Integrated Care Approaches Used for Transitions from Hospital to Community Care: A Scoping Review*

Cara L. Brown and Verena Menec
Department of Community Health Sciences, Faculty of Health Sciences, University of Manitoba

RÉSUMÉ

Les soins intégrés constituent une approche prometteuse pour améliorer les transitions entre les soins pour les personnes âgées, mais il n'existe pas de consensus concernant ce concept ou ses applications. Cet examen de la portée décrit l'ampleur et le contenu des publications sur les initiatives de soins intégrés visant les transitions entre les soins hospitaliers et les soins en milieu communautaire pour les aînés (âgés de 65 ans ou plus), et la conceptualisation des soins intégrés dans ces écrits. Une recherche systématique dans la littérature des 10 dernières années a permis d'identifier 899 documents qui ont été examinés par deux évaluateurs. Des 48 documents sélectionnés, 26 étaient des articles de revues scientifiques et 22 des articles de la littérature grise.

Les analyses réalisées incluent des statistiques descriptives et une analyse de contenu qui résume les caractéristiques des initiatives de soins intégrés. Les résultats suggèrent que l'intégration de la prestation des soins et services est principalement visée par ces travaux, plutôt que l'intégration du financement, de l'administration ou de l'organisation des soins. Afin de permettre des comparaisons sur le plan international des initiatives de soins intégrés visant l'amélioration des transitions entre les soins, une description détaillée des contextes organisationnels serait aussi nécessaire.

ABSTRACT

Integrated care is a promising approach for improving care transitions for older adults, but this concept is inconsistently defined and applied. This scoping review describes the size and nature of literature on integrated care initiatives for transitions from hospital to community care for older adults (aged 65 and older) and how this literature conceptualizes integrated care. A systematic search of literature from the past 10 years yielded 899 documents that were screened for inclusion by two reviewers. Of the 48 included documents, there were 26 journal articles and 22 grey literature documents. Analysis included descriptive statistics and a content analysis approach to summarize features of the integrated care initiatives. Results suggest that clinical and service delivery integration is being targeted rather than integration of funding, administration, and/or organization. To promote international comparison of integrated care initiatives aiming to improve care transitions, detailed descriptions of organizational context are also needed.

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La correspondance et les demandes de tirés-à-part doivent être adressées à : / Correspondence and requests for offprints should be sent to:
Cara L. Brown, M.Sc.
Department of Community Health Sciences
Max Rady College of Medicine
Faculty of Health Sciences
University of Manitoba
R106, 771 McDermot Ave.
Winnipeg, MB R3E 0T6
<cara.brown@umanitoba.ca>

Background

Transitions to the community from the hospital are often difficult for older adults. Because older adults are typically sicker than younger adults, they use more hospital days than the general population to accommodate extended recovery periods, or arrangement of home care or other long-term care services (Glasby et al., 2016). As a result of the potential for deterioration of functional status while in hospital, as well as a myriad of other factors such as multi-morbidity and limited support systems, older adults are vulnerable to post-hospital adverse events and hospital readmissions (Laugaland, Aase, & Barach, 2012). In addition, older adults have reported difficulty (1) accessing health services following hospitalization (Jackson, Oelke, Besner, & Harrison, 2012; Lapum, Angus, Peter, & Watt-Watson, 2011), (2) being unsure of how to take care of themselves once at home (Knight, Thompson, Mathie, & Dickinson, 2011), and (3) feeling rushed to make important decisions about their discharge destination (Lapum et al., 2011). Better ways to manage hospital-to-community transitions are needed, and integrated care approaches are a promising solution for enhancing hospital and community services coordination and collaboration.

Integrated Care

Integrated care is a health care approach recognized for providing high-quality care for older adults and/or people with chronic disease while maximizing health resource use (World Health Organization [WHO], 2015; Chappell & Hollander, 2013). Integrated care approaches focus on enhancing coordination and collaboration within and between care sectors to reduce fragmentation (Kodner & Spreeuwenberg, 2002; Valentijn, Schepman, Opheij, & Bruijnzeels, 2013). Integrated care is believed to be most effective for populations with complex care needs who require care from multiple providers and in several settings. Thus, older adults may experience improvements in the quality and efficiency of care transitions with the application of integrated care (Maruthappu, Hasan, & Zeltner, 2015).

