



SUMMARY REPORT

Roundtable on Cross-Sectoral Collaboration on the Social Determinants of Health

April 2022

Table of Contents

- Executive Summary 1
- Introduction and Background 3
- How SDOH Impact Each Other 5
 - Employment and Economic Stability. 6
 - Housing 7
 - Education. 9
 - Transportation. 10
 - Environmental Factors 11
 - Food Security. 12
 - Healthcare Access. 13
- Cross-Sectoral Takeaways 15
 - Community Engagement. 15
 - Data Use. 16
 - Data Needs 17
- Action Opportunities 19
- Conclusion 22
- About This Report 23
- Appendix I - List of Acronyms. 24
- Appendix II - Webinar Agenda. 25
- Appendix III - Participating Organizations 26
 - Civil Society 26
 - State and Federal Government 28
 - Private Sector 30
 - Researchers and Academia. 31

EXECUTIVE SUMMARY

On September 28, 2021, The U.S. Department of Health and Human Services (HHS) and the nonprofit Center for Open Data Enterprise (CODE) co-hosted a *Roundtable on Cross-Sectoral Collaboration on Social Determinants of Health (SDOH)*. Roundtable discussions focused on seven SDOH and their relationships, with separate breakout sessions on education, employment and economic stability, environmental factors, food security, healthcare access, housing, and transportation. Each of these SDOH has impacted the overall health and well-being of individuals and communities. While the Roundtable participants discussed those direct connections to health, they also focused on how SDOH impacts each other.

The Roundtable clarified how most SDOH *influenced* a broad range of other SDOH. This suggested that they should be a greater focus of targets to improve health and well-being. At the same time, other factors, notably healthcare access and food security, are *impacted by* other SDOH in many ways. Thus, there are opportunities to set targets in all SDOH to improve health and well-being on individuals and at the community level.

This report presents analysis from discussions on different areas of the SDOH, including a breakdown of how each SDOH influences others and case studies from several areas. It highlights three major needs identified across the topic areas: the need for robust community engagement around the SDOH, the need to overcome barriers to making better use of existing data, and the need to fill data gaps. The report also presents seven action opportunities to help identify and set targets for progress to reduce and ultimately eliminate inequities associated with SDOH:

1. Empower communities to adapt the Healthy People 2030 framework at state and local levels more effectively.
2. Develop interagency coordination and specific Federal agency objectives and targets around the SDOH.
3. Develop an interagency initiative to identify and address the impact of climate hazards on SDOH and health.
4. Explore the development of a centralized resource to aggregate SDOH data, measures, targets, and more.
5. Collect additional data on progress towards targets on healthcare access and other SDOH objectives where baselines already exist.
6. Set additional baselines and targets in areas that are currently underrepresented.
7. Iterate and evolve targets, metrics and frameworks to be based in an equity lens.

This report, written by the staff of CODE, summarizes insights and ideas from individual Roundtable participants and expert input before and after the Roundtable. It is not meant to represent a consensus of the participants and does not represent the views and opinions of HHS or its leadership or staff. CODE hopes this report will be of value to all stakeholders, inside and outside of government, as they address these important issues. This report and the related Roundtable were completed as part of Solicitation No. 75P00121R00052 BASE - COVID-19 Data-Driven Innovation. CODE was a subcontractor to the prime contractor, Pistis LLC.

INTRODUCTION AND BACKGROUND

The September 28, 2021, Roundtable, along with previous Roundtables co-hosted by HHS and CODE, highlighted the importance of SDOH data in determining health risks for vulnerable communities and individuals, identifying prevention strategies, and improving the health of Americans. The Roundtable followed a **public Webinar** on September 21 that featured keynote addresses from HHS leaders and lightning talks from practitioners working in specific SDOH areas. The Roundtable also built on work done by HHS and CODE through two previous projects: An October 2019 **Roundtable on Leveraging Data on the Social Determinants of Health** and an August 2020 Roundtable and Webinar on **Using SDOH Data to Fight COVID-19 and Support Recovery Efforts**.

The SDOH are **defined** as the “conditions in which people are born, grow, live, work and age that shape health.” Therefore, SDOH data is critically important to determine health risks for vulnerable communities and individuals, identify prevention strategies, and improve the health of all Americans.

Data about SDOH is not just applicable to the provision of healthcare, but also has value in understanding the factors that impact other areas of well-being. The Roundtable and **associated** materials were informed by research conducted by the HHS InnovationX team that explored other efforts to advance the use of SDOH data outside the context of healthcare. This research, which looked at the SDOH through a human-centered design lens, was built on 22 interviews with people from the economy, education, food, housing, and transportation sectors.

The research identified three “key insights” that are relevant to this report. First, many health problems are rooted in social factors. Second, people of color and asset-limited communities are disproportionately affected by SDOH. And finally, climate change is a threat multiplier for all SDOH. It has wide-ranging and serious implications for overall health and well-being.

To further investigate the impacts and implications of the SDOH, the Roundtable brought together stakeholders from the economic, education, environmental, food security, healthcare, housing, and transportation sectors. It fostered conversation across these sectors to *develop a shared understanding of SDOH to measure well-being and begin design of discrete targets to reduce and ultimately eliminate inequities associated with certain SDOH*. This project aims to develop a shared system of targets for improvements across these and other sectors.

This effort takes inspiration from the **Healthy People 2030** targets. Healthy People 2030 is led by the HHS Office of Disease Prevention and Health Promotion (ODPHP) and includes data-driven national objectives to improve health and well-being over the next decade. About a third of the 509 objectives in Healthy People 2030 relate to SDOH in categories like economic stability, healthcare access and quality, and neighborhood and built environment. A categorized list of these objectives can be found in Appendix C of CODE’s **Briefing Paper** for this Roundtable.

Since Healthy People 2030 is primarily focused on health outcomes and the healthcare sector, participants at the Roundtable saw an opportunity to add to the work already done on Healthy People 2030 by including additional objectives and targets related to SDOH. They also stressed the need for better, highly localized SDOH data—beyond the national data that informs Healthy People 2030—to identify issues and solutions at the community level.

This summary report represents CODE's synthesis of the discussions from each Roundtable breakout session, explores how our understanding of SDOH areas can be expanded to incorporate the interconnections between them and presents a set of insights and action opportunities that cut across all of the areas explored at the event. It builds on CODE's [Briefing Paper](#) published before the Roundtable and is accompanied by a [Cross-Sectoral SDOH Resource Hub](#), an important output developed from information shared during the Roundtable and additional research. The summary report and Resource Hub demonstrate how SDOH are integral to understanding health and well-being across sectors.

Federal Advisory Committee Act (FACA) rules did not apply to the Roundtable, an invitation-only event designed to elicit individual views and input from experts in the field. This report is not meant to represent a consensus of Roundtable participants but reflects CODE's analysis of individual participants' input and research done before and after the Roundtable.

