Improving Social Determinants of Health—Getting Further Faster

Brief Evaluation Report

March 2023

Public Health Problem

Chronic diseases such as heart disease and stroke, cancer, and diabetes are leading causes of morbidity and mortality in the United States.[1, 2] Chronic diseases are also leading drivers of the nation's annual $3.8 trillion in health care costs.[3, 4] Racial, ethnic, and socioeconomic chronic disease disparities persist, and they are bolstered by differences in social determinants of health (SDOH)[2, 5, 6] "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks."[7]

The Solutions

Addressing SDOH is essential for preventing chronic disease and promoting health and health equity.[8] The health care sector has made significant investments in addressing SDOH by screening patients for health-related social needs and referring them to services to help address those needs. We're also seeing an accelerated shift to value-based models to increase accountability around quality health care.[9, 10] These are key strategies for addressing health-related social needs and promoting health equity, and we see an opportunity for public health to augment health care's approach.

SDOH and health equity are complex issues that require comprehensive, multilevel interventions, and public health is well-positioned to rise to the challenge. Multisector community partnerships and coalitions (hereafter referred to as partnerships) are key agents for addressing SDOH and promoting health equity.[11, 12] Public health has a long history of leveraging multisector partnerships for disease prevention and health promotion. Centers for Disease Control and Prevention (CDC) examples include comprehensive cancer control coalitions, Racial and Ethnic Approaches to Community Health (REACH) partnerships, and tobacco control coalitions.

To help realize the potential of multisector community partnerships to prevent chronic disease and advance health equity by addressing SDOH, we need to better understand not only how they contribute to community changes that promote healthy living but also the health impact of partnerships' SDOH initiatives. As part of the Improving Social Determinants of Health—Getting Further Faster (GFF) initiative, CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP) has partnered with the Association of State and Territorial Health Officials (ASTHO), National Association of County and City Health Officials (NACCHO), and 42 multisector community partnerships (Appendix A) to strengthen the evidence base for advancing health equity and chronic disease prevention by addressing one or more of five SDOH areas: (1) built environment (BE), (2) community-clinical linkages (CCL), (3) food and nutrition security (FNS), (4) social connectedness (SC), and (5) tobacco-free policies (TFP). NCCDPHP is uniquely positioned to advance these domains, given the center's organizational expertise, capabilities, and congressional mandates.[5]

1. Engage all 42 GFF partnerships in evaluation design through interactive virtual community meetings
2. Conduct 42 group discussions with key staff and partners and rapid analysis of qualitative data
3. Review documents; abstract and synthesize relevant data
4. Conduct Prevention Impacts Simulation Model (PRISM) analysis

Rapid Retrospective Evaluation Approach

ASTHO/NACCHO contracted RTI International to conduct a participatory and mixed-methods rapid retrospective evaluation to "better understand and inform how multisector community partnerships perform meaningful work to improve chronic disease health outcomes and advance health equity by addressing SDOH." By starting with partnerships that indicated success with implementing initiatives related to one or more of the five GFF SDOH domains, the evaluation was designed to rapidly describe community and health outcomes and gather reflective insights from GFF partnerships on keys to their success. These findings can inform NCCDPHP, ASTHO, NACCHO, and other funders' and TA providers' future efforts to support and strengthen multisector partnerships' SDOH initiatives. The rapid evaluation is retrospective and evaluated work that the partnerships have completed. In addition, Prevention Impacts Simulation Model (PRISM) analysis simulated the longer-term impacts for continuing selected SDOH efforts into the future for 5, 10, and 20 years.

Key Findings

GFF partnerships are increasing communities' capacity to implement SDOH initiatives; changing communities to support healthy living; and improving health outcomes among community members, including those disproportionately burdened by chronic disease and related risk factors.

All 42 GFF partnerships built community capacity for addressing SDOH through new or strengthened partnerships, data and data systems, or strategic plans; leveraged resources; or engaged residents. Forty-one partnerships included state or local health departments.

90% of GFF partnerships contributed to community changes that promote healthy living, such as building new walking trails, bike lanes, and playgrounds; creating new community and school gardens; and adopting tobacco-free policies.

More than half of GFF partnerships reported health outcomes data for their SDOH initiatives, including improved health behaviors, clinical outcomes, overall health and wellness, and decreased health care utilization and costs.

