


# Community health worker program

## ▶ Intervention in brief

<p><b>High and rising risk:</b></p>	<p><b>Community health workers</b> are trained and trusted members of the community who serve as a bridge between health care providers, community-based organizations, and patients. They generally perform health education, chronic disease management, community advocacy, navigation in community settings, and outreach and enrollment. The goal of employing community health workers is to build patient trust, address the social determinants of health, reduce disparities, and improve service delivery.</p>
<p><b>Strength of evidence</b></p>	<div style="display: flex; align-items: center;">  <div style="margin-left: 10px;"> <p>Intervention has inconsistent rates of success across systematic reviews but the evidence base is growing with more frequent randomized controlled trials.</p> <p>Medium</p> </div> </div>
<p><b>Impact</b></p>	<ul style="list-style-type: none"> <li>• <b>Decreased cost:</b> \$185-\$2,561 decrease in costs per participant; \$2 ROI</li> <li>• <b>Decreased utilization (wide range):</b> Insignificant change to 51% decrease in ED visits; insignificant change to 50% decrease in hospitalizations; 36-55% fewer total hospital days; 15% decrease in physician visits; 60% less likely to have repeat hospitalizations vs. the control, 70% less likely to readmit after 30 days vs. control</li> <li>• <b>Improved quality, clinical outcomes:</b> 0.4-1.12 percentage point decrease in HbA1C levels; 0.34-0.83 decrease in HbA1C, 5-33% improved mental health score on (SF12); 12.6% more patients report high-quality discharge communication compared to control; 54% decrease in cigarettes per day; -0.3 decrease in diabetes distress score; 80% more likely to report increased quality of care vs. control</li> <li>• <b>Increased access:</b> 12.1% of intervention patients report they obtained timely post-discharge primary care compared to control</li> <li>• <b>Improved stakeholder satisfaction:</b> 20% more likely to rate primary care as comprehensive and supportive of self-management of disease</li> </ul>
<p><b>How to succeed</b></p>	<p>To build an effective community health worker program:</p> <ul style="list-style-type: none"> <li>• Establish community health work program's scope of practice and model of care (e.g., outreaching enrolling-informing agent, member of care team delivery model), given lack of national standardization</li> <li>• Select community health worker applicants with appropriate cultural and language skills and some health background and prioritize applicants with a demonstrated mix of strong communication skills, ability to create trusted relationships with patients and families, and the understanding to meet patients where they are</li> <li>• Promote frequent and ongoing communication between care team members and CHWs, especially during the integration phase to allow time and opportunity for workflow and process changes</li> </ul> <p>To learn more about developing an evidence-based community health worker program, review our Five Steps to Design a Community Health Worker Program toolkit <a href="#">here</a>.</p>

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## ▶ Demonstrated impact

### Literature review summary

**Title:** Impact of Community Health Workers on Use of Healthcare Services in the United States: A Systematic Review

**Publication:** Journal of General Internal Medicine

**Date:** 2017

**Type:** Systematic review

**Study population:** Children and adults with at least one chronic health condition across thirty four studies (sixteen randomized controlled trials, eight pre-post studies, six cohort studies, and four cost-effectiveness analyses)

**Major findings:** Patients in sixteen randomized controlled trials were selected and analyzed to determine the effects of deploying community health workers on health care spending and utilization. Overall, results varied:

- Cost of care: \$185–\$2,561 savings per participant
- ED visits (wide range): Insignificant change–51% decrease
- Hospitalizations (wide range): Insignificant change–50% decrease

**Source:** Full article [here](#).

**Title:** Community Health Worker Support for Disadvantaged Patients with Multiple Chronic Diseases: A Randomized Clinical Trial

**Publication:** American Journal of Public Health

**Date:** 2017

**Type:** Randomized controlled trial

**Study population:** 302 uninsured and publically insured patients diagnosed with two or more chronic diseases (e.g., diabetes, obesity, tobacco dependence, and hypertension) living in Philadelphia, Pennsylvania

**Major findings:**

- Reduced costs: \$2 return for every dollar invested due to decreased hospitalizations
- Reduced hospitalizations: 28% lower compared to control group
- Improved mental health: 5% increase in self-rated 12-item Short Form survey score (2.3 point increase compared to 0.2 decrease in control group)
- Decreased HbA1c: 5% decrease (0.4 percentage point decrease compared to no change in control group)
- Reduced cigarette smoking: 54% decrease in cigarette usage (5.5 fewer cigarettes per day compared to 1.3 fewer in control group)
- Increased satisfaction: 20% more likely to rate their primary care as comprehensive and supportive of their self-management of disease

**Source:** Full article [here](#).

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**Title:** Effect of Community Health Worker Support on Clinical Outcomes of Low-Income Patients Across Primary Care Facilities: A Randomized Clinical Trial

**Publication:** JAMA Internal Medicine

**Date:** 2017

**Type:** Randomized controlled trial

**Study population:** 592 participants (62.5% female, average age of 52.6) recruited from three Philadelphia primary care facilities, living in a high-poverty ZIP code, uninsured or publically uninsured, with two or more chronic diseases