Integrated care approaches may integrate care services along the vertical and/or horizontal continuum of care. *Vertical integration* refers to bringing together different levels of health care, such as primary and secondary care. Primary care includes basic health care services provided by professionals who are typically the "first contact" with patients (such as general practitioners [GPs]). Secondary care is specialist care, including basic hospital care (Gröne & Garcia-Barbero, 2001). *Horizontal integration* is the coordination and collaboration of services within one level of care and, in the context of this study, usually refers to integration of community-based social and health care services (Chappell & Hollander, 2013; Gröne & Garcia-Barbero, 2001). Although the term social services is not clearly defined in the literature, it typically refers to all non-medical services, such as assistance with financial and housing needs, and provision of home support needs such as home maintenance, meal programs, daycare services, and/or transportation (Hollander & Prince, 2007).

The term *integrated care* describes a wide variety of strategies or approaches to improve care continuity and coordination; consequently, the implementation of integrated care is varied (Maruthappu et al., 2015; Valentijn et al., 2013). This variation has made it challenging to compare integrated care initiatives (Valentijn et al., 2013). However, integrated care approaches that include vertical multidisciplinary interventions are efficacious for managing chronic diseases, managing care between primary and specialist care, and reducing hospital use (Martínez-González, Berchtold, Ullman, Busato, & Egger, 2014; Mitchell et al., 2015). Less attention has been paid to integrated care practices in relation to care transitions between the hospital and community, despite the emphasis of integrated care as an approach that can reduce boundaries between levels of health care (Vedel et al., 2011).

Care Transitions for Older Adults

The challenges with transitions from hospital to community care are well documented. Post-hospital adverse events, emergency room visits, and readmission rates

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are high for older adults (Canadian Institute of Health Information, 2012; Forster et al., 2004) due to multiple factors such as poor communication between the hospital and primary care services, lack of patient understanding of their diagnosis and self-care needs, and difficulties with accessing community care services (Jackson et al., 2012; Rennke et al., 2013).

The body of literature evaluating intervention programs designed to improve the quality and efficiency of care transitions from the hospital to the community is vast. It has been demonstrated that personalized discharge planning can bring small reductions in hospital length of stay and readmission rates for older medical patients (Gonçalves-Bradley, Lannin, Clemson, Cameron, & Shepperd, 2016). Studies on hospital-initiated interventions have identified two important features for reducing hospital readmissions: (1) the use of a dedicated, hospital-employed discharge transition provider or team, and (2) the use of a bridging strategy, whereby services are provided by the hospital beyond the discharge date (Rennke et al., 2013). A review by Leppin et al. (2014) of 47 trials using 18 types of discharge interventions found that more recent intervention studies have been less successful at improving health service use, even when implementing interventions that were successful in the past (Leppin et al., 2014). Moreover, interventions that provide frequent and complex assistance to older adults in their own homes are most successful in reducing hospital readmissions (Leppin et al., 2014). These findings signal the need for a new approach to care transitions that is consistent with integrated care principles such as reducing barriers within and between institutions, and meeting both social and health needs in the community.

The concept of integrated care seems promising for reducing fragmentation between the hospital and the community in order to improve care transitions, but has not yet been a focus of a systematic literature review. Because integrated care is not consistently defined or applied, it is important to understand how integrated care is currently being conceptualized in relation to hospital-to-community transitions. Scoping reviews are helpful for presenting a broad overview of the evidence to "map the concepts underpinning a research area" (Constand, MacDermid, Dal Bello-Haas, & Law, 2014, p. 2). Scoping reviews also identify gaps in research, including determining the feasibility of a systematic review on the topic (Tricco et al., 2016). Our scoping review is unique and distinct from previous reviews on hospital-to-community transitions because of our explicit focus on integrated care approaches. Our overall aim was to determine research gaps and directions for future research on the topic of integrated care approaches for facilitating transitions from hospital to home for older adults. We did this by (a) outlining the size and scope of this body of literature, and (b) identifying how integrated care is being conceptualized in this body of literature.

