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# Patient-Centered Community Health Worker Intervention to Improve Posthospital Outcomes

## A Randomized Clinical Trial

ONLINE FIRST

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JAMA Intern Med. Published online February 10, 2014. doi:10.1001/jamainternmed.2013.14327

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### ABSTRACT

ABSTRACT | METHODS | RESULTS | DISCUSSION | CONCLUSIONS | ARTICLE INFORMATION | REFERENCES

**Importance** Socioeconomic and behavioral factors can negatively influence posthospital outcomes among patients of low socioeconomic status (SES). Traditional hospital personnel often lack the time, skills, and community linkages required to address these factors.

**Objective** To determine whether a tailored community health worker (CHW) intervention would improve posthospital outcomes among low-SES patients.

**Design, Setting, and Participants** A 2-armed, single-blind, randomized clinical trial was conducted between April 10, 2011, and October 30, 2012, at 2 urban, academically affiliated hospitals. Of 683 eligible general medical inpatients (ie, low-income, uninsured, or Medicaid) that we screened, 237 individuals (34.7%) declined to participate. The remaining 446 patients (65.3%) were enrolled and randomly assigned to study arms. Nearly equal percentages of control and intervention group patients completed the follow-up interview (86.6% vs 86.9%).

**Interventions** During hospital admission, CHWs worked with patients to create individualized action plans for achieving patients' stated goals for recovery. The CHWs provided support tailored to patient goals for a minimum of 2 weeks.

**Main Outcomes and Measures** The prespecified primary outcome was completion of primary care follow-up within 14 days of discharge. Prespecified secondary outcomes were quality of discharge communication, self-rated health, satisfaction, patient activation, medication adherence, and 30-day readmission rates.

**Results** Using intention-to-treat analysis, we found that intervention patients were more likely to obtain timely posthospital primary care (60.0% vs 47.9%;  $P = .02$ ; adjusted odds ratio [OR], 1.52; 95% CI, 1.03-2.23), to report high-quality discharge communication (91.3% vs 78.7%;  $P = .002$ ; adjusted OR, 2.94; 95% CI, 1.5-5.8), and to show greater improvements in mental health (6.7 vs 4.5;  $P = .02$ ) and patient activation (3.4 vs 1.6;  $P = .05$ ). There were no significant differences between groups in physical health,

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satisfaction with medical care, or medication adherence. Similar proportions of patients in both arms experienced at least one 30-day readmission; however, intervention patients were less likely to have multiple 30-day readmissions (2.3% vs 5.5%;  $P = .08$ ; adjusted OR, 0.40; 95% CI, 0.14-1.06). Among the subgroup of 63 readmitted patients, recurrent readmission was reduced from 40.0% vs 15.2% ( $P = .03$ ; adjusted OR, 0.27; 95% CI, 0.08-0.89).

**Conclusions and Relevance** Patient-centered CHW intervention improves access to primary care and quality of discharge while controlling recurrent readmissions in a high-risk population. Health systems may leverage the CHW workforce to improve posthospital outcomes by addressing behavioral and socioeconomic drivers of disease.

**Trial Registration** clinicaltrials.gov Identifier: [NCT01346462](#)

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