Public Health Systems and Social Services: Breadth and Depth of Cross-Sector Collaboration

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Objectives. To examine the extent to which social service organizations participate in the organizational networks that implement public health activities in US communities, consistent with recent national recommendations.

Methods. Using data from a national sample of US communities, we measured the breadth and depth of engagement in public health activities among specific types of social and community service organizations.

Results. Engagement was most prevalent (breadth) among organizations providing housing and food assistance, with engagement present in more than 70% of communities. Engagement was least prevalent among economic development, environmental protection, and law and justice organizations (less than 33% of communities). Depth of engagement was shallow and focused on a narrow range of public health activities.

Conclusions. Cross-sector relationships between public health and the housing and food sectors are now widespread across the United States, giving most communities viable avenues for addressing selected social determinants of health. Relationships with many other social and community service organizations are more limited.

Public Health Implications. Public health leaders should prioritize opportunities for engagement with low-connectivity social sectors in their communities such as law, justice, and economic development. (*Am J Public Health.* 2020;110:S232–S234. doi: 10.2105/AJPH.2020.305694)

See also Dasgupta, p. S174.

Cross-sector collaboration has gained momentum over the past decade as a catalyst to improve population health and health equity. The Robert Wood Johnson Foundation (RWJF) Culture of Health Action Framework encourages communities to strengthen connections between organizations that work in the medical and public health sectors and those that focus on social and community services (e.g., housing, law enforcement, transportation) to strengthen capacities for addressing social, economic, and environmental determinants of health.[1,2] Toward this same end, the US Department of Health and Human Services launched the Public Health 3.0 initiative in 2016. This model calls for new cross-sector partnerships between public health agencies and community stakeholders, including social services, to enhance the collective impact on health.[3]

To date, the scientific community has focused on emerging relationships between medical and social service organizations, with much less focus on cross-sector relationships in public health. Although some large-scale studies have characterized cross-sector community health networks,[4] there are no national estimates of the extent to which these relationships span public health and social service sectors. We addressed this gap by examining the breadth and depth of social service involvement in public health activities. This information is critical for tracking progress in strengthening collaborations to address social determinants of health.

METHODS

We analyzed recently collected data from the National Longitudinal Survey of Public Health Systems (NALSYS), which follows a nationally representative cohort of US communities to assess implementation of public health activities and the networks of organizations contributing to these activities. The 2018 survey included an expanded set of questions measuring specific types of social and community organizations contributing to public health activities in local communities. Additional details about the NALSYS have been published elsewhere.[5]

Measures

We surveyed local public health officials in a stratified random sample of 776 communities regarding the implementation of 19 public health activities and the types of organizations engaged in these activities. Sample characteristics of the 554 responding communities (response rate = 71%) are shown in Table 1. For each public health activity, respondents reported specific types of social and community service organizations involved in implementing the activity from a list of 19 service types. For ease of interpretation, we grouped service types into 5 categories:

1. Basic needs, including assistance with housing, shelter, or utilities; food and

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This article was accepted March 27, 2020.

doi: 10.2105/AJPH.2020.305694

TABLE 1—Characteristics of Responding Communities: United States, 2018

	Sample (n = 554)
Population size, mean (SD)	399 424 (880 012)
Population characteristics	
Rural, % (SD)	32.3 (46.8)
Below federal poverty level, mean % (SD)	13.6 (4.7)
Non-White, mean % (SD)	26.5 (18.4)
Uninsured, mean % (SD)	9.5 (4.3)

nutrition; cash assistance for low-income households; transportation services; and employment or job training
2. Special populations, including support for veterans, children and families, people with disabilities, and older adults
3. Community and infrastructure, including agriculture or cooperative extension; land use, zoning, or community development; economic development; and environmental protection programs
4. Criminal justice, including law enforcement; corrections, criminal justice, or juvenile justice; and legal assistance
5. Culture and recreation, including library, arts, or cultural programs and parks, recreation, or physical activity programs

Respondents could also select "none of the services listed above."

Analysis

Borrowing from economic production theory, we characterized the breadth and depth of social service involvement in public health activities using concepts of extensive and intensive margins, respectively. The extensive margin for each social service was defined as the percentage of communities in which social service organizations participated in implementing at least 1 public health activity. The intensive margin for each social service was defined as the percentage of public health activities in which social services participated, averaged across communities. A fully collaborative community would exhibit high extensive and intensive margins, meaning collaboration with many social services across many public health activities.

RESULTS

In 2018, the extensive margins for social service involvement ranged from 25.3% of communities engaging parks, recreation, and physical activity organizations to 73.8% of communities engaging organizations that provide assistance with housing, shelter, or utilities (Table 2). Engagement was highest with organizations supporting basic needs such as housing and food. Notably low was collaboration with justice-related organizations such as legal assistance and law enforcement. Only 33 communities (5.96%) implemented all public health activities without the involvement of any social services listed on the survey.

The intensive margins ranged from 5.0% of activities involving corrections, criminal justice, or juvenile justice to 24.3% of activities involving organizations providing assistance with housing, shelter, or utilities. Organizations serving special populations such as veterans or children and families engaged in a higher percentage of public health activities than did organizations providing more niche services such as economic development or recreation. In the average community, nearly 20% of public health activities did not involve any of the social services examined.