Conceptual Framework for This Study

Two integrated care frameworks influenced our thinking while we conducted this study. The first is the *enhanced continuing care framework* (ECCF) (Hollander & Prince, 2007) because of its particular relevance to the topic of care transitions from hospitals to the community for older adults. The framework conceptualizes an ideal system for older adults with continuing care needs and specifically identifies linkages between the hospital and continuing care as important for meeting the needs of older adults. It emphasizes the importance of social as well as health care, promoting horizontal as well as vertical integration. The ECCF outlines the philosophical and policy prerequisites (e.g., patient-centred care; psychosocial model of care) that provide a base for the development and application of best practices of continuing care (e.g., coordinated administration, integrated information systems). Best practices then support the development of linkage mechanisms (e.g., staff that cross care boundaries, such as physician consultants in the community) between different layers of the health system and other sectors providing care services.

The second influence was a framework developed by Kodner and Spreeuwenberg (2002) that adds to thinking about integrated care for adults transitioning from hospital in two ways. First, it includes integration of single institutions, such as integration of different departments and professionals within a hospital. Second, rather than providing a specific framework for an integrated system, it takes a more flexible approach by proposing that one or more integration strategies can be implemented in one or more domains depending on the needs of the care environment. Kodner and Spreeuwenberg (2002) provided specific examples of strategies that can be implemented in five domains of integration that range from a macro level to a micro level: financial, administrative, organizational, service delivery, and clinical. For example, strategies for the financial domain include prepaid capitation and pooling of funds; strategies under clinical integration include decision support tools and regular patient contact.

Design and Methods

This study was guided by a six-stage methodology proposed by Levac, Colquhoun, and O'Brien (2010), who refined methodology developed by Arksey and O'Malley (2005). The first five stages outline considerations for (1) identification of the research question,

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(2) identification and (3) selection of relevant studies, (4) charting of data, and (5) summarizing and reporting results. As it is optional, we did not implement the sixth stage, which recommends consultation of stakeholders to gain additional perspectives on preliminary findings. We also followed recommendations as outlined in *The Joanna Briggs Institute Reviewers' Manual: Methodology for JBI Scoping Reviews* (Joanna Briggs Institute; 2015) that provides detailed recommendations on protocol development, data abstraction procedures, and required components in the reporting of results.

Eligibility Criteria

Consistent with scoping review methodology, this study was broad in its inclusion of different types of literature and did not evaluate the quality of the studies (Levac et al., 2010). Both peer-reviewed and grey literature was searched with no methodological requirement for study inclusion. Protocols were included since they provided information that was not otherwise captured, either because the studies were not yet published, or in the case of one study, the protocol had been altered during study implementation. We excluded conference abstracts and Microsoft PowerPoint presentations as they did not provide enough detail to determine document eligibility and/or extract data accurately. Eligibility criteria for content were developed according to the JBI guidelines (2015) that suggest the use of the mnemonic PCC (*population*, *concept*, and *context*) to target the desired focus and scope for the review:

1. *Population*: The document needed to focus on hospitalized older adults (defined as age 65 or older). Documents presenting research on participants with a mean age of 65 were included, even if some of the participants were under age 65.
2. *Concept*: The document needed to explicitly explain, evaluate, describe, or propose an *integrated care* initiative. As an objective of this review was to understand how the concept of integrated care is being used in research on care transitions, we included all types of integrated care.
2. *Context*: The document needed to focus on transitions of care from an acute care environment to other care environments (including, but not limited to, intermediate care, nursing home, home with or without home care services). Interventions applied in the community to prevent hospitalization readmission immediately following hospitalization were included, but interventions aimed at preventing hospitalization for community-dwelling older adults were excluded.

Information Sources and Search Strategy

The search was comprehensive and designed to locate both published and unpublished literature within the field of health and health services. The search strategy was developed with the advice of an experienced academic health librarian. We adapted the strategy following a preliminary search of some potential keywords to ensure search specificity. For example, a preliminary search using the term "care transition" did not provide adequate breadth of results, and thus was replaced by the terms "discharge OR hospital". The search strategy included the terms (or related terms) "integrated care"; gerontology (geriatrics, older adults, elderly); "discharge OR hospital" (with Boolean operators AND and * where relevant). We tailored the search plan to suit each database or search source. Details of the search strategies are available from the first author.