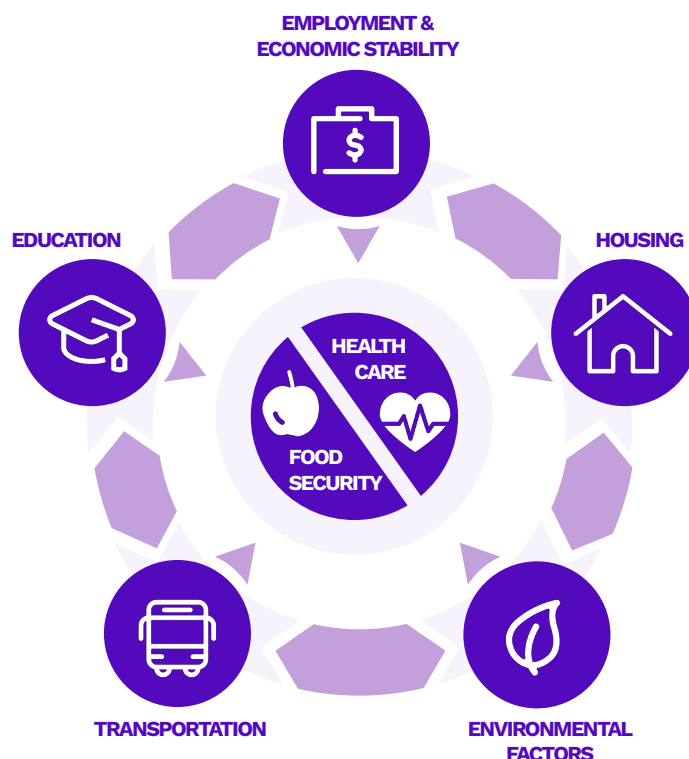
HOW SDOH IMPACT EACH OTHER

Discussions at the Roundtable focused on seven SDOH and their relationships, with separate breakout sessions on education, employment and economic stability, environmental factors, food security, healthcare access, housing, and transportation. Each of these factors impacts the overall health and well-being of individuals and communities. While the Roundtable participants discussed the direct ways in which the SDOH impact health, they also focused on how SDOH impact each other.

These insights on the interrelationship of SDOH can be valuable in supporting the goals of this Roundtable: to develop a shared understanding of SDOH and targets to reduce inequities associated with SDOH. Some factors, such as employment and economic stability, *influence* a broad range of other SDOH, suggesting that they should be a greater focus of targets to improve health and well-being. At the same time, other factors, notably healthcare access and food security, are *impacted by* the other SDOH in many ways - suggesting that they also deserve attention as a kind of common pathway by which other factors influence health and well-being in individuals and communities.

The diagram below shows how education, employment, economic stability, environmental factors, housing, and transportation influence each other - with the arrows showing the directions of influence - and how all five impact food security and healthcare access. While all these factors are interconnected in many ways, the diagram highlights the connections discussed in most detail during the Roundtable.

Figure 1: Influencing Factors



The following sections summarize insights from the Roundtable on how SDOH affect each other, beginning with those that have the greatest impact on other factors and ending with pathways through which other factors may act.

Employment and Economic Stability

Employment status and economic stability directly affect almost all SDOH considered during the Roundtable. Roundtable participants shared many examples, including the following.

Healthcare Access. Participants highlighted poverty and other economic issues as barriers to healthcare access and other support services to improve well-being. For example, people without economic stability may not be able to afford childcare or have paid time off. Furthermore, individuals who do not pay taxes for any number of reasons are unlikely to qualify for social services, making it more difficult for them to access care and other forms of support.

Employment status is tied to insurance coverage, a critical factor in healthcare access. The quality of health insurance is also important: many low-wage jobs do not include health benefits or may offer poorer insurance options that limit access. High insurance costs can also negatively affect economic stability.

Roundtable participants also pointed out that even insured individuals may face barriers to access related to transportation, economic stability, and education. For example, many low-wage jobs and jobs in the service sector do not offer flexibility or time off to receive medical care. Furthermore, people facing economic instability may not be able to afford transportation to get to their appointments.

Housing. Challenges with employment and economic stability can make it more difficult to find and maintain high-quality housing. Roundtable participants highlighted the many downstream impacts of poor housing that can affect other SDOH, such as environmental risk and food insecurity. For example, substandard housing may not have adequate air conditioning, leading to health problems in increasingly hot summers.

Education. Financial issues can make it harder to access education, which has long-term impacts on individual and community health and well-being. For example, poorer families are **more likely** to access the Internet through smartphones or tablets than personal computers. This may have made it harder for their children to have kept up when schools went virtual during the COVID-19 pandemic. Roundtable participants also pointed out that when parents are affluent, their children tend to have higher levels of education and more positive life outcomes over time. Education also directly affects health literacy and access to technology, making it easier for people to get healthcare and maintain their health, as described below.

Environmental Factors. Low-income communities, including minority and other vulnerable communities, are already **disproportionately affected** by climate change. These communities were already **more likely** to live and work in worse conditions than wealthier Americans. Roundtable participants stressed that these trends are likely to continue as climate hazards like drought, fire, heavy rains, and severe storms grow over time. People who can afford to move to safer areas will do so, while others will either be forced to stay or leave during a disaster, facing negative health impacts either way.

Transportation. Lack of economic resources can limit the ability to own a car or use rideshare services, requiring people to rely on public transport that may not be convenient or dependable. Roundtable participants highlighted that even public transport could be prohibitively expensive for individuals facing extreme poverty or unemployment.

Food Security. Employment and economic stability can have a direct impact on food security. Roundtable participants noted that, in some communities, fast food might be more available and cheaper than healthy food. For someone working multiple jobs to support their family, fast food may also seem like the only way to provide an easy, relatively affordable meal.

CASE STUDY: **Jobs Plus**

Jobs Plus was conceived in the mid-1990s by the U.S. Department of Housing and Urban Development (HUD), the Rockefeller Foundation, and MDRC. First put into practice in six cities from 1998 to 2003 and expanded to additional communities since then, Jobs Plus is designed to connect public housing residents with employment, education, and financial resources to help them improve their employment and economic situations.

Findings from the initial phase of Jobs Plus show that participants in the program increased their earnings by 16 percent over a seven-year period, which lasted beyond their official participation in the Jobs Plus program. MDRC is currently **conducting** a longer-term study to evaluate if those gains continued and how they impacted participants' children.

Housing

There are direct connections between housing, economic stability, health outcomes, and overall well-being. Roundtable participants pointed out that the cost of housing limits economic flexibility and restricts mobility. This means that individuals who cannot afford to move continue to live in buildings and neighborhoods that have environmental, safety, and food security issues.

Employment and Economic Stability. While economic stability heavily affects housing choices, housing has an economic impact in turn. Housing costs have increased rapidly in recent years, requiring an increasing percentage of household income. As of 2017, 48% of renters were **cost-burdened**, spending more than 30% of their income on rent, with the highest burden on low-income households. Increasing housing costs make it more difficult for individuals and families to buy their own homes, ultimately limiting their ability to build savings.

Environmental Factors. Living in substandard housing has its own impacts on environmental risks to health. According to a 2017 **assessment** by the Government Accountability Office (GAO), 15% of rental units have serious quality issues, including rodent infestations, water leaks, and problems with heating units. Moreover, HUD **estimates** that some 62,000 public housing units around the country need lead

abatement, as lead poisoning among children continues to pose a significant health risk. Low-cost housing may also be in areas with high air pollution caused by nearby industrial facilities. Combined with the accelerating impacts of climate change, these problems can lead to increased incidences of mold, vector-borne diseases, and heat and cold-related illnesses.

