of ideas and information and DMC-specific opportunities and resources. Many youth in the juvenile justice system have inconsistent or nonexistent healthcare, and physical and mental health issues occur in this population at a higher rate than the general adolescent population.[64] Therefore, OJJDP has an opportunity to advance health equity by focusing efforts on reducing the number of minority youth in the juvenile justice system.

- OMH works with the DOJ Office of Community Oriented Policing Services to integrate public health and violence prevention strategies. Specifically, the offices jointly support the Minority Youth Violence Prevention: Integrating Public Health and Community Policing Approaches grant program, which works to implement violence prevention interventions and crime reduction models tailored to at-risk young men of color.[65]

- OMH also supports grantees across the country to improve health outcomes for minority and/or disadvantaged young adults (aged 18-26) who are transitioning from jail to the community. Re-Entry Community Linkages aims to establish connections between the re-entry community and organizations that provide culturally and linguistically appropriate linkages to healthcare services.[66]

State Initiatives

- The Tennessee Department of Health has leveraged partnerships with local health departments, the judicial system, and local law enforcement to offer health education and information about health department services for incarcerated women, including voluntary family planning services. An increase in the number of babies born with neonatal abstinence syndrome (NAS) in Tennessee spurred action by the state health department. Forty-one county health departments have partnered with jails to provide NAS and family planning education and services to inmates, and an additional eight counties provide educational sessions only. In one region alone, 247 education sessions were held, and 3,509 individuals attended those sessions.[67]

Health and Transportation

Increased availability of public transportation decreases traffic congestion, reduces the risk of motor vehicle and pedestrian injuries, increases access to healthcare and other services, improves people's ability to commute to work, and lowers air pollution that can cause health problems. Facilities for cyclists and pedestrians, including bike trails, bike lanes, bike racks on buses, and sidewalks, also reduce traffic-related problems and encourage commuter and recreational options that provide health benefits. Enhanced public transportation options can advance health equity by allowing people without access to a private vehicle to experience greater mobility and access to health services. People in lower socioeconomic groups and the elderly are disproportionately impacted by lack of mobility compared to their counterparts living within communities with public transportation. Affordable public transit reduces social isolation for the elderly and disabled and facilitates access to work, healthcare, and other services. [68] The mission of the U.S. DOT is to "*serve the United States by ensuring a fast, safe, efficient, accessible, and convenient transportation system that meets our vital national interests and enhances the quality of life of the American people, today and into the future.*"[69]

Intersections of Health and the Transportation Sector

Federal Initiatives

- DOT's [Rides to Wellness initiative](#) works to increase access to healthcare, improve health outcomes, and reduce healthcare costs.[70] Outcomes include a cross-agency summit that HHS representatives attended, and a pilot program for coordinated access and mobility that began in 2016. This pilot program provides awards to help support innovative projects that will increase coordination of transportation services and non-emergency medical transportation services for those who are underserved by public transportation.
- Comprised of 11 federal agencies, the [Coordinating Council on Access and Mobility](#) oversees activities and provides recommendations to improve and enhance transportation in the United States. The council's goals are to "simplify customer access to transportation, reduce duplication of transportation services, streamline federal rules and regulations that may impede the coordinated delivery of services, and improve the efficiency of services using existing resources."[71] Robust public transportation systems can have a positive impact on residents' ability to access healthcare services.

State Initiatives

- Arkansas' [Hometown Health Improvement](#) program is a cross-sector, community-driven project that helps localities address the SDOH.[72] The process engages many partners, but also includes transport and infrastructure to make physical activity, especially play and walking, more accessible through the provision of sidewalks, traffic plans, and recreational areas.
- In 2009, Massachusetts created the [Healthy Transportation Compact](#) to facilitate transportation decisions that create a cleaner environment, improve public health, and ultimately support stronger communities. The transportation secretary and health and human services secretary co-chair the compact, which promotes inter-agency collaboration to promote health transportation policies and programs at the state and federal levels.[73]
- California's [Active Transportation Program](#) funds a broad range of active transport projects and education initiatives in communities throughout the state to increase the usage of active transportation, such as biking and walking. One of the program's goals is to ensure that communities experiencing high cumulative environmental burdens and disadvantaged communities receive the program's full benefits.[74]
- In 2008, California created the [Strategic Growth Council](#), a cabinet-level body appointed by the governor to coordinate the activities and intersectional factors of seven state agencies to work with stakeholders and develop programming that aims to revitalize and grow the environment, economy, and communities. Examples include the [Affordable Housing and Sustainable Communities Program](#), [Sustainable Agricultural Land Conservation Program](#), and [Transformative Climate Communities](#).