Communities exhibited a high correlation between extensive and intensive margins ($\rho = 0.71$). However, collaborations involving housing services (as an example) varied notably according to community rurality, with fewer such collaborations occurring in rural than urban communities (extensive margin: 62.6% vs 79.2%; $t = 3.97$; $P < .001$). When rural communities did collaborate with housing services, it was to a lesser degree than in urban communities (intensive margin: 26.9% vs 35.2%; $t = 3.50$; $P < .001$). Other community characteristics were not associated with statistically significant differences in margins.

DISCUSSION

To our knowledge, this study is the first to quantify the breadth and depth of social service engagement in public health activities across a nationally representative sample of US communities. Our work establishes a baseline for measuring progress toward the goals of cross-sector collaboration emphasized in the RWJF Culture of Health Action Framework and the Public Health 3.0 model. The extensive margins observed demonstrate that cross-sector relationships spanning the public health, housing, and food sectors are now widespread across the United States, giving most communities viable avenues for addressing selected social determinants of health. However, public health relationships with many other social services are considerably less prevalent, highlighting opportunities for public health agencies to expand their reach.

The intensive margins found reveal that social service organizations engage in a narrow range of public health activities in most communities, indicating the focused nature of cross-sector collaboration consistent with relatively early-stage development. Collaborations often begin as focused, single-purpose initiatives but have the potential to expand in scope over time if they successfully achieve goals and secure additional resources. Our results provide a starting point for examining the extent to which collaborations expand and deepen over time and identifying factors that facilitate or constrain such development.

Our study's limitations should be kept in mind when interpreting the results. Data were self-reported by local public health officials, who may overreport or underreport collaboration on the basis of their access to information and the extent to which they perceive collaboration as desirable. Because the respondents are important community leaders and public officials, their knowledge and perceptions of cross-sector collaboration provide meaningful signals of national progress despite our data's subjective nature. However, our results may not represent the perspectives of social service sector leaders or other community stakeholders. In addition, we may have omitted collaborations external

TABLE 2—Extensive and Intensive Margins for Social Service Collaborations in Public Health Activities: United States, 2018

Type of Social Service Organization	Extensive Margins, Mean % (SD)	Intensive Margins, Mean % (SD)
Basic needs		
Housing, shelter, utilities	73.8 (44.0)	24.3 (24.9)
Food and nutrition	70.2 (45.8)	10.1 (14.4)
Transportation	64.8 (47.8)	16.6 (22.7)
Cash assistance for low-income households	54.7 (49.8)	17.1 (24.7)
Employment and job training	48.9 (50.0)	9.7 (16.7)
Special populations		
Veterans	63.7 (48.1)	19.7 (24.5)
Child and family support	62.5 (48.5)	5.7 (9.9)
People with disabilities	60.5 (48.9)	19.6 (25.5)
Older adults	55.6 (49.7)	10.5 (18.7)
Community and infrastructure		
Agriculture or cooperative extension	58.7 (49.3)	12.5 (20.4)
Land use, zoning, community development	51.1 (50.0)	17.0 (24.6)
Economic development	30.9 (46.2)	5.4 (14.5)
Environmental protection	28.7 (45.3)	5.3 (14.4)
Criminal justice		
Law enforcement	46.0 (49.9)	13.0 (21.6)
Corrections, criminal, and juvenile justice	32.5 (46.9)	5.0 (13.0)
Legal assistance	32.3 (46.8)	9.4 (19.6)
Culture and recreation		
Library, arts, culture	38.1 (48.6)	12.0 (21.7)
Parks, recreation, physical activity programs	25.3 (43.5)	5.2 (14.2)

to public health or with services not included in the NALSYS.

PUBLIC HEALTH IMPLICATIONS

This study establishes a timely measure of the extent to which cross-sector relationships are forming that span public health and social service sectors. Our findings suggest that the breadth and depth of collaboration can be improved nearly universally. By monitoring the extent of cross-sector collaborations over time, public health leaders can identify gaps in collaborative relationships and establish priorities for future development. Combined with data from other initiatives (e.g., community health needs assessments), collaboration data can empower community leaders to target areas of greatest need and determine the optimal mix of partners to engage in health improvement initiatives. AJPH

CONTRIBUTORS

M. K. Hamer analyzed the data and led the preparation of the article. G. P. Mays supervised the study design and analysis. Both of the authors conceptualized the study design and contributed to interpreting the findings and writing the article.

ACKNOWLEDGMENTS

Support for this work was provided by the Robert Wood Johnson Foundation through the Systems for Action research program (grant 76689).

CONFLICTS OF INTEREST

Mika K. Hamer has no conflicts to disclose. Glen P. Mays was also supported by grants from the US Centers for Disease Control and Prevention, the Patient Centered Outcomes Research Institute, and the Humana Health Plan.

HUMAN PARTICIPANT PROTECTION

No protocol approval was needed for this study because it was determined not to be human participant research.

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