We searched the following electronic databases from January 1, 2005 to December 31, 2016 for documents written in French or English: Scopus (includes PubMed and EMBase), Proquest and EBSCOhost Full Text (includes 3,000 periodicals including AgeLine and CINAHL), and the University of Manitoba library one-stop search feature (includes all physical items in the University of Manitoba libraries, subscribed e-books, documents from over 200 databases, course reserve materials, and subject guides). The one-stop search feature was included to ensure breadth of the search, since it searches all library database materials, not just health and social databases. The *Journal of Integrated Care* and the *International Journal of Integrated Care* were searched separately due to the high potential of relevant documents. For further grey literature searching, we used both Google Advanced Search and the Canadian Health Research Collection. Once we had chosen documents for inclusion in the study, we reviewed their reference lists to search for additional studies.

Study Selection

The selection of documents was completed in three main stages (see Figure 1). In stage 1, the first author screened the document titles to eliminate French versions of documents for which we had copies in English and to eliminate documents that clearly did not meet the inclusion criteria (e.g., pediatric population). In stage 2, we independently determined the eligibility of documents based on the title and abstract, and then met to discuss and reconcile any differences. For grey literature with no abstract, we accessed the executive summaries or table of contents of the documents. In stage 3, we independently reviewed the full text of documents that were potentially eligible following stage 2, and then again met to discuss and reconcile any differences regarding eligibility, which left 48 documents.

Data Extraction

For documents eligible for inclusion, data was abstracted by the first author and reviewed by the second author.

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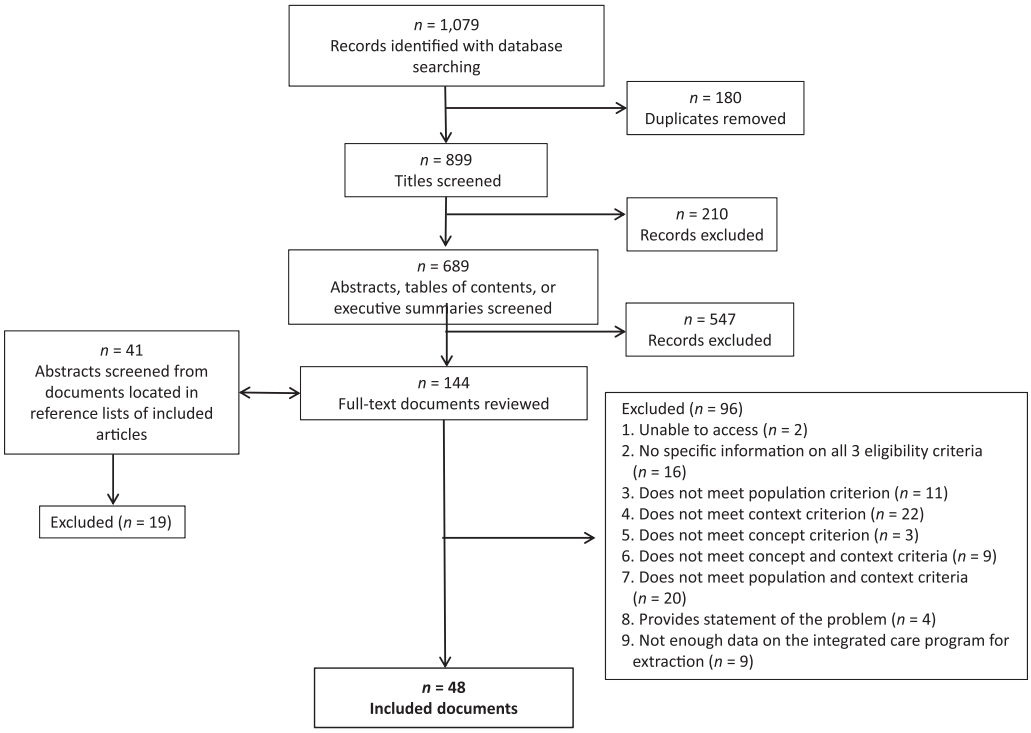

Figure 1: Document identification, screening, and selection flow

First, basic information (e.g., publication date, document objective, document type, etc.) was abstracted from each included document. To accomplish this, the first author developed an extraction file based on a list of key information recommended for extraction by the Joanna Briggs Institute (2015), and both authors met to revise the file after it was piloted on five documents. Next, we looked at the integrated care initiatives described in the documents. Several of the grey literature reports described multiple integrated care initiatives, but not all the initiatives met the inclusion criteria for this review. For example, documents may have described initiatives that were developed for different populations or that were not specific to care transitions. Thus, we reviewed all the initiatives reported within the included grey literature using our PCC inclusion criteria. The first author then extracted information on each initiative meeting the inclusion criteria so that the diversity of initiatives as well as literature types could be conveyed in the results.