Transportation. The location of affordable housing can also affect transportation options, which are tied to food security, healthcare access, economic security, and much more. Roundtable participants specifically highlighted the impacts on people who live far from their jobs, particularly in rural areas where public transportation options are limited.

Food Security. Participants pointed out that there are often connections between affordable housing location and issues with food security. For many, the only affordable housing available is located in “**food deserts**,” where access to quality, affordable food is limited. Participants also pointed out that solving this problem is not as simple as building new grocery stores since new amenities often lead to increased housing costs and gentrification, driving existing residents to even more underserved areas.

Education and Healthcare Access are also directly affected by housing location. Housing in low-income neighborhoods is likely to have poorer proximity to good schools, clinics, and hospitals.

CASE STUDY: Neighborhood Housing Services of Chicago

Neighborhood Housing Services of Chicago (NHSC) is a “nonprofit neighborhood revitalization organization committed to helping homeowners and strengthening neighborhoods throughout Chicago, South Suburban Cook County & Elgin.” NHSC’s approach is based on the understanding that economic stability, education, access to health care, housing and neighborhood conditions, and social capital all play key roles in physical and emotional well-being and the belief that safe and affordable housing is key to improving health outcomes.

Many African American neighborhoods in Chicago are food deserts and have unemployment rates twice the city average. Over a quarter of these households are housing cost-burdened, and about 15% of residential properties in these neighborhoods sit vacant and abandoned, promoting neighborhood blight and crime. The results of these conditions include poor nutrition, trauma and stress, exposure to safety hazards, and social isolation, all with significant negative implications for physical and emotional health outcomes.

NHSC works to change these conditions, encouraging people of color to access homeownership and take steps towards financial security and housing stability. Homeownership leads to stronger communities that directly affect a neighborhood’s physical, emotional, and social health.

Education

Research **has shown links** between education and health outcomes, including significantly lower mortality rates for those with at least some college education than for those without any. Roundtable participants articulated several ways education can lead to better health outcomes, and its impact on several other SDOH. Most directly, education can help increase individual and community awareness and understanding of SDOH overall, and how individuals and families can exert control to improve their health outcomes and overall well-being. Additionally, education can affect health and well-being over longer periods by helping individuals build better careers, increase their earning capacity, and provide more stable, healthy lives for their children. The education system itself plays a direct role in health and well-being with school nurses, physical education, and free breakfast and lunch programs.

Employment and Economic Stability. Participants highlighted education as a key step on the pathway to improved career outcomes, which increase overall family resources, leading to better access to care and improved outcomes. Increasing parents' education levels, and thus their financial resources may be particularly valuable to their children, with **research** showing that wealthier parents have healthier children.

Healthcare Access. Health literacy, or lack thereof, was described at the Roundtable as a significant driver for issues with healthcare access. Patients with limited health literacy may not understand complicated insurance documents or their available level of care. Additionally, while expanded telehealth options helped many access care during the COVID-19 pandemic, Roundtable participants pointed out that many people can't access or don't know how to use the technology necessary to take advantage of new telehealth options.

Primary and secondary education may also have direct impacts on healthcare access. Roundtable participants pointed out that some children's most consistent access to healthcare may come via their school nurses, while school vaccine requirements may ensure at least some preventative care for children who otherwise lack access.

Food Security. Education is connected to food security in several ways. First, Roundtable participants stressed that education could help families make healthier food choices and understand how to access more affordable, high-quality food. The education system itself also plays a direct role in fighting food insecurity and improving health and well-being. Thanks to the **National School Lunch Program** and other similar efforts, schools can provide a lifeline to food-insecure children, which provide well over 4.5 billion meals each year. The value of these programs was highlighted at the beginning of the COVID-19 pandemic when schools were forced to close. The U.S. Department of Agriculture **worked with states** to ensure that children continued to have access to free and reduced-price meals during lockdowns.

CASE STUDY: Feeding America Hunger + Health

Feeding America is a nationwide network of food banks that serve more than 46 million people. It is one of the largest U.S. charities by revenue. Its Hunger + Health microsite grew out of a call from professionals for increased access to information and a growing focus on “ensuring that the intersections of food insecurity, nutrition and health are being discussed and addressed throughout the food, nutrition, health, government, and social service sectors.”

The Hunger + Health microsite now provides access to quality information, tools, and resources addressing the root causes of food insecurity and social determinants of health. It features educational materials on food insecurity, a database of healthy recipes, and much more.

Transportation

Transportation is an important piece of the overall connection between SDOH and health and well-being. It affects access to healthcare, education, employment, food, and other necessities. It is also closely tied to environmental factors, with Roundtable participants identifying pollution caused by cars and buses and dangerous conditions imposed by highways, train tracks, and other transportation infrastructure as key challenges.

Healthcare Access. Participants stressed the importance of transportation to healthcare access. It is **estimated that** 3.6 million Americans miss or delay non-emergency medical care because they don't have transportation options to access it. For example, in Blythe, California, residents must travel over 100 miles to access specialty care. This represents a significant commitment even for individuals with access to a car. 11% of Blythe residents do not have vehicle access, making accessing care nearly impossible, regardless of insurance status.

Issues with transportation access present significant barriers to healthcare, creating prohibitive costs and impacts on health and well-being. One Roundtable participant shared an anecdote from their own life, noting the added burden that emerged when a family member could no longer drive themselves to appointments for their cancer treatments. The COVID-19 pandemic worsened access-related transportation issues as public transit was disrupted, and concerns over the virus's spread discouraged people from accepting rides. A **recent report** from UCLA found that the pandemic compounded existing inequities in transportation and healthcare access.

Education. The COVID-19 pandemic also worsened issues for transportation and education access. Many American children rely on public transportation to get to school, already highlighted as a key provider of food and healthcare in addition to education. The pandemic sparked school **bus driver** shortages across the country. For example, Chicago, Illinois **faces a shortfall** of 500 bus drivers, leaving well over 2,000 special needs students without access to on-site schooling.

Environmental Factors. Roundtable participants focused on the many ways that transportation and environmental factors combine to affect human health and well-being. According to [the EPA](#), in 2019, transportation accounted for almost one-third of U.S. greenhouse gas emissions. Pollution and other disruptions from the transportation system have a disproportionate impact on low-income and minority populations, who often live close to highways, truck routes, and other pollution centers, in addition to more densely populated areas. A recent report from the [Safe Routes Partnership](#) explored how poorly planned industrial zoning in Southern California impacts local populations' health and safety.

Food Security. Transportation can significantly impact food security, particularly for people who live in low-income areas that are food deserts where good food is not readily available. Their best choice may be to travel to access healthy food. But that may be a limited option for people who do not have access to a car or convenient public transportation. Roundtable participants noted that while people will travel significant distances away from where they live to access healthy food, many can only do so occasionally because of limited transportation options.

CASE STUDY: Kaizen Health

Every year \$150 billion is lost thanks to missed healthcare appointments, and 25% of that is directly attributable to lack of transportation. Kaizen Health works with health care systems, Federally Qualified Health Centers, Medicaid, Medicare Advantage, clinical trials, senior living, home health, and others to fill this transportation gap, connect people to care, and help them live happy, healthy lives.

