12-month Outcomes of Community Care Teams for Primary Care Practices Transforming towards PCMH

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Background

The transformation of primary care to PCMH is one of the fundamental strategies for achieving higher quality care at lower cost. Multidisciplinary team-based care is also considered a crucial tactic for meeting our society’s healthcare needs.

The Lehigh Valley Health Network enhanced support to primary care practices by deploying multi-disciplinary teams called Community Care Teams (CCT) to practices to help manage their high-risk patients. The premise was that CCTs should help at the:

- Practice level: CCTs should increase overall practice effectiveness/efficiency by offsetting some of the workload from high-risk patients.
- Patient level: CCTs should improve outcomes of patients directly managed by the CCT team.

Purpose

Evaluate the effectiveness of CCTs within the PCMH model, both at the practice level (patients not engaged CCT but belonging to practices with CCTs) and patient level (patients receiving CCT services).

Methods

CCTs were designed to support 3 to 4 primary care practices in the short-term management of high-risk patients with chronic disease. Each team consisted of a RN Care Manager, who functioned as the team lead, a behavioral health specialist, a social worker, and a clinical pharmacist.

Management: CCT provided support for disease self-management and goal-setting skills, addressed behavioral health, social, and economic problems, and connected the patient to Network and community resources.

DC Reconciliation: hospital discharge reconciliation phone calls were made by the CCT Care Manager to support PMH transition care program: within 48 business hours of hospital discharge to reconcile medications, assess/identify issues for follow-up, answer questions and coordinate appointments.

High Risk Registry

Patients were identified for CCT services either (A) through a high-risk registry developed internally by a lead physician specialized in primary care or (B) on-site clinic referrals to the CCT team.

Practice Selection: Wave 1 July 2012: 3-year experience with practice transformation in South Central PA UPMC Care Initiative: achieved NCQA Level 3 PCMH recognition, and results of a network-wide high-engagement practice assessment.

Practice Wave 2 July 2013: population with perceived greatest need, more urban practices with chronic disease.

Setting: Lehigh Valley Health Network, a large health care delivery system in southeastern PA, serving 5 counties and moving towards ACO but still operating in a fee-for-service environment.

Design and Participants: A non-randomized longitudinal study design comparing the CCT practices/patients with non-CCT comparison groups.

Practice Wave (Level 1) analyses compared 29,801 patients (5% high risk) from the 6 CCTs to 40,212 patients from 3 non-CCT practices which were also transforming towards PCMH.

Patient level (Wave 1) analyses: 406 patients received CCT services (68% high-risk); 171 care management and 230 hospital discharge reconciliation calls. These patients were compared to 406 patients from the same CCT practice who did not receive CCT services.

Practice Wave (Level 1) analyses: 406 patients who did not receive team services (practice level) and 317 patients who received CCT services (patient level); 218 care management and 99 discharge reconciliation calls.

Practice Level Outcomes: Within group analyses were used due to significant group baseline differences for some outcomes.

Wave 1: There were significantly reduced probabilities of an unplanned admission and readmission post-CCT for patients in CCT practices but not in non-CCT practices, but only among high-risk patients. While there was significant improvement for other quality indicators, it occurred for both CCT practices and non-CCT practices transforming towards PCMH.

Survey Data: There was no significant change in Practice Joy (MQQ) or Patient satisfaction (CAHPS).

For more urban/transitory populations (Wave 2): There was a significant but small reduction in the probability of an ED visit for high-risk patients from CCT practices. However, for high-risk patients (the CCT staff did not have a chance to service to date or who refused CCT services), there were significant but small increases in the probabilities of an ED visit and a 30-day readmission.

Conclusions

PCMH transformation alone may be effective in creating improvements in patient care and cardiac disease, but the presence of CCT appears necessary to reduce unplanned admissions and readmissions at least among high-risk patients.

For patients who received CCT services directly, CCT had a significant impact on reducing the probability of a 30-day readmission with patients who received hospital discharge reconciliation calls from the CCT. For more urban/transitory populations, CCT patients, both those receiving management or discharge reconciliation, had a reduced probability of an unplanned admission, although high-risk patients who have yet to receive CCT services demonstrated a significantly increased probability of an ED visit and a readmission.

The intent of the current endeavor was to perform a formative evaluation of the CCTs’ effectiveness. Despite analytic challenges of such early-stage analyses, we believed it was vital to determine the preliminary effectiveness of the PCMH care management interventions and, if possible, suggest improvements to the intervention.

Limitations

Despite attempting multiple matching schemes, there was notable difficulty developing comparison groups which were equivalent to the intervention groups at baseline. We hope to overcome this limitation via propensity score matching and multilevel modeling.

Another major gap was the need to improve the strategy used for selecting patients for CCT intervention. Despite the use of a predictive risk score, prioritizing the very large list of high-risk patients remains a challenge. We hope that the addition of a brief measure of patient activation will be particularly helpful for selecting the riskiest/least engaged patients for CCT intervention as well as tailoring CCT services to different types of patients.

While more rigor will be brought to future analyses, we hope the current evaluation highlights the utility of performing such formative evaluations.

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