Reducing preventable hospitalizations: a study of two models of transitional care

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Objectives

• Explain the context for adverse events and increased healthcare utilization during care transitions and the ways transitional care attempts to close those gaps
• Present a brief literature review of models of transitional care
• Compare and contrast the structure and outcomes of two transitional care programs

What are care transitions?
Why are care transitions important?

High rates of adverse events...

...lead to increased morbidity and mortality and healthcare utilization.

Risk factors for re-hospitalization

Patient factors:

Systems factors:

What is transitional care?

- Targeted to those at risk for re-hospitalization
- Time-limited
- Focused on health care continuity and preventing adverse events
The birth of transitional care

Model programs

• Transitional Care Model
  • Applied to heart failure patients, cognitively impaired elders

• Care Transitions Intervention
  • APNs act as "transition coach"
  • Four pillars:
    • Medication management
    • Patient-centered health record
    • Primary care and specialist follow-up
    • Knowledge of red flags

And many more variations...

• Models of care:
  • Palliative
  • Restorative
  • Low-intensity

• Providers:
  • Pharmacists
  • Physicians
  • Social work
  • Registered nurses
  • Lay volunteers
...but what works?

- Systematic Reviews show:
  - Care coordination/management by a nurse
  - In-person home visits
  - Emphasis on patient self-management
  - Communication between acute and primary care providers

Healthcare reform and transitional care:

- Carrots:
  - Medicare Shared Savings Program/Accountable Care
  - Improvements to electronic health records
  - Community Based Care Transitions Program

- Sticks:
  - Hospital Readmission Reduction Program
  - Bundled payments

The study

- Side-by-side comparison of two transitional care programs:
  - One led by 3 clinical nurse specialists (CNS)
  - Another led by 2 physicians with expertise in palliative care (PPC)

- Outcomes measured: ED visits, hospitalizations for 120 days before and after intervention
Methods

• Design: Retrospective pre-post single-patient design without controls
• Data collection:
  • CNS: secondary analysis of existing data
  • PPC: chart review of encounters data

Intervention: CNS

• Led by a team of 3 clinical nurse specialists
• Small rural community hospital
• Focus on chronic disease self-management
• Hospital-based, see patients inpatient daily
• Standardized assessment and home visit schedule
• Patients seen at home or acute rehab
• Usually no patients on hospice, receiving home health, or with dementia, mental health admissions

Intervention: PPC

• Led by two physicians: Internal Medicine and Palliative care
• Academic medical center in small metropolitan area
• Focus on managing complex chronic illnesses, palliative care
• Community-based, no visits during hospitalization
• No standardized assessment or home visit schedule
• Patients seen at home or long term care
• Patients may be on hospice or receiving home health, cognitively impaired
Analysis

• CNS: all patients from 9/2014 – 12/2014
  • Deceased patients already removed from secondary data
• PPC: all patients from 9/2014 – 4/2015
  • Data collected regarding date of death

• Statistical analysis: Wilcoxon Matched-Pair Signed-Rank test for non-parametric data

Results – Patient characteristics

• CNS:
  • n=98
  • mean age 69
  • 65% female

• PPC:
  • 72 patients
  • 32 deceased within post-intervention period
  • n = 40
  • mean age 81
  • 63% female

Results – outcomes

![Graph showing ED visits and hospitalizations for CNS and PPC]
Discussion

• Both significant decreases in hospitalizations post-intervention
• CNS program also showed significant decrease in ED visits
• Many differences between programs and populations prevent direct comparison

Discussion

• Population: Older population, palliative focus likely contributor to reduction in hospital but not ED visits for PPC
• Providers: Nurses skill set in care coordination, transitional care may have contributed to success
• Setting: Success of nursing program has added significance given challenging social determinants of health

Limitations

• No randomized controls
• CNS patient restrictions prevent generalizability
• Many differences in patient populations made risk-adjustment for direct comparison difficult
• Lack of cost data
Conclusions and future directions

- Contributes to body of evidence that transitional care reduces unnecessary healthcare utilization
- Shows potential for a variety of providers, program designs to make an impact
- Future study would include randomized controls, cost data

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References


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