Understanding Interventions to Improve Transitions of Care

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Outline

- Interventions to improve transitions of care review
    - Introduction
    - Motivations
    - Methods
    - Synopsis of Studies
    - Results
- Discussion
    - Context, barriers and enablers
    - Questions & Next steps

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Why Transitions of Care?

- **Alternate Level of Care**
  - 16% of Ontario hospital beds are occupied by ALC patients
- **Hospital Readmission**
  - 19.6% of Medicare beneficiaries are rehospitalized within 30 days
- **Patient Safety**
  - 49% of patients experience at least one medical adverse event at discharge
- **Poor Information Transfer**
  - 23% of primary care providers had direct communications with hospital care team

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Why Interventions to Improve Transitions of Care?

"… because patients and their caregivers are often the **only common thread** moving across sites of care, together they constitute an appropriate target for an intervention…"

(Coleman et al. 2006)

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Motivation for this Review

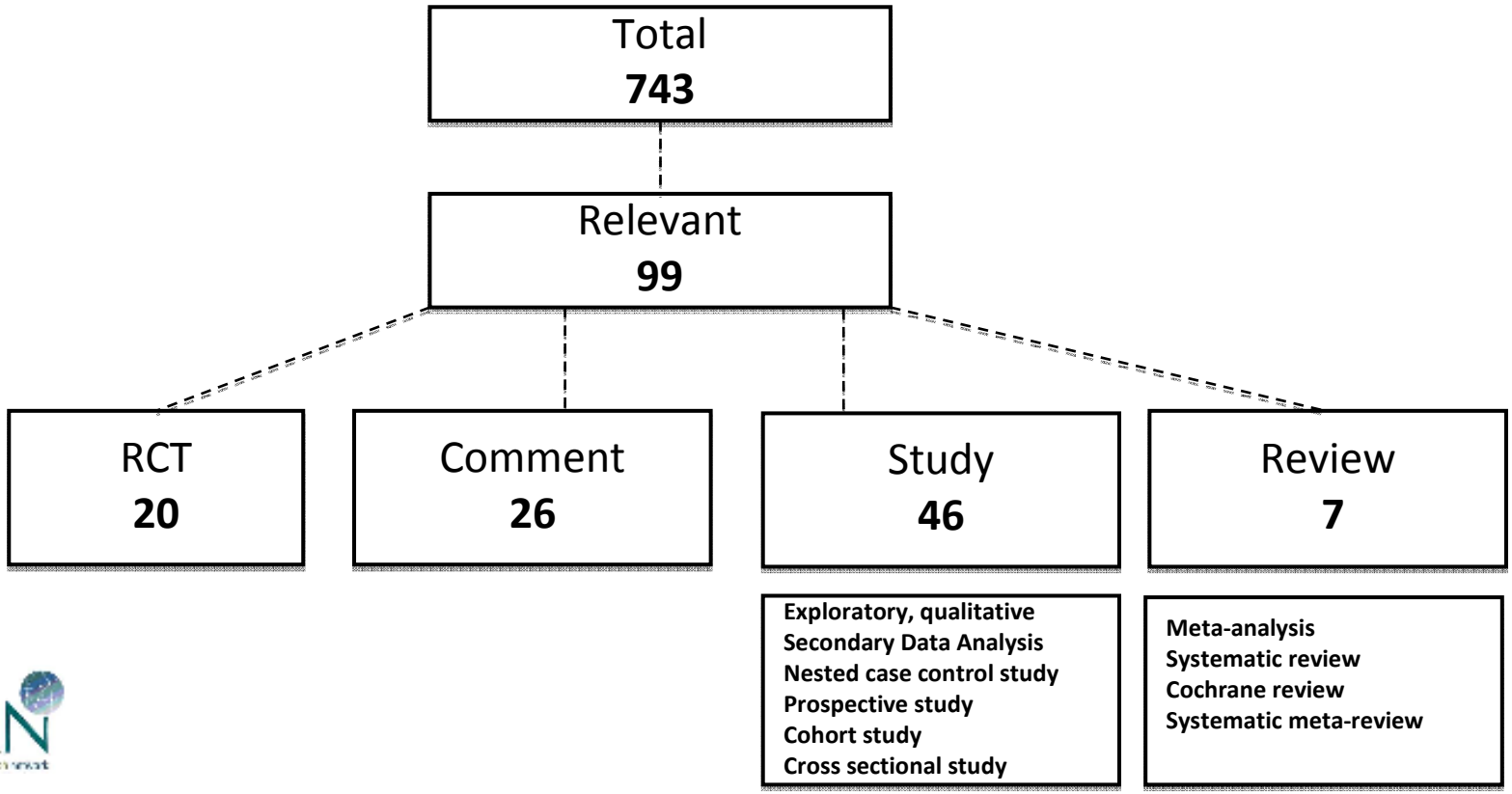
- Limited evidence demonstrating effectiveness

- What are organizational and policy contexts in which interventions are implemented?
  - Does context influence the intervention process and/or outcomes?