Example Interventions and Reported Health Outcomes

Intervention Description	Reported Outcomes (Source)
Infrastructure Improvements and Outdoor Educational and Recreational Programming. Targeted infrastructure investments include nature-based/outdoor park amenities that facilitate expanded youth outdoor educational and recreational programming and increased self-directed use of outdoor spaces by the community.	Of 128 enrolled youth, 60 completed pre-and post-intervention surveys. Results indicated a statistically significant increase of at least 60 minutes in the number of minutes participants spent on physical activities per day in 2018. (Impact Report)
Culturally Tailored Community Health Worker (CHW) Intervention. Using a randomized control design, CHWs are embedded into primary care practices and enroll patients at risk of developing diabetes or with uncontrolled diabetes into treatment or control groups. Participants in the intervention group received five group educational sessions and two one-on-one visits delivered by a trained CHW, whereas those in the control group received only the first group educational session.	The average decrease in A1C was 0.2% greater for the intervention group (N = 176) than for the control group (N = 160). Although this difference between groups was not significant, a significantly greater percentage of individuals in the intervention group achieved A1C control (< 7.0%) at 6 months (36.3% vs. 24.6%), and a significantly larger proportion of intervention group participants had decreased A1C at 6 months compared with individuals in the control group (55.2% vs. 42.5%). Mean cholesterol decreased significantly by 10.6 mg/dL for the intervention group ($p = 0.004$) compared with a decrease of 0.6 mg/dL for the control group ($p = 0.878$) (2018 Manuscript on Version 1.0 of the intervention)
Program to Encourage Active, Rewarding Lives. This evidence-based program is designed to reduce symptoms of depression and improve quality of life among older adults and among all-age adults with epilepsy. The partnership holds the license for this program, serves as the training and learning collaborative, manages a centralized data system for assessing the effectiveness of these programs, embeds screenings for SDOH and social isolation, and provides bidirectional data sharing with primary care physicians through the state Health Information Exchange.	Among 320 program participants with sessions from 7/1/2018–5/30/2021, 130 completed pre- and post-surveys. Thirty-five survey respondents improved self-rating of general health (2018–2021 Program Administration for Community Living Grant Report)
Street as Medicine. Since January 2016, the program has provided primary care to unhoused, sheltered, and at risk of homelessness, "couch surfers," "rough sleepers," etc.—any person, family, or household with no fixed address or security of tenure. Primary care services are provided in community locations, including a homeless shelter and a YMCA.	From March 2018–May 2019, there were an estimated 257 emergency department and 15 admissions saved and an average cost savings of $1,329,595 (Business Case Report based on EPIC Clarity data)

Implications for Funders and TA Providers

Partnerships reported a range of outcomes for SDOH initiatives, and evidence and data sources for outcomes varied widely; this suggests that funders and TA providers should consider

- **specifying expectations for outcomes reporting up front so partnerships can plan for data collection and analysis;**
- **providing early and continued TA related to monitoring and evaluation, including tracking reach and dose;**
- **helping funded programs select appropriate performance measures based on community priorities, partnerships evaluation capacity, and the existing evidence base for interventions; and**
- **using simulation modeling to estimate longer-term impacts of evidence-based interventions to help maximize resources for implementation and evaluation of proximal outcomes.**

A Closer Look at the 22 Partnerships Reporting Health Outcomes

- **Years in Operation:** Twenty partnerships reported years in operation through discussions or document review. Reports ranged from 1 to 41 years as of 2021; most (9, 45%) fell in the 5- to 10-year range.

- **Priority Populations:** Eighteen partnerships specified priority populations for their work, and 12 specified two to three priority populations.

Racial and ethnic minorities, including immigrants	12
People with low income	9
Children and youth	4
Older adults	2
People living in rural areas	2
People who identify as LGBTQ	1

- **GFF SDOH Domain:** Fourteen of the 22 partnerships that reported health outcomes data for their initiatives were multi-SDOH partnerships, five were designated as CCL partnerships, one was designated as FNS, and two were designated TFPs.

- **Lead Organizations:** Four partnerships are led by community-based organizations, four by health care organizations, two by health departments, and two by universities. Seven are co-led by at least two partnering organizations. The remaining three partnerships are led by other types of organizations (Area Agency on Aging, nonprofit real estate developer, and nonprofit public health institute).

- **Funding Sources:** Twenty-one partnerships described funding sources for their work, and 12 partnerships reported two to four funding sources.

State or local government agency	14
Foundations	8
Federal agency other than CDC	6
CDC	3

- **Health Department Partners:** Twenty-one partnerships partnered with a local and/or state health department, and two partnerships have local health department leads.