Kaizen's technology-powered transportation and logistics network is made up of rideshare companies like Uber and Lyft, taxis, wheelchair accessible vehicles, vehicles with car seats for children, stretchers, non-emergency ambulances, volunteer networks, and courier and delivery services. It aims to accommodate its clients' transportation needs curb to curb, door to door, door through door, and bed to bed.

Analysis shows that Kaizen's efforts are paying off. They worked with one client to increase their compliance for a 7-day follow-up appointment from 17% to 34% in just one month, and then upped that to 51% in 6 months. More broadly, a recent survey showed that 94% of their clients would not have been able to keep their appointments without Kaizen's services.

Environmental Factors

The earlier sections describe how environmental factors are intertwined with transportation, housing, and economic security. Roundtable participants also explored deeply how the environment and climate change are tied to food security and education. Overall, climate change is a threat multiplier for all issues involving SDOH, health, and well-being.

Education. Roundtable participants also highlighted the impacts that climate change and other environmental factors may have on children. Climate disasters can shut down schools, leading to lower educational achievement, disruptions to mental health, and poor nutritional outcomes. These impacts are likely to be worse in poor and underserved communities, as wealthier communities can afford to invest more in public school infrastructure or fund alternative sources of nutrition, education, and health access.

Food Security. Climate change is affecting food security in several ways. Drought and water shortages are already causing **food insecurity** worldwide and in the United States, including agricultural shortages in states like California and Florida. Perhaps just as concerning, Roundtable participants noted that increasing carbon dioxide in the atmosphere is already changing the nutritional value of crops, potentially making it harder for everyone to access proper nutrition. Finally, more severe climate disasters may cause supply chain interruptions and infrastructure damage, leading to food insecurity.

CASE STUDY: HHS InnovationX Social Determinants of Health Human-Centered Design Report

In 2021, the HHS InnovationX team explored other efforts to advance the use of SDOH data outside the health space. This research looked at SDOH through a human-centered design lens and was built on 22 interviews with people from the housing, transportation, food, economy, and education sectors. The Social Determinants of Health Human-Centered Design Report identified three “key insights.” The first two - that many health problems are rooted in social factors and that people of color and asset-limited communities are disproportionately affected by SDOH - have helped frame this project’s overall goals.

The third insight - that climate change is a threat multiplier to all SDOH - highlights an emerging understanding with wide-ranging and serious implications for overall health and well-being. The report helped shed light on both short and long-term impacts of climate change on SDOH in all areas discussed in this paper. For example, in the short term, food scarcity and nutrition issues are likely to occur in the immediate aftermath of a natural disaster, while in the long term, droughts and irregular weather can lead to water scarcity and halt agriculture production, leading to food shortages.

Food Security

As the earlier sections describe, food security is linked to many other SDOH areas explored at the Roundtable. Unemployment and underemployment, a lack of transportation options, and poor-quality housing contribute to food insecurity. Meanwhile, education and the education system can help families make healthier food choices and directly distribute food. Improvements to the other SDOH may help improve food security for individuals and communities as well.

At the same time, programs that act directly to improve food security may have some of the greatest impacts on the health and well-being of any SDOH interventions. And those interventions may also include education or other programs to address food security in the context of other issues - as the case study below shows.

CASE STUDY: Martha's Table

Martha's Table is a 41-year-old nonprofit organization founded in the heart of Washington, DC, and committed to ensuring that every Washingtonian can stay and thrive. Their programs focus on supplying emotional wellness and mental health services, early childhood education, and healthy food.

Martha's Table runs 50 Joyful Food Markets in elementary schools east of the Anacostia River in Washington, DC, where there are only three full-service grocery stores serving 160,000 people.

The Joyful Food Markets work to decrease food insecurity and teach families that eating healthy can be affordable. Over time, the program has evolved to incorporate community feedback, which indicated a desire for more fresh food options. The program now also includes a team of trained chefs, a nutritionist, and teachers who provide cooking demonstrations and teach families how to use healthy foods that they may not have encountered previously.

This combination of education and increased access can have a positive impact across several SDOH areas as well as overall health outcomes. Individuals and families are empowered to make healthy meals, improve their diets, and gain a fuller understanding of how food and health are interconnected.

Healthcare Access

Healthcare access is a SDOH factor most clearly and directly connected to health outcomes. As the previous sections describe, most other SDOH seem to affect health and well-being partly through their impact on healthcare access. People who have limited resources, or challenges with housing, transportation, or other essentials, are likely to prioritize those needs over healthcare unless they experience a health emergency. For that reason, simply addressing basic needs can go a long way towards improving healthcare access, health, and overall well-being.

Because of its obvious importance, healthcare access is already prioritized in Healthy People 2030. Almost half of the SDOH-related core aims of Healthy People 2030 are focused on healthcare access. Many of those objectives do not yet have the data they need to measure whether progress has been made towards stated targets, and the connections between healthcare, other SDOH, and health are not fully developed. The Action Opportunities that end this report include opportunities for continuing to build both healthcare access and related targets.

CASE STUDY: Rides to Wellness Demonstration Grants

In one innovative approach to improving healthcare access, the Federal Transit Administration (FTA) funded eight demonstration projects in its Rides to Wellness Initiative. The Initiative “provided funding to transit agencies and other entities to help finance innovative pilot projects that would improve access to healthcare by fostering partnerships between healthcare and transportation providers” in an attempt to address the “triple aim” of increasing access, improving outcomes, and lowering costs.

While these projects were intended to “address transportation barriers to healthcare access” they also demonstrate the interdependence between a range of SDOH areas - including transportation, education, economic stability, and housing - and healthcare access.

One of the projects funded as part of Rides to Wellness, GO Buffalo Mom, is a particularly clear example of how transportation, education, and economic stability can combine to improve healthcare access and outcomes. The program “is a travel training, education, and financial planning program for low-income, high-risk pregnant women who experience significant barriers to accessing transportation services for prenatal medical care.” It is designed to address transportation access and provide resources and education to help participants gain a measure of economic stability. Ultimately, Go Buffalo Mom’s education and financial literacy components helped program participants save an average of \$1,400, which helped them access both transportation and housing.

CROSS-SECTORAL TAKEAWAYS

The previous section has shown that the various SDOH areas impact health and well-being in complicated and interconnected ways. Several themes appeared across all Roundtable breakout sessions to help guide efforts to set SDOH-driven targets for improved health and well-being. Roundtable participants were clear on the need for more robust community engagement in all areas. They also identified a variety of data needs and barriers that restrict the use of the many data resources that are already available.

Community Engagement

Across the Roundtable discussions, participants stated that community engagement is necessary for data collection, indicator definition, target setting, and ultimately, improving health and well-being. Data must be relevant to communities and stakeholders, and just as important, communities should use this data to take part in decision-making processes for outcomes that affect them. Roundtable participants also highlighted the need to move beyond “traditional” forms of community engagement in several ways.

The sessions on healthcare access, environmental factors, housing, food security, and others highlighted the need for community engagement in data collection. Participants noted that there is a lot of quantitative data available, but it may not always be relevant to or collected directly from communities. For example, participants in the food security discussions highlighted the lack of cultural relevance in existing nutritional guidelines and explained that collaborating with local communities could allow for better data collection and more proper guidelines. More broadly, improvements are needed around health equity and representation in data, including the need for more racially disaggregated data. Participants mentioned specific methods of community data collection, including crowdsourcing, citizen science, patient registries, human-centered design processes, and more.

