Implementation of a community paramedic-delivered care transitions intervention for older adults following emergency department discharge

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Background

Improving care transitions following emergency department (ED) visits may mitigate post-ED adverse events in older adults (e.g. re-visits).

The Care Transitions Intervention (CTI) improves the hospital-to-home transitions on key metrics such as readmission, post-hospital follow-up care, and medication adherence.

Community paramedics are highly-skilled professionals trained to work with underserved and high-need users of emergency medical services in home or community settings.

Objectives

In this study, we aimed to:

- Test whether the CTI could be successfully adapted for use following ED discharge.
- Test whether the CTI could be effectively implemented by trained community paramedic coaches (with high fidelity, feasibility, and adoption of CTI-supported behaviors).

Methods

We conducted a 3-site randomized controlled trial of the CTI for older adult ED patients discharged home.

Inclusion criteria:

- Age ≥ 60
- Community-dwelling
- Primary care provider in an affiliated health system
- Discharged home within 24 hours of ED arrival
- English-speaking
- Not enrolled in care management or hospice
- Emergency Severity Index ≤ 1 (not trauma)

Patients were enrolled and randomized to receive either the intervention or usual care.

Sessions were led by community paramedic coaches

Data & Analyses

- Verbally-administered surveys given by researchers at baseline, 4-days post and 30-days post discharge
- Community paramedic coaches captured visit logistics, content, and performance using CTI-specific evaluation tools and free-text notes
- EHR abstraction performed to accurately collect health and utilization data
- Using quantitative and qualitative data from these sources, we assessed implementation outcomes using descriptive statistics, content analysis, structural and thematic coding methodologies, and mixed-effects regression models.

Care Transitions Intervention Implementation

Intervention Design Study

- Enrollment
- Home visit characteristics:
  - % of scheduled home visits completed: 84%
  - Visit length (Median): 52 minutes
  - Travel time (Mean): 40 minutes
  - Pre & post visit documentation time (Mean): 26 minutes

- Follow-up call characteristics:
  - % of scheduled follow-up phone calls completed: 92.7%
  - Average number of attempts per call: 1.6
  - Call length (Median): 10 minutes
  - Pre & post visit documentation time (Mean): 15 minutes

- Reasons Home Visits Did Not Occur

Acceptability

- 30 days after enrollment, 88.0% of those receiving the intervention said they would be “Likely” or “Extremely likely” to choose an ED that offered this program over one that did not.
- Many participants suggested that care intervention programs should become a routine part of ED practice
- Most participants who said that they did not “need” the intervention, or that it was “not a good fit” for them, also said it would likely be valuable for others, particularly those in worse health or less confident/experience navigating the healthcare system.
- The least-acceptable aspect of the CTI was the PHR. Many reported already using other electronic or paper tools. It was described as cumbersome, overwhelming, and unnecessary.

Feasibility

Implementation Outcomes

- Fidelity
  - Completion of CTI content during home visits was extremely high, with decreasing rates across the three follow-up calls.

Participant Characteristics

Of the 863 participants randomized to receive the intervention, 726 completed the home visit. The following table demonstrates systematic differences between those who received the intervention and those scheduled for, but did not receive, the sessions.

Participant Perspectives

Major themes from participant comments:

- The CTI was helpful in mitigating post-discharge changes (e.g., medications, new treatments) and understanding when to seek care in the future.
- Coach visits increased motivation and accountability. Helping some feel more able to communicate with providers and self-advocate.
- Others felt the CTI would be better suited for adults who were older, less knowledgeable about their health, and/or had more complex needs.
- Social interaction with coaches was often valued as much or more than knowledge gained.

Summary & Implications

- Trained community paramedic coaches delivered the adapted CTI with high fidelity, demonstrating the feasibility of implementing this intervention following ED discharge.
- Participants acceptance and adoption of behaviors emphasizes the potential of this program to improve post-ED outcomes in ways similar to post-hospitalization CTI implementation. Intervention effectiveness analyses are currently in progress.
- Significant differences between participants who received the CTI and those that cancelled indicate a need for further adaptation, particularly for older adults with cognitive impairment.

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