Recommendations to Foster Cross-Sector Collaboration at the State Level

The following are strategies that can be implemented at the state, local, and federal levels to foster collaboration across sectors to address health equity issues and their root social determinants. The examples below are not exhaustive, but are meant to spark ideas and discussion between sectors. This section includes potential ways in which state health leaders can work with other partners across their jurisdictions to build partnerships. Guidance is listed by sector.

Agriculture

- Food support programs, such as SNAP and FMNP, constitute some of the most important linkages between agriculture and health. State health leaders can work to coordinate eligibility applications between SNAP and programs that they administer, including WIC and Medicaid.
- The agricultural sector can also be a partner in supporting evidence-informed environmental and systems improvements that reflect community priorities and address inequities in the food environment.
- Not every state participates in the FMNP program, creating the opportunity for those state health agencies to collaborate with their legislature to authorize WIC participants to be able to use FMNP coupons at local farmers markets.
- State health officials can reach out to community health equity leaders that may be willing partners in developing community gardens sponsored by state-based cooperative extensions.
- State public health agencies may partner with their agriculture departments to promote the relocation of farmers markets to more impoverished neighborhoods.

Economy

- In states where commerce departments authorize state-based commercial insurance carriers, state health officials can collaborate with them to develop state-based insurance regulations and ensure that residents have access to high-quality health insurance.
- State health officials can assess how making changes to the minimum wage in their state can lead to improved population health.
- Collaborations like Washington's Small Communities Initiative, described above, can be replicated in other states and at the local level to ensure that small, rural communities can meet the same public health and environmental standards as larger cities.

Education

- State health agencies can work with local health departments or community health organizations to support school-based health centers. To facilitate an integrated approach to electronic health record and public health surveillance efforts, state health and education agencies may collaborate to develop memoranda of agreement that ensure privacy standards and facilitate safely sharing data between school-based health centers and state health departments.

- State health agencies can work with their education departments to develop local school and school district partnerships to improve immunization rates. For example, public health staff may stage and staff school-based immunization clinics before the start of the new school year. Vaccine-preventable diseases are one of the most easily remediable health disparities between racial and socioeconomic groups.
- State health agencies can also work with their education departments to develop local partnerships to engage parent-teacher organizations on building programs that support positive parenting and enhanced after-school programming.
- State public health agencies should develop strong partnerships with state school health programs to promote healthy school lunch programs and advance physical fitness requirements, especially in neighborhoods with fewer resources.
- Schools also represent an opportunity to screen for environmental health conditions in children, such as exposure to lead in drinking water or paint.

Environment

- State health officials are in a strong position in many states to partner with state environmental health regulatory agencies, such as those that regulate air and water quality and access. One method to advance community-based environmental awareness is to convene local or regional public health agencies in environmental assessments and make data available to these agencies to advance their work.
- State health officers can educate communities via local health departments about specific environmental health concerns, such as perfluorooctanoic acid and lead contamination.
- State- and local-level health improvement plans should include a focus on environmental conditions that people experience living in poorer census tracks and communities.
- State health agencies can utilize ASTHO's resources through its environmental health program. This program area is designed to support state and territorial public health agencies to build their capacity to respond to environmental public health challenges. CDC funds ASTHO to provide resources to state and territorial public health agencies on emerging environmental health issues. ASTHO focuses on the built environment, data partnerships to improve health, food safety, the natural environment, tribal environmental health, water safety, and tracking environmental health hazards.

