Community health workers improve outcomes, reduce costs

The caveat: The evidence, though mainly positive, is mixed.

Health care has long been considered the territory of white-coated professionals. But a workforce of lay people has been serving behind the scenes for decades. Community health workers—who are members of, or closely understand, the communities they serve—liaise between underserved populations and clinicians, help patients find resources to manage disease, and provide health education, informal counseling, and social support.

The profession's visibility and size have increased over the past several years, partly because the ACA included grant funding for community health workers that was used both to serve underserved groups and to fill out interdisciplinary care teams that were part of the new payment models the law promoted. In 2016, 58,000 Americans had jobs as community health workers, and the U.S. Bureau of Labor Statistics projects that number will increase by 18% by 2026.

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Community health workers were traditionally funded by short-term grants aiming to help underserved populations prevent and manage a specific disease, but the overall body of evidence hasn't conclusively demonstrated that using community health workers in this way improves outcomes. Studies showed that some of these interventions improved clinical outcomes and reduced utilization and cost, although other studies showed no effect on such outcomes.

Some experts believe that more holistic approaches than specific disease interventions are needed for community health workers to improve clinical and financial outcomes. As a result, interest in community health workers is shifting away from narrowly focused intervention on a single disease toward care coordination of multiple chronic conditions and care transitions across settings, according to Carl Rush, a University of Texas–Houston researcher who advises states on community health worker policies.

In 2010, a team of University of Pennsylvania researchers developed a model called Individualized Management for Patient-Centered Targets, a mouthful designed to be rendered into its acronym, IMPaCT. The model includes community health worker hiring guidelines, a month-long course, and standardized work practices. Penn Medicine created the Penn Center for Community Health Workers in 2013 to scale up the model through patient care, research, and the sharing of best practices.

Penn researchers reported the results of a study of the IMPaCT model in *JAMA Internal Medicine* four years ago. They randomly assigned 446 low-income patients hospitalized with various conditions to an intervention group served by community health workers and a control group. The community health workers served as liaisons between intervention patients and the care team during hospitalization, explaining patient goals to the team and ensuring that patients could follow discharge instructions. After the patients were discharged, the community health workers helped them address barriers to accessing primary care; for example, helping people without a primary care doctor find one.

The study found that intervention patients were more likely than the control group to receive primary care within 14 days of discharge (60% versus 47.9%). They

Benefits of community health workers

A University of Pennsylvania study found benefits in five areas. Other differences fell short of statistical significance.

Outcome	Unadjusted			Adjusted
	No. (%)			
	Control group	Intervention group	*P* value	Odds ratio (95% CI) or β coefficient (SE)
Post-hospital primary care	92 (47.9)	115 (60.0)	.02	1.52 (1.03–2.23)
High-quality verbal discharge communication	118 (78.7)	137 (91.3)	.002	2.94 (1.50–5.80)
Perfect medication adherence	115 (59.3)	123 (63.7)	.37	1.24 (0.82–1.87)
Any readmission	30 (13.6)	33 (15.0)	.68	1.13 (0.66–1.95)
Multiple readmissions	12 (5.5)	5 (2.3)	.08	0.40 (0.14–1.06)
Multiple readmissions among readmitted patients	12 (40.0)	5 (15.2)	.03	0.27 (0.08–0.89)
Change in patient activation score, mean (SD)	1.6 (17.2)	3.4 (17.5)	.05	3.80 (1.50)
Change in mental health score, mean (SD)	4.5 (12.2)	6.7 (14.0)	.02	2.84 (1.20)
Change in physical health score, mean (SD)	4.8 (10.4)	5.5 (10.4)	.62	0.64 (0.98)
Satisfaction with medical care, mean (SD)	3.4 (1.2)	3.4 (1.2)	.85	0.04 (0.12)

Kangovi S et al., *JAMA Internal Medicine*, April 2014

were also less likely to experience recurrent readmissions (2.3% versus 5.5%), although this finding wasn't statistically significant at the usual .05 level (*P*=.08). But among the 63 patients who were readmitted, the intervention decreased recurrent readmissions from 40% to 15.2%.

In 2017, the Penn researchers reported the results of a study in the *American Journal of Public Health* that tested whether the IMPaCT model could improve outcomes for low-income patients with multiple chronic conditions. They found statistically significant improvements in patient-rated mental health and patient-rated quality of primary care. Positive results for clinical outcomes and reduced hospitalizations weren't statistically significant.

Lay health worker intervention after late-stage cancer diagnosis reduced total health care costs 22-fold (median costs of $1,048 in the intervention group vs. $23,482 in the control group) in the last 30 days of life. —Patel MI et al., *JAMA Oncology,* Oct. 2018

These studies show that this model can improve performance on metrics that are important in value-based payment models and where racial and socioeconomic disparities exist, such as primary care access and patient experience.

Notably, neither study found statistically significant reductions in hospitalizations or readmissions. Yet Penn Medicine says the model has saved them $2 for every $1 invested, with savings primarily from decreased hospital and emergency department utilization over five years, according to Jill Feldstein, chief operating officer of the Penn Center for Community Health Workers.

IMPaCT has served 7,000 patients in Philadelphia and piqued national interest. Approximately 1,000 organizations have downloaded an online toolkit that provides guidance on how to implement the model.

How organizations implement the model and how they're paid will affect whether they can find value in community health worker programs. After all, fee-for-service payment doesn't traditionally cover services like care coordination, although some value-based payment schemes are beginning to. "As we move more and more to value-based purchasing, outcomes and quality can be monetized," says Feldstein. "But that depends on the specific institution and its finance structure."

Some aren't waiting for optimal payment structures to explore new community health worker models. Even though Medicare Advantage hasn't yet embraced community health worker services as a core benefit, some organizations are testing if community health workers can be deployed to preventing falls, says Rush.

Researchers are also looking at the effect that community health workers might have on end-of-life care. Results of a Stanford University study published in *JAMA* in July showed that a lay health worker intervention increased documentation of care preferences after late-stage cancer diagnoses and reduced total health care costs 22-fold (median costs of $1,048 in the intervention group versus $23,482 in the control group) in the last 30 days of life.

—Sarah Kwon