**Major findings:**

- Decreased repeat hospitalizations (odds of re-hospitalization after the intervention 60% less vs. the control)
- Decreased 30-day readmission (odds of 30-day readmissions after the intervention 70% less vs. the control)
- Fewer total hospital days at 6 months (55%) and 9 months (36%)
- Improved self-reported quality of care (odds of improved care after the intervention 80% more vs. the control)

**Source:** Full article [here](#).

**Title:** Randomized Controlled Trial of a Community Health Worker Self-Management Support Intervention Among Low-Income Adults With Diabetes, Seattle, Washington, 2010–2014

**Publication:** Preventing Chronic Disease

**Date:** 2017

**Type:** Randomized controlled trial

**Study population:** Low-income individuals (less than 250% of the federal poverty level) aged 30 to 70 years with a type 2 diabetes diagnosis with glycated hemoglobin A1c (HbA1c) of 8.0% or higher in the 12 months before enrollment

**Major findings:** Patients receiving four home visits plus an optional one from community health workers over ten months experienced:

- Decreased self-reported physician visits (15%)
- Decreased average HbA1c levels (9.09% to 8.58%), 1.12 points greater than the control group

**Source:** Full article [here](#).

**Title:** Patient-Centered Community Health Worker Intervention to Improve Post-Hospital Outcomes

**Publication:** Journal of the American Medical Association Internal Medicine

**Date:** 2014

**Type:** Randomized clinical trial

**Study population:** 446 uninsured or Medicaid patients aged 18 to 64 with at least one inpatient stay at either of two academically affiliated Philadelphia hospitals during the study period

**Major findings:** Patients met their community health worker during inpatient stay to develop individualized action plans for achieving their recovery goals and provided support for a minimum of two weeks (i.e., telephone calls, text messages, and visits) and until the primary care appointment. Program resulted in:

- Reduced 30-day readmissions compared to control: 2.3% vs. 5.5%
- Increased likelihood of timely post-discharge primary care: 60.0% vs. 47.9%
- Increased likelihood of reporting high-quality discharge communication: 91.3% vs. 78.7%
- Greater improvements in mental health: 6.7 vs. 4.5 on SF12 Survey

**Source:** Full article [here](#).

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**Title:** Effectiveness of a Community Health Worker-Led Diabetes Intervention among Older and Younger Latino Participants: Results from a Randomized Controlled Trial

**Publication:** Geriatrics

**Date:** 2018

**Type:** Randomized controlled trial

**Study population:** 149 Latino patients with type 2 diabetes at an FQHC in Detroit between October 2009 and February 2013

**Major findings:** Six months after the start of the community health worker intervention, Journey to Health, patients experienced decreased average HbA1C:

- Patients 55 years of age and older (-0.83)
- Patients under 55 years of age (-0.34)

**Source:** Full article [here](#).

**Title:** Outcomes at 18 Months From a Community Health Worker and Peer Leader Diabetes Self-Management Program for Latino Adults

**Publication:** Diabetes Care

**Date:** 2018

**Type:** Randomized controlled trial

**Study population:** 222 Latino patients with type 2 diabetes at an FQHC

**Major findings:** Patients in the intervention arm received diabetes self-management education from a community health worker. After the intervention, half received monthly telephonic outreach for 12 months (CHW-only) and half attended group sessions delivered by peer leaders (CHW+PL). At six months, all intervention patients experienced:

- Greater decreases in HbA1C (-0.45)
- Greater decreases in diabetes distress (-0.3) using the Diabetes Distress Scale

At 12 and 18 months, CHW+PL patients maintained HbA1C improvements and had fewer depressive symptoms (-2.2). CHW-only patients maintained diabetes distress improvements.

**Source:** Full article [here](#).

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## Appendix

- Jack HE, et al., “Impact of Community Health Workers on Use of Healthcare Services in the United States: A Systematic Review,” *Journal of General Internal Medicine*, 32, no. 3 (2017): 325-344, <https://www.ncbi.nlm.nih.gov/pubmed/27921257>.
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- Kangovi S, et al., “Effect of Community Health Worker Support on Clinical Outcomes of Low-Income Patients across Primary Care Facilities: A Randomized Clinical Trial,” *JAMA Internal Medicine*, 178, no. 12 (2018), <https://jamanetwork.com/journals/jamainternalmedicine/article-abstract/2707949>
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- Nelson K, et al., “Randomized Controlled Trial of a Community Health Worker Self-Management Support Intervention Among Low-Income Adults with Diabetes, Seattle, Washington, 2010–2014,” *Preventing Chronic Disease*, 14, no. 15 (2017)., <https://www.ncbi.nlm.nih.gov/pubmed/28182863>.
- Campos B, et al., “Effectiveness of a Community Health Worker-Led Diabetes Intervention among Older and Younger Latino Participants: Results from a Randomized Controlled Trial,” *Geriatrics*, 3, no. 3 (2018), <https://www.mdpi.com/2308-3417/3/3/47/htm>.
- Spencer M, et al., “Outcomes at 18 Months From a Community Health Worker and Peer Leader Diabetes Self-Management Program for Latino Adults,” *Diabetes Care*, 41, no. 7 (2018), <http://care.diabetesjournals.org/content/41/7/1414>.