Housing

- State health agencies can partner with state housing authority agencies to support programs that address homelessness. Specifically, state health agencies can support integrating clinical care, preventive services, social services, and supports within public housing centers to ensure individuals who are at risk for homelessness receive all necessary supports, including a path to permanent housing without displacement.
- To help individuals find appropriate housing, state health leaders can coordinate efforts with Medicaid and associated entities, such as managed care organizations, and work with healthcare

providers (e.g., behavioral and mental health providers), social services (e.g., job training and placement), and other services. In some cases, state health agencies can substantially support these initiatives financially, including through Medicaid. Because of the substantial disparities in homelessness rates between races, health-driven interventions to reduce homelessness and its effects can measurably improve health equity.

- State health agencies can play a leadership role in bringing together partners in public health and the housing sectors to open discussions about mitigating the risks of lead and tobacco exposure in the home. State health agencies can join housing industry trade associations, learn about what motivates housing industry professionals so they can help craft and deliver key messages about the benefits of smoke-free housing, and offer support to property managers who are trying to implement smoke-free housing rules.[75]

Justice

- Due to disparities in the criminal justice system, state health leaders can improve health equity by ensuring an adequate supply of skilled healthcare providers in criminal justice facilities. One such option is giving health professional shortage area designations to these facilities. Health leaders can also coordinate with criminal justice officials to ensure a smooth transition from institutional settings to life among the general population, including a care transition plan for any chronic conditions, and ensuring reentry planning for community-based mental health services.
- State health agencies can coordinate with their state DMC coordinators to protect the health of youth in the juvenile justice system by educating detention center staff about tobacco use, substance abuse, and mental health, and ensuring that youth leaving or aging out of the juvenile justice system have access to healthcare through insurance.
- State health leaders can engage justice officials to develop comprehensive plans to prevent violence before it occurs, drawing on its knowledge of crime prevention techniques that a range of sectors can implement (e.g., street and community design, zoning and planning, and park landscaping). The justice system's role in implementing a prevention approach can include a strengthened emphasis on community policing and community-police relations, alternatives to incarceration like restorative justice practices, and prioritizing re-entry efforts to minimize recidivism and re-arrest.

Transportation

- State health leaders can work with transportation partners to understand how public transit routes and availability affect access to care. State health leaders can also present the health impacts of transportation infrastructure projects and advocate for healthier options, including sidewalks and improved traffic patterns.
- Transportation agencies receive federal grants to improve public transit and non-motorized infrastructure. State health officials may partner with these agencies and develop grant proposals with objectives and outcome measures designed to target communities most in need for access to services and livable, walkable communities.

Conclusion

This guide is intended as a resource for state and local public health departments to use when thinking about collaborations with non-public health sector partners. The suggested sectors are by no means exhaustive, but are meant to spark inspiration on the myriad ways in which public health intersects with other sectors, and how various agencies at both the state and federal levels have navigated that intersection. There is clear and demonstrated interest in collaboration from those sectors, and if the goal of health equity is to be advanced, one of the means of doing so is through collaboration with our colleagues in other fields.

Multi-sector Intersection and Partnership Resources

Title	Author(s)	Description
The State of HiAP Report	Goff N, Wyss K. Association of State and Territorial Health Officials. (2018)	The report provides case studies from nine states that have integrated HiAP activities, highlights linkages to health equity, and identifies common program themes.
Roundtable on Population Health Improvement - Materials on Collaboration	The National Academies of Sciences, Engineering, and Medicine. (2018)	The National Academy of Science, Engineering, and Medicine Roundtable on Population Health Improvement webpage features roundtable workshop resources that serve as tools to support multi-sector collaboratives.
Rhode Island's Health Equity Zones: Addressing Local Problems with Local Solutions	Alexander-Scott N, Novais A, Hall-Walker C, *et al.* (2017)	This article describes Rhode Island Department of Health's placed-based, community-led approach to address the social determinants to eliminate local health disparities through their Health Equity Zone Initiative.
Health Development Without Displacement: Realizing the Vision of Healthy Communities for All	Aboelata M, Bennett R, Yanez E, *et al.* Prevention Institute. (2017)	This brief explores what people working on healthy community issues can do to improve community conditions without contributing to gentrification and displacement.
Exploring Equity in Multisector Community Health Partnerships: Proceedings of a Workshop	The National Academies of Sciences, Engineering, and Medicine. (2017)	The National Academy of Science, Engineering, and Medicine Roundtable on Population Health Improvement conducted a workshop to explore key strategies and challenges to develop and engage multi-sector community partnerships in order to