- How can care transition interventions be better understood to enable effective implementation beyond a ‘laboratory’ setting?

Review of Interventions: Methods

- Literature search (March 2009, repeated February 2010) of English-language articles indexed in PubMed, MEDLine (OVID), Scholars Portal & Google Scholar
- Hand search of reference sections for key papers



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Interventions Aim to Improve Process & Outcomes of Transitions

Aim of Intervention	Measurements
Smooth discharge process	* Length of Stay * Discharge destination
Prevent /manage post-discharge patient issues	* Functional measures * Patient Satisfaction * Safety Measures
Prevent hospital readmissions	* Readmission rates * ED visits
Reduce Costs	* Cost per patient * Insurance reimbursements

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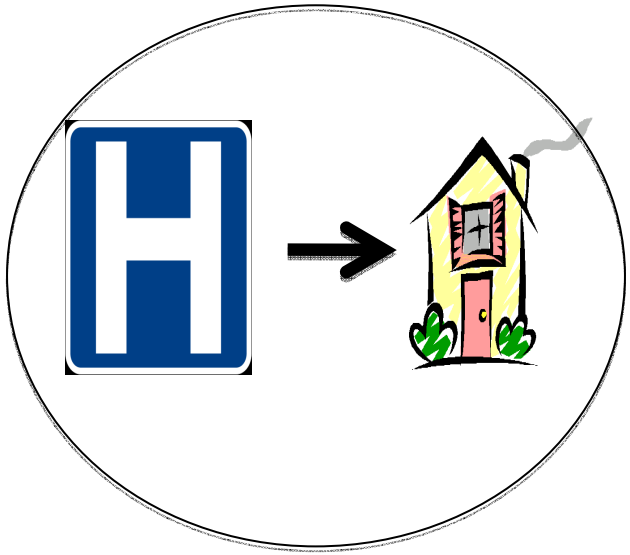
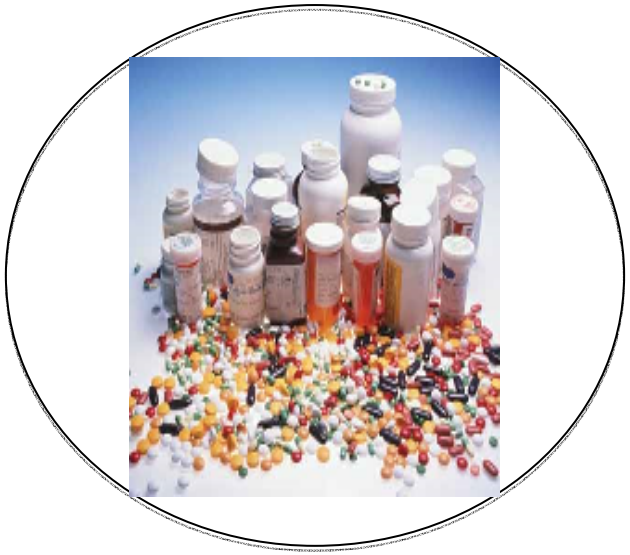
Intervention Components





Intervention Name	Case mgt	Patient Education	Follow up	Med Rec
The Discharge-Transfer Intervention	X		X	
SIPA (System of Integrated Care for Frail Elderly)	X	X	X	
Nurse led multidisciplinary intervention for chronic heart failure patients	X	X	X	
4 pillar Care Transitions Intervention		X	X	X
Evidence Based Medication Management				X
MD directed, RN managed home based Heart Failure	X	X	X	X
Technology supported multidisease care mgt.	X	X		
Re-Engineered Discharge (RED)	X	X	X	X
Post discharge home based care for COPD patients	X	X	X	
Reengineered Hospital Discharge	X	X	X	X
Targeted care bundle		X	X	X
Post-Acute Care (PAC) Program	X	X	X	
Advanced Practice Nurse (APN) Centered discharge for Hospitalized Elders	X	X	X	
APN led intervention for heart failure	X	X	X	X
Home based RN intervention for Cardiac Patients	X	X	X	
Disease Management program for post MI patients	X	X	X	

