A Community-Based Participatory Intervention in the United States Using Data to Shift the Community Narrative From Deficits to Strengths

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With Minneapolis, Minnesota, partners, we developed a community-based participatory intervention using a mobile health application to provide actionable data to communities. More than 550 participants completed the survey. Key messages included strengths in our homes, neighborhoods, and faith communities. Key challenges were related to substance use and sleeping. We jointly conducted virtual community meetings such as webinars, Facebook Live shows, and online newsletters to begin to shift the community narrative from deficits to whole-person health, including strengths. (*Am J Public Health*. 2022;112(S3):S275–S278. https://doi.org/10.2105/AJPH.2022.306852)

In alignment with Public Health 3.0, we community members and nurses worked in partnership for communities to obtain timely and reliable community data for narrative development using a community-validated mobile health (mHealth) application (app).

INTERVENTION AND IMPLEMENTATION

Our long-term goal was to address health inequities by empowering communities with their own data to begin to shift the self-perceived community narrative from deficits to that of a whole-person, strengths-based perspective.[1,2] Such narrative development underlies successful community transformation, and individuals benefit from community environments that buffer or mitigate challenges.[3]

Definitions that guided intervention development were as follows:

- Public Health 3.0 is a partnership in which leaders serve as chief health strategists, partnering across multiple sectors and leveraging data and resources to address social, environmental, and economic conditions that affect health and health equity.[1]
- Community resilience is the sustained capacity to cope, strive, and be supported through equitable buffers that address sources of acute and chronic stress.[3]
- Narrative shifts are essential to influencing our perceptions of who deserves empathy or support, and who does not, by examining the systemic barriers to resilience and the opportunities to reshape the landscape to overcome those barriers.[2]
- Whole-person health consists of environmental, psychosocial and emotional, physical, and health-related behavioral aspects of health.[4]
- Strengths are health assets: skills, capabilities, actions, talents, and potential in each family member, each family, and the community.[4,5]

Community members (individuals and organizations) and nurses (community members, faculty, and students) committed to a shared goal of making valuable local data available and accessible to the community.[1] We agreed that the data should incorporate strengths and resilience along with social and behavioral determinants of health and related challenges (whole-person health).[6–8] We chose a research-ready mHealth app for data collection with a consent page and 42 brief health assessments of strengths, challenges, and needs across all of health (Figure 1 and Figure A, the latter available as a supplement to the online

My Living	My Mind & Networks	My Body		My Self-Care
Income	**Connecting**	Hearing	Breathing	Nutrition
Cleaning	Socializing	Vision	Circulation	**Sleeping**
Home	**Role change**	Speech & language	Digestion	Exercising
Safe at home and work	**Relationships**	Oral health	Bowel function	Personal care
	Spirituality or faith	Thinking	Kidneys or bladder	**Substance use**
	Grief of loss	**Pain**	Reproductive health	Family planning
	Emotions	**Consciousness**	Pregnancy	Health care
	Sexuality	Skin	Postpartum	Medications
	Caretaking	Moving	Infections	
	Neglect			
	Abuse			
	Growth & development			

FIGURE 1— Omaha System Assessments Across Four Domains of Health

Note. Bolded terms = community-determined health priorities.

version of this article at https://www.ajph.org). The app provides a personalized summary report for each participant, and aggregate data may be viewed in a community dashboard.

It incorporates a simplified version of the rigorous standardized multidisciplinary health terminology and instrument, the Omaha System.[9] The Omaha System has been used for two decades by public health nurses and others to understand whole-person health of diverse populations.[9] Over a series of meetings discussing health priorities, community members decided to collect data for 13 of the 42 Omaha System assessments (bold assessments in Figure 1).

The Omaha System exists in the public domain and may be viewed online at omahasystem.org.[10] The mHealth app is freely available for use in clinical and research settings through the University of Minnesota office for technology commercialization.[11]

We surveyed community members during neighborhood COVID-19 testing events. Adults accessed the survey by computer, tablet, or smartphone and received a $10 gift card upon completion. Many shared the survey link with acquaintances. This unexpected sharing of the virtual survey link by local participants resulted in data submissions from more than 550 participants, split evenly between local neighborhoods and elsewhere (New York to California). We organized and interpreted the data together with community members at three community events.

We jointly conducted community meetings using multiple virtual modalities, such as webinars and Facebook Live shows, and disseminated our findings in online newsletters.

PLACE, TIME, AND PERSONS

In the Minneapolis, Minnesota, metro area during Fall 2020, we convened numerous stakeholders to plan and implement the intervention. Stakeholders included an organization promoting the health of persons of color, a nursing organization of persons of color, an organization providing educational support for vulnerable young children, a neighborhood council, the local governmental health department, individuals in the community, and nursing students and faculty.

PURPOSE

In partnership with communities, the purpose was to provide actionable data to communities to begin to shift the community narrative from deficits to whole-person health, including strengths.

EVALUATION AND ADVERSE EFFECTS

Key messages gleaned from this experience included greater strengths among local residents in comparison with those elsewhere, particularly in our homes, our neighborhoods, and our faith communities. Key challenges were related to substance use and sleeping. Compared with those without substance use challenges, those with substance use challenges had half as many strengths and five times as many challenges. Sleep-related issues resonated with community members deeply and became a focus of further community dialogue regarding the importance of sleep for overall well-being. Community members shared these findings and our intervention broadly, raising awareness of the power of community-led assessments to begin community narrative development.

We observed no adverse effects. One community partner observed,

> Utilizing the app has allowed us to reach a diversity of neighborhoods,

> individuals, and groups with information that is being used for strategic health planning purposes. The students have added greatly to the project by their availability and willingness to assist as we are engaged in this project.

Another shared,

> Working on the project was a robust experience and working with members from the community–academic partnership really made this project fun as everyone brought something different to the table.

Some neighborhoods collected local data to understand how the COVID-19 pandemic and the opioid epidemic affected both individuals and the broader community. The data that community members shared with the local health department suggested a need for additional resources to address substance use issues.

Limitations of the intervention are related to the challenge of avoiding bias in the data, because representing all groups in the community may be difficult using this sampling strategy. Therefore, the findings are not generalizable. There is a critical need to understand the community's perspective regarding such whole-person health strategies. Community members were enthusiastic about engaging with the University to continue this work.[12]

SUSTAINABILITY

A community-based participatory intervention using data to shift the community narrative from deficits to strengths created buy-in from key stakeholders in the community and a strong commitment from all partners to continue efforts. Nursing students and faculty committed to ongoing participation. Funding needs consisted mainly of incentives for survey completion, as the app was freely available.

Partners were already working in collaboration with various communities that were eager to have access to compelling local data. A new collaborator noted,

> The app is a great opportunity and experience that is bringing our community together to learn about this valuable tool that will be beneficial and lead to positive health outcomes. The data will provide better understanding on identifying the needs of the community and utilizing the data to propose for programs/services that are culturally specific to this community.

PUBLIC HEALTH SIGNIFICANCE

This community-based intervention aligns well with Public Health 3.0, building a new community narrative by engaging community members through data.[1] This approach has potential to enable cross-sector partnerships in collecting and using data to inform actions. Public health nurses are ideally positioned in community to contribute to and co-lead this transformation. This ongoing intervention is building toward a positive community-empowered approach with the goal of achieving equitable health care, starting by shifting the health narrative in communities and neighborhoods from deficits to whole-person health, including strengths.[1] AJPH

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CONFLICTS OF INTEREST

The authors report no potential or actual conflicts of interest.

HUMAN PARTICIPANT PROTECTION

The data were deidentified, and this study was deemed exempt from oversight.

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