In the final phase of data extraction, we used a qualitative content analysis approach to further address the study objective of determining how integrated care is being conceptualized in the literature from the perspectives of the documents' authors (Vaismoradi, Turunen, & Bondas, 2013). Content analysis allows for reporting of common trends and patterns in large amounts of text with a low level of interpretation and can allow for the quantification of qualitative information (Vaismoradi et al., 2013). Information about the features of each integrated care initiative was extracted, grouping text that was similar in meaning. We used an inductive approach, rather than attempting to fit the data into current frameworks of integrated care. However, knowledge of the Hollander and Prince (2007) and Kodner and Spreeuwenberg (2002) frameworks ensured that we considered multiple domains of integrated care (financial, administrative, clinical, etc.) and were referenced to assist with developing category labels.

When extracting data, we included all features of the initiative that would be (or were) in place during the implementation of the integrated care initiative. In some cases, this included features of the system or initiative that were already in place and were being kept in place during implementation of the integrated care initiative. As new information was extracted from different documents, similar information was grouped together. Following extraction of approximately 10 initiatives at a time, we reviewed the data as a whole, categorized it, and then applied labels to grouped data. This iterative process continued, altering labels and categories as new data were incorporated into the emerging framework. Once data had been extracted from all the documents, we continued to collapse similar categories until we were left with three main groups of data containing categories and subcategories that summarize the features of integrated care in this body of literature.

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Finally, we counted how many articles had information on each of the category features.

Results

Types of Documents

The number of peer-reviewed articles totaled 25 (19 with empirical results, four protocols, an editorial, and a program description), 22 grey literature documents (19 reports, 2 dissertations, and 1 clinical care guideline), and one non-peer-reviewed journal article. These 48 documents taken together described 45 different integrated care initiatives to support older adults transitioning from the hospital to the community. The initiatives were in various stages of implementation; 32 (71.1%) had been implemented, 3 (6.7%) were partially implemented, and 9 (20.0%) were proposals or visioning documents (see tables 1 and 2 for details of the included documents).

The peer-reviewed research (n = 19) was heterogeneous in terms of research design. There were six randomized controlled trials (RCTs), five qualitative studies, five prospective cohort studies, two mixed method studies, and one quasi-experimental study. Of the four protocols, two were from the same study, with one protocol describing the intervention and the other the research design (quasi-experimental with nested RCT). The remaining two protocols described an RCT and a prospective matched control before and after study.

Of the grey literature (n = 22), 19 were reports describing planned or implemented integrated care initiatives. Only one of the reports had an empirical approach and data reporting (mixed methods); the rest of the reports were descriptive in nature. The reports were most commonly authored by health authorities, health associations, or the health government branch (n = 9). For the two dissertations, one was a process evaluation and the other, a quasi-experimental study (see Figure 2).

The documents came from 14 different countries on four continents (Europe, North America, Asia, and Australia) with the majority originating from Europe (31; 64.6%). In order of most to least documents produced, documents were from England (14; 29.2%), Canada (7; 14.6%), the Netherlands (6; 12.5%), Norway, (4; 8.3%), Hong Kong (3; 6.3%), and Singapore (3; 6.3%); additionally, two documents each (4.2%) were from Australia, Sweden, Scotland, and the United States, and one document each (2.1%) from Spain, Denmark, and Ireland. The initiatives described in the documents were generally from the same 14 countries, although some documents reported on initiatives in other countries, and some initiatives were described in more than one document. For example, there were six documents and two initiatives from the Netherlands, and two documents and four initiatives from the United States.

According to the publication year, this topic is becoming more popular, with the number of documents increasing over the past 10 years. Nine of the documents were released between 2005 and 2010 (18.8%), while the remaining 39 were released between 2011 and 2015 (81.3%). The year with the most documents released was 2015 (13; 27.1%).