Intervention	Measured Outcomes			
	ED visit	Readmission	Satisfaction	Status
Discharge-Transfer Intervention	—	—		
SIPA (System of Integrated Care for Frail Elderly)	—			—
Nurse led Multidisciplinary Intervention for CHF		↓		↑
4 pillar Care Transitions Intervention		↓		
Evidence Based Medication Management		↓	—	—
MD directed, RN Managed Home Based Heart Failure		—		
Technology Supported Multi-Disease Care Mgt.	↑			—
Re-Engineered Discharge (RED)		—		
Post-discharge Home Based Care for COPD		—		—
Reengineered Hospital Discharge	↓		↑	
Targeted Care Bundle		—		
Post-Acute Care (PAC) Program		—	↑	—
Advanced Practice Nurse (APN) Centered discharge for Hospitalized Elders		↓	—	—
APN led intervention for Heart Failure		↓	—	—
Home based RN intervention for Cardiac Patients		↓	—	—
Disease Management program post-MI	↓	↓		

Mixed Results for Interventions

- systematic review of **nurse-assisted care transition interventions** found improved outcomes, such as reduced re-hospitalization rates in ½ studies
  - No features are universally applicable (Chiu et al. 2007)

- There is **limited summarized evidence** that discharge planning and discharge support interventions have a positive impact on
  - patient status
  - patient functioning
  - health care use after discharge
  - Costs (Mistaien et al. 2007)

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Methodological Challenges?

- Heterogeneity of findings
  - Small sample sizes
  - Poor study retention
  - Differences in implementation
  - Study sample not ‘real world’
- Rehospitalization and ED visits are proxy measures of effectiveness, factors influencing readmission are complex:
    - underlying medical conditions
    - familial and social supports
    - communication
    - Transportation/housing

Discussion: the importance of context

- Ability of a patient to 'navigate' the health care system is associated with complex interplay of factors
  - Patient Characteristics
  - Environment

- **Sociodemographic characteristics** of patients prone to complex discharges, rehospitalization

- What about the **organizational, system and policy contexts** which may influence the success of a transition intervention?

Case Management by an Inter-professional Team

- Funding regimes may be a barrier for effective collaboration
  - Silo'd funding for providers
  - Provider funding schemes can be disincentives

- Support structures for inter-professional liaison
  - Communication tools
  - Clinical Information systems
  - Culture

Patient Education&Empowerment

- Human Resource, cost burden
  - Coleman Care Transitions
    Intervention Coach: $74, 310 /year (2006)

- Disease-specific discharge interventions do not address whole patient issues
  - Readmissions for patients in heart failure self management intervention were for co-morbid conditions (DeBusk et al. 2004)

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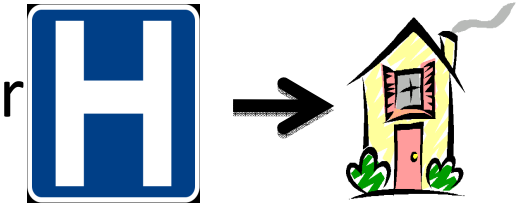
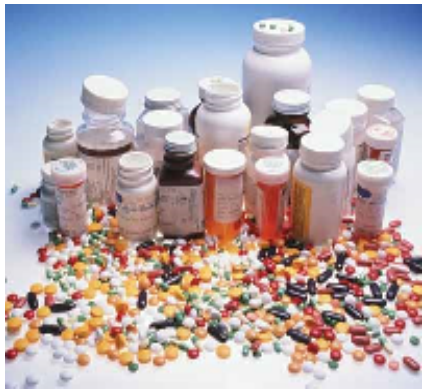
Ongoing Follow Up Across Settings

- Discharging patients quicker and sicker



  - Cost shifting from acute to community
  - Incentives to collaborate across settings
  - Unclear accountability, Beland et al. (2006) developed accountability agreements

Medication Reconciliation



- Role redesign around responsibility, accountability
  - Role of clinical pharmacist, community pharmacist, attending physician?

- Reimbursement schemes for hospital, community pharmacists
  - Financial implications

Knowledge Gaps & Questions

- What are approaches to studying the context in which care transitions interventions are successful (or not) ?

- How can system and organization level barriers to transition interventions be mitigated?

- What are lessons learned from organizations in Ontario implementing care transitions interventions?

A New Approach?

Jenicek (2003) Evidence Hierarchy

I. Randomized Controlled Trial

II. Well designed trial without randomization

III. Analytical Observation Studies

IV. Multiple Time Series

V. Qualitative Case Reports

- More research is needed
- New approaches are warranted
- Research to generate information supporting the transfer of knowledge on intervention effectiveness and outcomes

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Thank you & Contact Information

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