Regardless of data collection, community engagement can help improve health and well-being in several ways. One participant called the return on investment in community engagement “massive,” and several argued for a greater focus on community well-being and health promotion as a strategy to improve outcomes. For example, one participant mentioned the Centers for Disease Control and Prevention’s (CDC) **successful** work to train community members on peer education to reduce diabetes. Overall, participants argued that building stronger community ties can lead to better economic outcomes and improved health and well-being.

Trust is a major ongoing barrier to engagement. As CODE’s **previous work** with HHS has explored, communities may not trust government agencies or researchers due to various historical and structural factors. Participants stressed the importance of effective communication to build trust, particularly in crises when communities need to get authoritative information in the languages they speak. Roundtable participants suggested convenings that include more community members and leaders and more regular interactions between communities and government agencies as approaches to improve communication.

Participants also highlighted the need to build trust between individuals, communities, and the healthcare system. As one participant put it, “the breakdown of trust at the individual level has major impacts at the community level.” People already trust healthcare providers more than most “officials”, but more can be done. One participant suggested identifying and spreading best practices from **Community Health Workers**. Another highlighted the importance of creating connections and trust between community organizations and healthcare organizations that can help show benefits for people’s health and well-being. Simplified data and analytical products that make it easier for communities to use data for their own benefit may also help build trust.

Communities also need to be supported and incentivized to engage with data and use it to solve problems. Several participants highlighted the need for community engagement to include compensation for participants’ time and expertise. This was highlighted as particularly important in communities that have been chronically underserved or where distrust for government is high. One participant explained that their organization avoids any models that do not compensate community members since they are “simply unsustainable.”

Finally, Roundtable participants discussed and shared ways to measure how well engagement is working and how much it is empowering local communities. These included reports from the **California Department of Public Health**, which looked at the connection between political participation and community health, and **efforts from** researchers at Johns Hopkins University and Vanderbilt University to understand the “intersection of community power and health equity...[that underscored] the need for more responsive and dynamic measurement of power.”

Data Use

Roundtable participants stated that there is already a wide range of data available on the various SDOH areas. While there are still data needs - which will be explored in the next section - a lot can be achieved by taking more action with the existing data. However, there are several cross-cutting barriers to data use, including a need for greater interoperability and data linkages and existing privacy and legal fears that limit data use.

The need for more interoperability and more robust data linkages came up throughout the Roundtable. Creating new data linkages is key to understanding the opportunities for collaboration across different sectors. Participants explained that there is a lot of data available in each sector, but it is not connected to other SDOH areas and is rarely connected to health data. Furthermore, the lack of adequate data standards came up repeatedly during the Roundtable. Participants argued for the need to continue breaking down data silos and develop standards for data interoperability.

The Federal government has a leadership role to play in this area. Federal data stewards and chief data officers can work to bring data together across departments to improve health outcomes. Connection between housing and health data would allow for analysis of how health outcomes vary between families who receive aid from HUD, and those who do not. One participant from a government agency pointed out that it is relatively easy to create simple crosswalk tables to connect a variety of datasets but stressed

that it would only be valuable if the results, tables, and data are shared openly. The Federal government can also provide support for state-level data collaboration and develop data governance models that states can use.

Participants also identified an opportunity to link data from government and other public data sources with data held by private firms. They highlighted the robust opportunities for data exchange and collaboration with large companies and argued that this sort of partnership could improve both private and public data. For example, real estate data collected by companies like Zillow and Realtor.com are rich but may not be complete. Combined with more Federal data, they could help identify redlining, proximity to food resources, access to transportation or healthcare, and much more.

Roundtable participants also noted that many potential users are hesitant or unable to use health data due to privacy or legal concerns. According to participants, these fears may be unfounded or overblown, but they have a real impact. They can make it more difficult to access health data, such as Part B data, Medicaid data, or health claims data. One of the main lessons learned from the FTA's **Rides to Wellness Initiative** is that grantees struggled to evaluate the impact of their programs on health due to confidentiality concerns relating to health privacy laws, such as the Health Insurance Portability and Accountability Act (HIPAA). Grantees noted that they could not “gain access to patient health records as planned, and instead had to rely solely on self-reported health data.” CODE’s earlier work with HHS has shown that improved guidelines and communication could help facilitate research efforts under HIPAA, as described on the website HealthDataSharing.org.

Data Needs

Roundtable participants did identify several important data needs, a few of which cut across all SDOH topic areas discussed. These included the need for more granular data - including community and individual-level data as well as disaggregated data - longitudinal data and data on patient and individual experiences.

Many participants expressed a desire for more granular data at the local and individual levels and data disaggregated by race and ethnicity. There are limits to national datasets, which may be stratified to distinct types of subpopulations to identify their unique needs and challenges. For example, participants shared that during the COVID-19 pandemic, many cities struggled to distribute aid intended to prevent evictions because they did not have appropriately granular data. Rural data can be sparse, aggregated, and out of date.

There is a need for more data at both community and individual levels of granularity. At the community level, sub-county level data can help local governments, healthcare providers, and community organizations understand community needs and implement effective solutions. Participants suggested that community data collection could be linked to specific metrics for SDOH performance.

Data collection can help healthcare providers and community groups identify needs, conduct interventions, and track health outcomes at the individual level. As it stands, there is not enough data

at this level for different well-being areas. For example, existing datasets in areas like nutritional status, particularly for Indigenous Americans, are not large enough. Collecting more individual data via fieldwork can help identify people facing food insecurity and improve their health and well-being.

Participants also argued that data should be disaggregated and assessed by race and ethnicity in ways informed by and meaningful to community members. They suggested more Federal guidance is needed on granularity in race, ethnicity, and language that could be developed.

While participants focused largely on the need for more granular data, additional longitudinal data is also needed to measure health and well-being over time, at a large scale, and to understand the impact of various interventions. Participants pointed out that 18-month studies are not long enough to understand long-term impact and that, often, multiple generations need to be examined. There are challenges to accessing and using this data related to data linkages.

Finally, participants discussed the need for more qualitative data on patient and individual experiences. New data tools over the past 15 years have emphasized quantitative data, but it is also important to listen to people and communities about what they need and how they experience health and well-being. Indicators like people's experience moving around their communities or the differences between urban and rural communities can be highly valuable, if not easily quantifiable. This can be as simple as asking people without healthcare access what they think they can do to be healthier or as complicated as gathering information from individuals and aggregating it into datasets around housing quality or nutrition access.

ACTION OPPORTUNITIES

Roundtable participants shared various ideas and opportunities for action to advance well-being and health outcomes based on SDOH. These included everything from redefining poverty metrics to match current realities better, incorporating health outcomes into evidence-based policymaking, and including health topics in elementary and secondary education. The Roundtable also surfaced many resources tied to each SDOH area, including research and datasets, that CODE has aggregated into the new [SDOH Resource Hub](#).

A number of these ideas, potential actions, and resources relate directly to the Roundtable's goal of beginning to work towards *discrete targets to reduce and ultimately eliminate inequities associated with certain SDOH*. Based on a synthesis of participants' input and other research, CODE suggests seven steps that could help ease and improve this target setting.