Outcomes Measured

In the quantitative research from peer-reviewed publications (n = 14; 8 RCTs and 6 non-RCTs), the most commonly measured outcome was health utilization, with the most frequent indicators being hospital readmissions (n = 9 studies), and hospital length of stay (n = 7 studies). Other health utilization measures included emergency department visits and outpatient visits (n = 7 studies). Health and function indicators were used in seven studies; health care costs in five studies; patient satisfaction of care in five studies; quality of life of the patient or informal caregivers in four studies; service provider perspectives of care, and health care costs, in three studies. See Figure 3 for a summary of outcomes reported from quantitative instruments. The qualitative studies involved thematic analysis of interviews, focus groups, or narrative documents, and thus outcomes were not extracted for these studies and are not included in Figure 3. All six of the studies that analysed qualitative data explored perceptions of staff on the implementation of an integrated care initiative, and two of the seven also explored patient perceptions of their care transition experience.

Patient Populations

The patient populations in the peer-reviewed quantitative research were also variable. Of those reporting specific enrolment criteria (n = 11 of 14 studies), some studies included only older adults with specific health conditions (COPD, n = 2; hip fracture, n = 1; chronic cardiorespiratory disease, n = 1), whereas others included all hospitalized older adults (n = 4). Some studies focused on older adults considered to be vulnerable to hospitalization due to existing disability (n = 2), or older adults at risk of readmission according to screening tools (n = 2).

Conceptualization of Integrated Care

To determine how integrated care was conceptualized in this body of literature, we first tracked the terminology related to the word *integrate* in all of the documents to explore consistency in the use of this term.

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Table 1: Peer-reviewed research reporting results

Study, Year, Country of Origin	Purpose	Design	Program Overview	Population[a]	Measures	Results/Key Findings[b]
Béland et al., 2006 Canada	Assess the System of Integrated Care (IC) for Older People (SIPA) model of delivery of health and social services.	Randomized controlled trial (RCT)	Community-based multidisciplinary teams that deliver community health and social services and coordinate institutional care.	Community-dwelling with moderate disability.	Primary: health utilization and costs. Secondary: health status; satisfaction with care; caregiver burden.	Program reduced alternative level of care (ALC) use by 50%; program cost neutral.
Wong et al., 2012 Hong Kong	Empirical testing of the Health-Social Transitional Care Management Program (HSTCMP)	RCT	A primarily community-based health-social time-limited transitional care intervention.	Discharged home from medical unit.	Primary: readmission rate. Secondary: quality of life (QoL); self-efficacy; patient satisfaction.	Intervention group fared better for all outcomes except QoL.
Wong et al., 2011 Hong Kong	Cost-effectiveness analysis of the HSTCMP.	RCT	As per Wong et al., 2012.	Discharged home from medical unit.	Primary: Health services utilization and costs. Secondary: QoL.	No difference in length of stay (LoS) if readmitted. Cost savings with intervention.
Preen et al., 2005 Australia	Determine the effects of a hospital-coordinated discharge care plan.	RCT	A research nurse developed a discharge care plan, requested input from the GP on the plan, and faxed the plan to community providers.	Inpatients: primary diagnosis of chronic cardiorespiratory disease.	QoL; patient and GP satisfaction; hospital LoS.	Intervention group had better mental QoL; improved communication but not timeliness with GPs; limited increase in patient satisfaction.
Eklund et al., 2013 Sweden	Evaluate the "Continuum of Care for Frail Older People" intervention.	RCT	Provide support in ED, through hospital and after at home, by collaboration of hospital and community health care providers.	1 or more: chronic disease; ADL dependency.	ADL; frailty	Intervention group had higher ADL independence but no differences in frailty.
Lee et al., 2015 Singapore	Evaluate the Transition Care Program.	RCT	A hospital-based multidisciplinary team provides post-hospital follow-up.	Inpatients with high risk of readmission.	Primary: readmissions. Secondary: ED visits; patient satisfaction	Intervention group had higher rates of satisfaction.
Casas et al. 2006 Spain and Belgium	Evaluate a standardized IC intervention for readmission prevention for chronic obstruction pulmonary disease (COPD).	Prospective cohort	Comprehensive assessment, self-management teaching, individualized care plan; access to specialist nurse post-discharge.	Patients with COPD who spent more than 48 hours in acute care.	Readmissions; number of health care visits; mortality.	Intervention group had lower readmission rates; otherwise no differences between groups.
Titova et al., 2015 Norway	Compare the COPD-Home IC intervention with usual care.	Prospective cohort	Hospital discharge support via: 1) self-management education and plan, 2) hospital follow-up via telephone and home visits.	Admission to hospital due to COPD.	Health services utilization due to COPD.	Intervention group had a reduction in readmissions and hospital days.