Implications for Funders and TA Providers

- **For partnerships getting to health outcomes, health departments are key partners, though only lead partners in two cases. Funders can encourage partnering with health departments and consider eligibility criteria that allow for different types of lead organizations.**
- **Results suggest that implementing SDOH initiatives in collaboration with health care partners facilitates outcomes tracking and reporting via electronic health records.**
- **Partnerships reporting two or more types of health outcomes have been in operation for approximately 4 to 10 years, which suggests that more-mature partnerships may be better positioned to track and report health outcomes than those in early planning or implementation stages.**

Potential Long-Term Impact

Results of the PRISM analysis suggest promising long-term impacts from SDOH initiatives studied in the GFF retrospective evaluation. According to reach data provided by 27 partnerships, their initiatives are projected to save $633 million in medical and productivity costs after 20 years.

Outcome	5-Year Results	10-Year Results	20-Year Results
Coronary heart disease events averted[a]	460	960	2,080
Strokes averted[a]	230	510	1,170
Deaths averted[a]	150	340	880
Medical costs averted (2021$)[b,c]	$18,830,000	$45,415,000	$125,733,000
Productivity costs averted (2021$)[b,c]	$82,191,000	$193,680,000	$507,665,000
Total costs averted (2021$)[b]	$101,021,000	$239,095,000	$633,398,000

[a]Rounded to nearest ten [b]Rounded to nearest $1,000 [c]Includes costs of CVD and risk factors of CVD

GFF Partnerships' Insights for Implementers and Key Considerations for Funders and TA Providers

GFF partnerships' reflections on keys to their success may be useful for other multisector community partnerships working to launch and sustain SDOH initiatives. These reflective insights can also help inform funders' and TA providers' efforts to support and strengthen multisector partnerships' SDOH initiatives.

Photo: Proviso Partners for Health

GFF Partnerships Insights for Implmenenters

Context and Culture

- Assess the social, political, and geographic context of the communities the partnership serves and explore how these contextual factors may affect SDOH initiatives; consider the breadth of supports and level of investment required to implement SDOH initiatives in underresourced communities that face several challenges, including low wages, limited transportation systems, and limited availability of and access to healthy food.
- Plan for emergent community health priorities (e.g., COVID-19). This may include identifying different options for service delivery and strategies for rapidly assessing community members' support needs.

Partnership Characteristics

- Ensure partnership consists of diverse organizations that represent different areas of impact for the coalition, including community health and social service organizations, businesses, schools, local government officials and agencies, health care delivery sites and systems, food systems, and community planners and developers.
- Identify and engage champions in intervention settings.
- Leverage state and local health departments, which can be a valuable source of funding and other supports (e.g., campaign materials; planning, coordination, and networking support; technical assistance) for partnerships.

Implementation Strategies

- Diversify funding sources to obtain resources required to implement SDOH initiatives (e.g., funding, staff, physical infrastructure, data systems) and plan for sustainability early on; consider teaming with health care partners and leveraging reimbursement to help sustain services.
- Engage the community in all aspects of the initiative, from co-creating initiatives to implementation and evaluation (e.g., establishing a community advisory board, hiring and training community members to implement the initiative, and partnering with trusted community-based organizations to reach community members) to ensure the initiative is responsive to community priorities; this also helps the partnership anticipate and address any backlash or stigma associated with planned initiatives.

Outcomes and Impact

- Policy, systems, and environmental change can take a long time. Set realistic milestones and celebrate interim achievements; invest in services and resources needed to support adoption of policy, systems, and environmental changes.
- Apply a balanced approach to demonstrating outcomes so the implementation side of the project is not short-changed. Align approaches for demonstrating outcomes with the time required to achieve outcomes and to what we already know about the impact of evidence-based interventions—not all interventions may need extensive evaluation. Leverage existing data sources and reporting protocols.

Key Considerations for Funders and TA Providers

- Consider investing resources according to need by prioritizing underresourced communities for sustained support.
- Allocate some resources to foundational work that GFF partnerships have identified as key to success, including community engagement; establishing, diversifying, and strengthening partnerships; strategic succession, evaluation, and sustainability planning; training service providers; and developing common data systems and protocols.
- Consider including meaningful community engagement as an evaluation criterion for award or funding requirement.
- Collaborate with funded programs to identify strategies that will help position partnerships to quickly pivot to address emergent priorities (e.g., percentage of full-time enrollment dedicated to coordinating emergency response, streamlined protocols for updating workplans or budgets, health communication TA).
- Consider a menu of performance measures or indicators that partnerships can choose from, which may help ensure alignment with community priorities and allow partnerships to leverage existing monitoring, evaluation, and reporting protocols.
- Provide guidance and TA for obtaining long-term funding to sustain SDOH initiatives, including real-world examples from GFF.