- 1. Empower communities to adapt the Healthy People 2030 framework at state and local levels more effectively.** Roundtable participants pointed out that Healthy People 2030 is most useful as a resource at the Federal level. They suggested exploring ways to draw inspiration from the Healthy People Model at the state and local levels. This would help set more specific, locally applicable objectives and targets and supply pathways for local leaders to meet them. For example, one of the Healthy People 2030 objectives is to "Increase the number of states, territories, and DC that prohibit smoking in worksites, restaurants, and bars." Many states and territories - including Washington, DC - already prohibit smoking in those locations. A local-scale Healthy People could replace this aim with something more relevant.

State or local level Healthy People programs could also be used to engage local companies, community benefit organizations (CBOs), and other non-governmental players around setting targets and working towards reaching them. The [National Neighborhood Indicators Partnership](#) was mentioned as a potential source of guidance or partnership in this area. This effort could also include the development of a Federal Center of Excellence designed to help states, territories, and cities identify and implement best practices. **Who would be involved:** HHS, state governments, local governments, researchers, CBOs, private companies

- 2. Develop interagency coordination, and specific Federal agency objectives and targets, around SDOH.** While there is increasing recognition of the importance of SDOH outside of the healthcare space, Roundtable participants noted that interagency coordination around SDOH has so far been limited. Efforts to bring in experts from outside of HHS during the development of Healthy People 2030 and to engage agencies through the [Social Determinants of Health Workgroup](#) are a strong beginning and a basis for further work. HHS can play a key role here, but other agencies need to be engaged and encouraged to incorporate SDOH into their work. Ultimately, agencies are responsible for areas that affect SDOH should set their own targets for progress in areas that would help improve health and well-being. **Who would be involved:** HHS, HUD, U.S. Department of Transportation, U.S. Department of Agriculture, U.S. Department of Education, U.S. Department of Commerce, U.S. Environmental Protection Agency.

- 3. Develop an interagency initiative to identify and address the impact of climate hazards on SDOH and health.** There is an immediate opportunity to further interagency coordination and collaboration by setting specific targets around SDOH and climate change. HHS research, which was further supported by discussions at the Roundtable, suggests that climate change is a threat multiplier for all SDOH considered as part of this project. At the same time, a **recent report** from the **National Oceanic and Atmospheric Administration** (NOAA), the **Federal Emergency Management Agency** (FEMA), and the **White House Office of Science and Technology Policy** (OSTP) detailed ways to expand and improve climate information and services for the public. This report explored five hazards that pose the greatest risks: drought, flooding, extreme heat, wildfires, and coastal hazards. HHS, potentially through the **Office of Climate Change and Health Equity**, should collaborate with NOAA, FEMA, OSTP, and other relevant agencies to develop objectives and targets to address the impacts of these climate hazards on health. **Who would be involved:** HHS, NOAA, FEMA, OSTP
- 4. Explore the development of a centralized resource to aggregate SDOH data, measures, targets, and more.** Roundtable participants pointed out that there is no central location for access to SDOH data and information on related measures, objectives, and targets. For example, Healthy People 2030 supplies information on objectives and aggregates links to several datasets. Similarly, CODE's new SDOH Resource Hub compiles a range of resources and data sets, but it is designed to be an evolving information repository rather than an action hub. There may be an opportunity for HHS, another government agency, or a non-governmental organization to develop a more comprehensive resource to facilitate access to and use of SDOH data, measures, and targets. It may be possible to re-envision **Healthdata.gov** as a major resource for SDOH data and other data on health and healthcare. **Who would be involved:** HHS, non-governmental organizations, academic institutions
- 5. Collect additional data on progress towards targets on healthcare access and other SDOH objectives where baselines already exist.** About a third of the 509 objectives in Healthy People 2030 relate to SDOH in one way or another, with a particular focus on healthcare access. Roundtable participants provided feedback on updating Healthy People 2030 iteratively to set additional baselines and targets and move beyond the existing baselines. Specifically, there are currently 50 objectives around healthcare access and quality, but only five have moved beyond the baseline phase. **Who would be involved:** HHS, the Social Determinants of Health Workgroup
- 6. Set additional baselines and targets in areas that are currently underrepresented.** Several important SDOH are currently underrepresented in Healthy People 2030. For example, **CODE's research** identified only one objective related to transportation and two tied to housing. Roundtable participants provided feedback on expanding Healthy People 2030 to include additional targets around transportation, housing, the environment, and other SDOH explored as part of this project. **Who would be involved:** HHS, the Social Determinants of Health Workgroup

7. **Iterate and evolve targets, metrics and frameworks to be based in an equity lens.** As frameworks like Healthy People 2030 continue to evolve, their focus should be on using objectives and targets to reduce and eliminate inequities. For example, Healthy People 2020 is currently focused on helping “all people...achieve their full potential for health and well-being” an admirable goal, but one that may make target setting or concrete action difficult. To better embrace the Biden administration’s goals around **racial equity** and ensure that its objectives and targets are actionable, Healthy People 2030 and other SDOH efforts should be developed to reduce and eliminate inequities as a first step on the path towards ensuring health and well-being for all Americans. **Who would be involved:** HHS, the **White House Equitable Data Working Group**

CONCLUSION

The Roundtable revealed the extent to which the various SDOH are interconnected and interdependent. Most have some influence on a few others, while more than one directly affects every other area.

At the same time, several important themes appeared across each SDOH. Most notably, to reach the goal of reducing and eliminating inequities, government agencies will need to engage with vulnerable communities more effectively. It will be essential to engage, communicate, and build trust to ensure that current and future efforts address the problems that real people and communities face.

Discussions at the Roundtable helped articulate several opportunities for action that can increase coordination, build on existing work done through programs like Healthy People 2030 and the Social Determinants of Health Workgroup, bring discussions around SDOH and their impact on health closer to the most affected communities, and address vital issues that directly relate to the SDOH. With growing awareness of the importance of SDOH, HHS and other government agencies have an opportunity to create new, collaborative, and effective programs that can dramatically improve Americans' health and well-being.

ABOUT THIS REPORT

This report was written by Matt Rumsey, CODE's Research and Communications Manager, with support from Temilola Afolabi, CODE's Research Associate, Paul Kuhne, CODE's Roundtables Program Manager, and Joel Gurin, CODE's President. CODE would like to thank the members of the HHS InnovationX team and the Office of the Assistant Secretary of Health for their support throughout this project.

This Report was produced by the Center for Open Data Enterprise and represents CODE's independent synthesis of input from the *Roundtable on Using SDOH Data to Fight COVID-19 and Support Recovery Efforts*. Information and opinions in this report do not necessarily reflect the opinions of the U.S. Department of Health and Human Services, or any other component of the Federal government. Federal Advisory Committee Act rules were not applicable to the Roundtable, an invitation-only event designed to elicit individual views and suggestions from experts in the field. This report is not meant to represent a consensus of Roundtable participants but reflects CODE's analysis of individual participants' input and research done before and after the Roundtable.