Continued

Table 1: Continued

Study, Year, Country of Origin	Purpose	Design	Program Overview	Population[a]	Measures	Results/Key Findings[b]
Lin et al., 2005 Hong Kong	Examine the effectiveness of the IC and Discharge Support program.	Prospective cohort	Comprehensive geriatric assessment and discharge planning; intensive case management OR rapid intensive multidisciplinary support.	Inpatient returning to community-dwelling and at risk for readmission.	Primary: ED visits, readmissions, bed days, cost. Secondary: function and mental status.	Improvement in all outcomes except for mental status. Cost saving.
Doshi, et al., 2014 Singapore	Describe integrated model of care developed for management of hip fractures.	Prospective cohort	IC pathway for hospital care facilitated by a care manager.	Hospitalized for hip fracture.	LoS; discharge destination; functional improvement	LoS reduced to below the national average. Most patients regained pre-morbid function.
Lyon, Miller, & Pine, 2006 England	Determine if Castlefield's IC model of social and nursing services had an effect on hospital admissions.	Prospective	Social worker incorporated into a community health practice to work with community nursing.	One primary care practice patient population.	Caseload, referral patterns; timeliness of services provided.	Hospital discharge planning started sooner. Rates for admissions, LoS, and bed occupancy fell with no impact on budget.
Asmus-Szepesi et al., 2015 Netherlands	Evaluate the effect and cost of the Prevention and Reactivation Care Program (PReCAP).	Quasi-experimental	A geriatric rehabilitation program integrated across hospital, rehab and community settings to prevent functional decline.	Screened as at risk of functional decline.	Primary: ADL. Secondary: mortality; readmissions; falls; care costs; QoL; informal caregiver burden.	Intervention group had better perceived health status. No differences on other outcomes. Not cost-effective.
Holstege et al., 2015 Netherlands	Explore perceptions of health services professionals during implementation of a national integrated geriatric rehabilitation programme.	Mixed methods: Prospective	Each geriatric rehabilitation service improved care pathways to promote collaboration between settings (hospital, nursing facility, community care).	Staff, patients, and informal caregivers from skilled nursing facilities.	Questionnaire on 4 domains of health care service delivery: alignment of care to patient needs; care coordination; team cooperation; quality of care. Interviews with process managers.	No changes noted post-intervention by patients/caregivers. Staff reported improved team cooperation, but less improvement in the other three domains.
Roland et al., 2012 England	Report outcomes for 6 IC pilots that used intensive case management as an intervention. The Church View program was relevant to this review.	Mixed methods: Questionnaire and health care utilization	Church View Program: Organizational integration of one GP practice with its local acute hospital and virtual ward model post-discharge.	Front-line staff, patients of service.	Staff perceptions of changes in role and patient care; patient satisfaction; health care services utilization (ED admissions, elective admissions, outpatient care).	Increased communication between and with patients but patients felt had less personal choice. Reduction of health utilization with the exception of an increase in ED use. Overall cost-effective.