Limitations

The rapid and retrospective nature of the data collection meant that we had to rely on partnerships' ability to accurately document and recall activities that had occurred before our evaluation began. Also, the outcomes assessment was limited to targeted review and abstraction of a wide range of documents provided by partnerships, and some partnerships may have achieved outcomes that were not captured in the documents we reviewed. To help mitigate this limitation, we cast a wide net for reported outcomes and abstracted all explicit outcomes with supporting data from available program documents. Our ability to accurately estimate potential long-term impacts of GFF partnerships' SDOH efforts was limited. Only a subset of partnerships both implemented SDOH initiatives that linked to PRISM levers and could readily provide the needed data (data on the number of people reached by their SDOH initiatives or their intended reach for the initiatives) within the rapid evaluation time constraints.

Despite limitations, our retrospective approach and PRISM analysis were key strategies for overcoming common challenges with evaluating health outcomes of multisector community partnerships' efforts (e.g., evaluation time frames that are shorter than the time required for health outcomes to manifest and wide variation in intervention strategies[12]). Our approach also fit the purpose of rapid evaluation and assessment methods (i.e., "to provide information of sufficient quality at key decision points to improve the quality of decision making and, by extension, the effectiveness of actions subsequently taken"[13]), and findings are being used to help inform ASTHO, NACCHO, and NCCDPHP's SDOH-related programming and TA.

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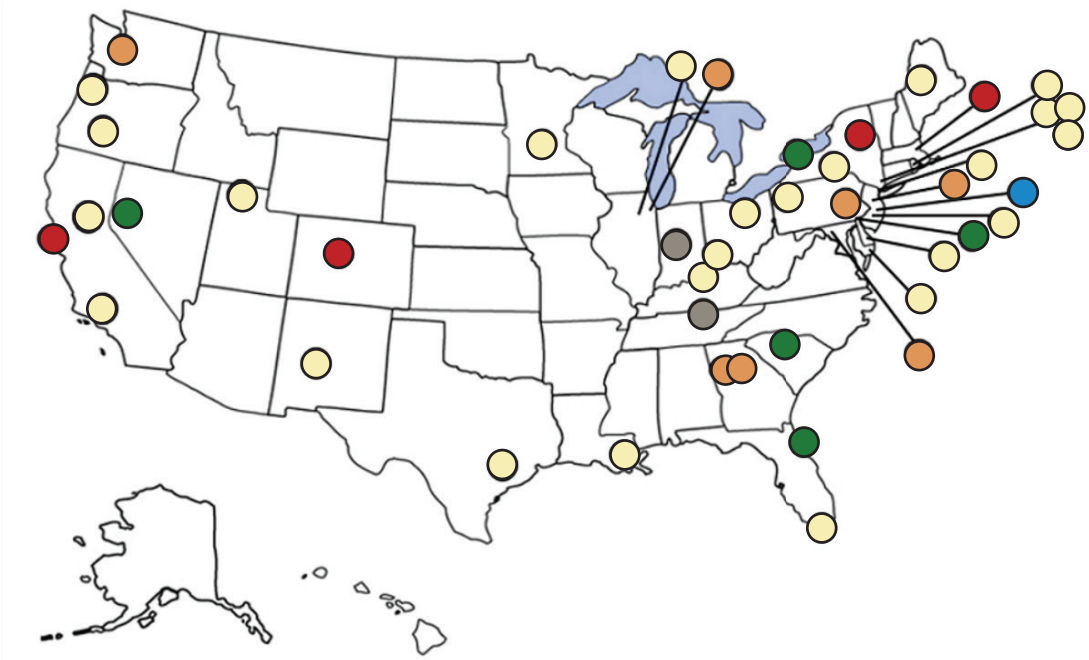
Appendix A. GFF Partnerships

SDOH Community Pilots Recipient Map



SDOH Area Key

- BUILT ENVIROMENT (BE)
- COMMUNITY-CLINICAL LINKAGES (CCL)
- FOOD AND NUTRITION SECURITY (FNS)
- SOCIAL CONNECTEDNESS (SC)
- TOBACCO-FREE POLICY (TFP)
- MULTIPLE SDOH AREAS