The Center for Open Data Enterprise (CODE) is an independent nonprofit organization based in Washington, DC CODE's mission is to maximize the value of open and shared data for the public good, by working with government agencies, businesses, nonprofits, and researchers who are both data providers and data users. Since it was founded in January 2015, CODE has held more than two dozen Roundtables and Workshops with the White House and Federal agencies focusing on medical research and health care, energy and the environment, and Federal data strategy. CODE has also developed informational materials and recommendations to promote government data and public-private collaboration around data sharing and application. In addition to working with government agencies in the U.S. and internationally, CODE partners with private sector companies, foundations, and other nonprofit organizations to achieve its mission. More information about CODE is available at www.odenterprise.org.

APPENDIX I - LIST OF ACRONYMS

CBO Community Benefit Organization

CDC Centers for Disease Control and Prevention

CODE Center for Open Data Enterprise

FACA Federal Advisory Committee Act

FEMA Federal Emergency Management Agency

FTA Federal Transit Administration

GAO Government Accountability Office

HHS U.S. Department of Health and Human Services

HIPAA Health Insurance Portability and Accountability Act

HUD U.S. Department of Housing and Urban Development

NHSC Neighborhood Housing Services of Chicago

NOAA National Oceanic and Atmospheric Administration

ODPHP Office of Disease Prevention and Health Promotion

OSTP White House Office of Science and Technology Policy

SDOH Social Determinants of Health

APPENDIX II - WEBINAR AGENDA

Webinar on Cross-Sectoral Collaboration on the Social Determinants of Health Co-hosted by CODE and the U.S. Department of Health and Human Services September 21, 2021	
12:00	Welcome to the HHS Webinar on Cross-Sectoral Collaboration on SDOH Joshua Prasad, MPH, Director for Health Equity Innovation, HHS
12:05	Special Welcome from the Office of the Assistant Secretary for Health Leith States, MD, MPH, Chief Medical Officer, HHS
12:10	Special Remarks: Understanding The Vision for Healthy People 2030 RADM Paul Reed, MD, Deputy Assistant Secretary for Health, HHS
12:15	HHS Keynote Address Karen Hacker, MD, Director, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC)
12:22	An Overview of CODE Joel Gurin, President, CODE
12:26	Lightning Talk: Addressing Transportation Related-Health Risks with Data Mindi Knebel, Founder and CEO, Kaizen Health
12:30	Lightning Talk: Housing and Health Anthony Simpkins, Executive Director, Neighborhood Housing Services of Chicago
12:34	Lightning Talk: Understanding Environmental Health Impacts Rebecca Rehr, Director of Climate for Health Project, ecoAmerica
12:38	Lightning Talk: Regional Planning and Health Tiffany Williams, Chief Program Officer, Martha's Table
12:42	General Q&A

APPENDIX III - PARTICIPATING ORGANIZATIONS

Roundtable on Cross-Sectoral Collaboration on the Social Determinants of Health.

Co-hosted by CODE and the U.S. Department of Health and Human Services.

September 28, 2021

Civil Society

AcademyHealth is a leading organization for health services researchers, policymakers, and health care practitioners and stakeholders. AcademyHealth supports and conducts high-level health services research designed to improve the public's understanding of the U.S. healthcare system.

Catalyst Miami's mission is to identify and collectively solve issues adversely affecting low-wealth communities throughout Miami-Dade County. Their vision is a just and equitable society in which all communities thrive.

Civitas Networks for Health is a national collaborative comprised of member organizations working to use health information exchange, health data, and multi-stakeholder, cross-sector approaches to improve health.

The CLEO Institute is a 501(c)(3) nonprofit, non-partisan organization exclusively dedicated to climate change education, engagement, and advocacy.

ecoAmerica builds institutional leadership, public support, and political resolve for climate solutions in the United States.

Healthcare Association of New York State (HANYs) works to ensure every New Yorker has access to affordable, high-quality care. HANYs advances the health of individuals and communities by providing leadership, representation and service to not-for-profit and public hospitals, nursing homes and other healthcare organizations throughout New York state.

Health Equity Solutions' mission is to promote policies, programs, and practices that result in equitable health care access, delivery, and outcomes for all people in Connecticut.

Healthy Gulf is a network of environmental, social justice, and citizens' groups and individuals committed to restoring the Gulf of Mexico to an ecologically and biologically sustainable condition.

Human Impact Partners transforms the field of public health to center equity and builds collective power with social justice movements. They envision a society that centers health, healing, and belonging.

Kaizen Health provides organizations with data-driven proactive well-being solutions that tackle the demands of the modern workplace. Kaizen does this by helping businesses to further connect with their employees with data-driven feedback-based action plans that target specific well-being needs to improve health.

Kaiser Permanente is one of the nation's largest not-for-profit health plans, serving 12.2 million members. It comprises Kaiser Foundation Hospitals and its subsidiaries, Kaiser Foundation Health Plan, and the Permanente Medical Groups.

The LEAD Coalition of Bay County mission is to work collaboratively to build trust, increase safety and restore neighborhoods. A Community Development Corporation that convenes stakeholders to develop and implement authentic, collaborative solutions to neighborhood challenges.

Love City Strong, Inc. is a 501(c)(3) nonprofit organization based on and serving the island of St. John, in the US Virgin Islands. They focus on disaster preparedness, disaster response, and building resilience and capacity on a community level to address future natural disasters.

Martha's Table works to support strong children, strong families, and strong communities by increasing access to healthy food, quality education, and family supports in the District of Columbia.

MN Community Measurement's mission is to accelerate the improvement of health by publicly reporting health care information. As a Minnesota nonprofit, they work with their partners to create, convene, collaborate and communicate across a range of local and national measure development, analytics and public reporting activities.

The National Committee for Quality Assurance exists to improve the quality of health care. We work for better health care, better choices and better health.

The National League of Cities is an organization comprised of city, town and village leaders that are focused on improving the quality of life for their current and future constituents.

The Navajo Water Project, DigDeep is a community-managed utility alternative that brings hot and cold running water to homes without access to water or sewer lines. They do this primarily by installing off-grid Home Water Systems amongst other activities.

Neighborhood Housing Services of Chicago is a nonprofit neighborhood revitalization organization committed to helping homeowners and strengthening neighborhoods throughout Chicago, South Suburban Cook County & Elgin.

Propeller is a 501c3 nonprofit that grows and supports entrepreneurs to tackle social and environmental disparities. Our vision is an inclusive and thriving entrepreneurial ecosystem in New Orleans that responds to community needs and creates the conditions for an equitable future. Our strategy is to build a critical mass of small businesses and nonprofits working to tackle disparities in community economic development, education, food, health, and water.

Puerto Rico Public Health Trust's vision is to achieve sustainable health equity in Puerto Rican communities and improve their quality of life through innovation, collaboration and community engagement.

Regional Plan Association is an independent, nonprofit civic organization that develops and promotes ideas to improve the economic health, environmental resiliency, and quality of life of the New York metropolitan area.

Safe Routes Partnership's mission is to serve a diverse national community of organizations that advocates for and promotes the practice of safe bicycling and walking to and from schools throughout the United States.

Shift Health Accelerator partners with communities to learn what issues they need to address, who's best positioned to solve them, and then connect them with money and support to spark positive change where it's needed most.