		address health equity by eliminating health disparities.
Health in All Policies (HiAP): A Framework for State Health Leadership	Wyss K, Dolan K, Goff N, Association of State and Territorial Health Officials. (2016)	This framework outlines HiAP's history in the United States and around the world, showcases state and local HiAP successes, and provides strategies for HiAP implementation.
A Roundtable on Cross-Sector Collaboration and Resource Alignment in Health Equity: Meeting Summary	Nweke, O. (2016)	This article provides recommendations on cross-sector collaboration as a strategy to eliminate health inequities. Opportunities and strategies discussed to increase cross-sector collaboration and resource alignment include mission alignment, greater investments in infrastructure and capacity building, and increased information access.
The Guide to Community Preventive Services Review of Interventions to Promote Health Equity in the United States	Hahn R, Fielding J, Johnson R, *et al.* (2016)	This article examines systematic reviews of interventions to promote health equity. Interventions include education-, employment-, housing-, and transportation-based.
Implementation of the National Partnership for Action to End Health Disparities: A Three-Year Perspective	Espinosa O, Coffee-Borden B, Bakos A, *et al.* (2016)	This paper examines the National Partnership for Action to End Health Disparities' (NPA's) establishment of regional health equity coalitions and strategic national partnerships to advance health equity, particularly the implementation of activities and actions resulting from these collaborations.
Mapping the Alignment of Programmatic Mission, Functions and Outcomes with the Attainment of Health Equity: An Overview of the Approach and Initial Outcomes through the Lens of the USDA's CYFAR SCP Program	Nweke O, Ryan K, and Williams B. (2016)	The article describes the mapping process of the USDA's CYFAR SCP Program, identifying how health equity is currently integrated into programs as well as future opportunities.
Achieving Health Equity for Indian Country	Ishcomer J. (2016)	The article describes the partnership between the National Indian Health Board and the NPA and their efforts to support tribal communities achieve health equity by strengthening their public health capacity.

The Mobilizing Action Toward Community Health Partnership Study: Multisector Partnerships in US Counties with Improving Health Metrics	Zahner SJ, Oliver TR, Siemering KQ. CDC. (2014)	This study explored the types and salient features of multi-sector partnerships in U.S. counties with improving population health metrics.
Multi-Sector Partnerships for Preventing Violence: A Guide for Using Collaboration Multiplier to Improve Safety Outcomes for Young People, Communities, and Cities	Tsao,B and Davis, R. Prevention Institute. (2014)	This publication clarifies the roles and contributions of 10 sectors and 12 departments in preventing violence before it occurs. It also walks readers through a collaboration multiplier analysis.
Sustainability Through Partnerships: Capitalizing on Collaboration	Gray B, Stites JP. Network for Business Sustainability. (2013)	This report outlines factors affecting partnership outcomes and provides recommendations for achieving positive partnership outcomes.
Building Multisectoral Partnerships for Population Health and Health Equity	Fawcett S, Schultz J, Watson-Thompson J, *et al.* (2010)	This journal article provides recommendations for strengthening collaborative partnerships for population health and health equity.
Collaboration Multiplier	Prevention Institute (n.d)	An interactive framework and tool for analyzing collaborative efforts across fields.
Developing Effective Coalitions: An Eight Step Guide	Prevention Institute (n.d.)	A framework for engaging individuals, organizations, and governmental partners in addressing community concerns.

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For more information about this guide please contact Mary Ann Cooney, ASTHO's chief, health systems transformation (mcooney@astho.org), or Melissa Lewis, ASTHO's director, health equity and SDOH (mlewis@astho.org).

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