Name	Location	
Built Environment		
Health by Design	Indianapolis	IN
Active Knox / Knox County Health Department	Knoxville	TN

Name	Location	
Community-Clinical Linkages		
Westside Connect / CHRIS 180	Atlanta	GA
Community Resource Hubs / Atlanta Regional Collaborative for Health Improvement (ARCHI)	Atlanta	GA
IMPACT / AllianceChicago	Chicago	IL
Asian American Center of Frederick County	Frederick	MD
Trenton Health Team	Trenton	NJ
Community Connections / Reading Hospital	Reading	PA
Lead Prevention Team / Afghan Health Initiative	South King County	WA
Food and Nutrition Security		
Food as Medicine Collaborative / San Francisco Dept. Public Health	San Francisco	CA
Centura Health Food Security Coalition / Centura Health and Jefferson County Public Health	Jefferson County	CO
Massachusetts Municipal Wellness and Leadership Initiative / Metropolitan Area Planning Council	Boston	MA
Adirondack Food System Alliance / Adirondack Health Institute (AHI)	Glens Fall	NY
Social Connectedness		
Allies In Caring, Inc. / Hammonton Health Coalition (HHC)	Hammonton	NJ
Tobacco-Free Policy		
Tobacco Free Volusia / FDOH in Volusia County	Daytona Beach	FL
Nevada Tobacco Prevention Coalition / Smoke-Free Truckee Meadows	Reno	NV
Buffalo Tobacco Action / Cicatelli Associates (CAI)	Buffalo	NY
Health Promotion Council / Southeastern PA Tobacco Control	Philadelphia	PA
Lancaster County Health and Wellness Commission / Upper Midlands Rural Health Network	Lancaster	SC

Name	SDOH Focus Area	Location	
Multiple			
Invest Health Roseville	BE, FNS, SC, TFP	Roseville	CA
BPSOS Center for Community Advancement	CCL, TFP	Westminster	CA
Sussex County Health Coalition	CCL, FNS, SC	Georgetown	DE
Healthy Little Havana	BE, SC	Miami	FL
Proviso Partners for Health	BE, FNS, TFP	Maywood	IL
West Louisville Outdoor Recreation Initiative / Wilderness Louisville, Inc.	BE, SC	Louisville	KY
Louisiana Healthy Communities Coalition (LHCC) / Louisiana Cancer Prevention and Control Programs (LCP)	BE, FNS	New Orleans	LA
Maryland Living Well Center of Excellence	CCL, FNS, SC	Salisbury	MD
Central Lincoln County YMCA / Lincoln Health CLC YMCA	CCL, FNS, SC	Damariscotta	ME
National Urban American Indian and Alaska Native Cancer Coalition / American Indian Cancer Foundation	BE, CCL, FNS, SC, TFP	Minneapolis	MN
Acenda Integrated Health	BE, CCL, FNS, SC	Glassboro	NJ
Healthy Here Coalition / Presbyterian Healthcare Services	BE, CCL, FNS	Albuquerque	NM
Supports for Healthy Aging in Rural New York / Rural Health Network of SCNY	CCL, SC	Broome County	NY
The Diabetes Research, Education, and Action for Minorities (DREAM) Coalition / Council of Peoples Organization	CCL, FNS, SC	New York	NY
Staten Island Child Wellness Initiative / Staten Island Partnership for Community Wellness	BE, CCL, FNS	Staten Island	NY
Access Health Stark County	CCL, SC	Canton	OH
Avondale Children Thrive Collaborative/ The Community Builders	CCL, FNS, TFP	Cincinnati	OH
Healthy Klamath Coalition / Blue Zones Project	BE, FNS, TFP	Klamath Falls	OR
ACHIEVE Coalition / Multnomah County Health Department	FNS, SC	Portland	OR
Live Well Allegheny REACH Coalition / Allegheny County Health Department	BE, CCL, FNS	Allegheny County	PA
Newport Health Equity Zone / Women's Resource Center	BE, CCL, FNS, SC	Newport	RI
Be Well™ Baytown / The University of Texas MD Anderson Cancer Center	BE, FNS, SC	Houston	TX
Ogden Civic Action Network (OgdenCAN) / Weber State University	BE, CCL, FNS, SC, TFP	Ogden	UT