The Urban Land Institute is a nonprofit research and education organization with regional offices in Washington, D.C., Hong Kong, and London. Its stated mission is to "shape the future of the built environment for transformative impact in communities worldwide

State and Federal Government

The Arizona Department of Transportation (ADOT) is a multimodal transportation agency serving one of the fastest-growing areas of the country. ADOT is responsible for planning, building and operating a complex highway system in addition to building and maintaining bridges and the Grand Canyon Airport

The Census Bureau's mission is to serve as the leading source of quality data about the nation's people and economy. The Census Bureau is overseen by the Economics and Statistics Administration.

The Department of Agriculture's National Institute of Food and Agriculture provides leadership and funding for programs that advance agriculture-related sciences. They invest in and support initiatives that ensure the long-term viability of agriculture.

The Department of Health and Human Services is a cabinet-level department of the U.S. Federal government with the goal of protecting the health of all Americans and providing essential human services.

The Administration for Community Living was created around the fundamental principle that older adults and people of all ages with disabilities should be able to live where they choose, with the people they choose, and with the ability to participate fully in their communities.

The Agency for Healthcare Research and Quality's mission is to produce evidence to make health care safer, higher quality, more accessible, equitable, and affordable, and to work within the U.S. Department of Health and Human Services and with other partners to make sure that the evidence is understood and used.

The Centers for Disease Control and Prevention (CDC) works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same.

The Centers for Medicare and Medicaid Services administers the Medicare program and works in partnership with state governments to administer Medicaid, the Children's Health Insurance Program (CHIP), and health insurance portability standards.

Center for Medicare & Medicaid Innovation, or Innovation Center, with CMS supports the development and testing of innovative health care payment and service delivery models.

Health Resources and Services Administration is the primary federal agency for improving health care to people who are geographically isolated, economically or medically vulnerable.

National Center for Health Statistics (NCHS), part of the CDC, compiles statistical information to help guide policies to improve the health of Americans. Holds a biennial data user conference; consult the NCHS website for date and location. NCHS disseminates data and statistics online and in print.

The National Institutes of Health seeks fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.

The Office of the Assistant Secretary for Health oversees 12 core public health offices — including the Office of the Surgeon General and the U.S. Public Health Service Commissioned Corps — as well as 10 regional health offices across the nation and 10 presidential and secretarial advisory committees.

The Office of the Assistant Secretary for Planning and Evaluation is the principal advisor to the Secretary of HHS on policy development, and is responsible for major activities in policy coordination, legislation development, strategic planning, policy research, evaluation, and economic analysis.

The Office of Minority Health was created in 1986 and is dedicated to improving the health of racial and ethnic minority populations through the development of health policies and programs that will help eliminate health disparities.

Montana Office of Rural Health is dedicated to improving access to quality healthcare for rural Montana by providing collaborative leadership and resources to healthcare and community organizations.

The Department of Housing and Urban Development is a cabinet-level department of the U.S. Federal government that seeks to provide housing and community development assistance and to make sure everyone has access to “fair and equal” housing.

The Department of Transportation’s mission is to improve the quality of life for all American people and communities, from rural to urban, and to increase the productivity and competitiveness of American workers and businesses.

The Department of Veterans Affairs seeks to provide veterans the world-class benefits and services they have earned - and to do so by adhering to the highest standards of compassion, commitment, excellence, professionalism, integrity, accountability, and stewardship.

Private Sector

Banco de Alimentos' mission is to mitigate hunger by responding to the food needs of food insecure persons through our food distributions and our nourishing and educational programs.

BrightHive is an impact-driven data technology company using data trusts to transform the way social services providers, government agencies, and funders share data, make decisions, and affect the outcomes of beneficiaries.

The Commonwealth Healthcare Corporation was formed under the executive branch of government. Over the next thirty years it came to operate the sole territory hospital and emergency department, several outpatient clinics, a dialysis unit, ancillary services, behavioral health services, and all public health functions.

DataGen, inc. provides customers with advanced visibility into—and proper understanding of—federal payment policy change. Their deep understanding of healthcare policy allows the team to proactively identify, translate, and alert customers to impending change.

Dedalus is the leading healthcare and diagnostic software provider in Europe and one of the largest in the world. The shareholding structure ensures stability and great financial capacity through the presence of Ardian, the largest private investment company in Europe and 4th in the world.

Google Health is dedicated to improving women's physical and mental health and the patient care they receive through research, product development, and partnerships.

Humana is a for-profit American health insurance company based in Louisville, Kentucky.

Leavitt Partners, a leading consulting firm, is at the forefront of navigating change in healthcare. They provide a holistic view of economic, market, delivery system, public policy, and political influences impacting healthcare, helping clients successfully navigate from today's uncertainty to tomorrow's prosperity.

Mathematica is dedicated to improving public well-being by bringing the highest standards of quality, objectivity, and excellence to bear on public policy. It advances its mission through objective, evidence-based standards, superior data, and collaboration.

The Maximizer Group is an independent advisory firm primarily advising corporations, investors and startup companies.

Metropolitan Group crafts strategic and creative services to amplify the power of voice of change agents in building a just and sustainable world.

MySidewalk is a city intelligence tool. They help analysts in local government track key indicators, answer questions about city progress, and create reports and data dashboards that drive awareness and action.

The Novartis US Foundation's mission is to improve health in underserved communities in the United States by creating innovative and sustainable solutions to expand access to healthcare and build trust within the healthcare system.

Optum connects the brightest people, places and ideas across the health care ecosystem to create better care.

ProMedica is a mission-based, not-for-profit health and well-being organization headquartered in Toledo, Ohio. It serves communities in 28 states.

Unite Us is an outcome-focused technology company that builds coordinated care networks to connect health and social service providers together. It aims to connect providers around each patient through a seamless integration of the social determinants of health into care delivery.

ZeOmega's mission is to deliver proven population health management software solutions that enable our clients to enhance the value of healthcare and bend the cost curve.

Researchers and Academia

Bipartisan Policy Center is a Washington, D.C. based think tank that actively fosters bipartisanship by combining the best ideas from both parties to promote health, security, and opportunity for all Americans. Its policy solutions are the product of informed deliberations by former elected and appointed officials, business and labor leaders, and academics and advocates who represent both sides of the political spectrum.

Drexel is an academically comprehensive and globally engaged urban research university, known for the nation's premier co-operative education program.

Iowa State University of Science and Technology is a public land-grant research university in Ames, Iowa. It is the largest university in the state of Iowa.

The Johns Hopkins Center for a Livable Future works toward a healthy, equitable, resilient food system from within the Department of Environmental Health and Engineering.

New York University is one of the world's foremost research universities and is a member of the selective Association of American Universities.

The Patient-Centered Outcomes Research Institute helps people make informed healthcare decisions, and improves healthcare delivery and outcomes, by producing and promoting high-integrity, evidence-based information that comes from research guided by patients, caregivers, and the broader healthcare community

Rural and Minority Health Research Center's mission is to illuminate and address the health and social inequities experienced by rural and minoritized populations to promote the health of all through policy-relevant research and advocacy.

Stanford University is one of the world's leading research universities. Stanford is known for its entrepreneurial character, drawn from the legacy of its founders, Jane and Leland Stanford, and its relationship to Silicon Valley. Research and teaching stress interdisciplinary approaches to problem solving.

The University of the Virgin Islands is a public, co-ed, land-grant HBCU in the United States Virgin Islands (USVI). Approximately 2,500 students are enrolled on the two campuses: the Albert A. Sheen Campus on St. Croix and the St. Thomas campus.