Continued

Table 1: Continued

Study, Year, Country of Origin	Purpose	Design	Program Overview	Population[a]	Measures	Results/Key Findings[b]
Masters et al., 2008 Australia	Content analysis of 23 transitional care program self-evaluations.	Qualitative	Residential or community-based care at the end of an acute hospital episode for those that need time and support or restoration.	Hospitalized.	Compliance with key requirement of the program. E.g., timely access to care; care is linked to patient goals; documentation includes assessment of function.	Person-centred care evident; GP, pharmacist and geriatrician involvement in care planning was low; few programs had service agreements but those that did had better processes.
Baillie et al., 2014 England	Determine how a vertically integrated health system facilitates transition from acute hospital wards.	Qualitative	Vertical integration of acute and community hospitals, and community-based health care services.	Key staff in hospital and community; hospitalized patients.	Perceptions of 53 staff from both acute and community sites.	"The removal of organizational boundaries does not necessarily reduce boundaries between staff" (p. 9).
Dahl et al., 2014 Norway	Compare discharge to home directly from an acute care setting, to discharge to an intermediate care setting.	Qualitative	Intermediate care ward to improve discharge from acute care to primary care.	Front-line and managerial staff from community, nursing home, and hospital.	Perceptions of 27 health professionals and administrators.	Intermediate care provides a buffer between acute and community care but communication challenges persist.
Johannessen, Lurås, & Steihaug, 2013 Norway	Explore the role of an intermediate unit in the clinical pathway from hospital to home.	Qualitative	As per Dahl et al., 2014.	Intermediate care unit patients; staff from hospital, intermediate care, and community.	Perceptions of 30 health care professionals and 8 patients. Observation.	Challenges with communication and collaborative working exist due to lack of shared goals between settings.
Hjelmar, Hendriksen, & Hansen, 2011 Denmark	Explore what affects motivation to participate in a cross-sectoral programme of post-hospitalisation follow-up visits.	Qualitative	Joint follow-up visit within one week of hospital discharge by the GP and primary care nurse.	Hospital staff, district nurses, project coordinator, and ward physicians.	Perceptions of 23 health professionals.	Participants think the home visits are relevant, yet difficult to motivate GPs to participate.

[a] All population groups were age 65 and older, or the population mean was 65 years of age or older.

[b] Only the results related specifically to acute to non-acute transitions are reported here.

ED = Emergency Department; GP = general practitioner; IC = integrated care; LoS = length of stay; QoL = quality of life

Table 2: Characteristics of other documents included

Author, Year, Country of Origin	Document Type	Document Purpose and Included Programs	Program Description(s)	Program Results/Key Messages
Strategy and Implementation Group for Nottingham South (SIGNS), n.d. England	Report by health authority	Describe the Nottingham IC model of health social services.	A "transfer to assess" initiative facilitates early discharge from hospital with comprehensive home supports.	Plan to measure patient-oriented outcomes in the future. Shared principles of care will guide implementation of new programs to address the needs of frail older adults.
NHS Forth Valley, 2012 Scotland	Report by health authority	Propose a Care Village for service delivery across health and social organizations.	Integrate health and municipal social services as well as private housing services administratively and geographically.	No plan for evaluation outlined. This proposal provides a commercial, financial, and management argument for developing an "innovative intergenerational community" of integrated vertical and horizontal care.
NHS England, 2014 England	Report by health authority	Annual report of IC Pioneer programs.	N/A	Brief narrative descriptions of programs in 15 regions. Case study examples illustrate the scope of the initiatives.
		Kent	Integrated multidisciplinary teams provide discharge support and rapid response in community.	People with more complex conditions are remaining at home. Success is illustrated with case reviews.
		Hospital at Home (Norfolk)	Provision of in-home support to facilitate early discharge or prevent admission.	High rates of patient satisfaction; readmission rate to hospital of 5%.
Chia et al., 2012 Singapore	Editorial	Provide preliminary information of the Aged Care Transition (ACTION) team.	Care coordinators provide transition and post-hospital support with multidisciplinary in-home care for clients with higher acuity.	Intervention group had better transition experience than control group according to the Coleman's Care Transition Measure (CTM-15).
Altfeld Pavle, Rosenberg, & Shure, 2015 United States	Non-peer reviewed journal	Describe the Bridge Model and present preliminary data.	A social work–based transitional care program providing pre-discharge planning and follow-up 30-day post-hospitalization.	High levels of satisfaction at 30 days. Rated positively by hospital and community staff including administration. Lower readmission rate with program than national average.
Thistlethwaite, 2011 England	Report by policy institute	Case study of the Torbay integrated health and social care model.	Vertical health integration as well as administrative integration of regional health services and municipal social services. Integrated health and social teams.	Program evaluation demonstrated that institutional health care service use had decreased. Community health and social care had increased. This integration effort required time to develop but had good results.

Continued

Table 2: Continued

Author, Year, Country of Origin	Document Type	Document Purpose and Included Programs	Program Description(s)	Program Results/Key Messages
Ontario Behavioral Support System Project Team, 2010 Canada	Report by charitable organization and health region.	Proposes a Behavioural Support System for a system of supports and services for adults with behavioural issues.	Coordinated, cross-agency, cross-sectoral collaboration and partnerships to facilitate seamless care for older adults with cognitive impairment and associated challenging behaviors.	This program aims to reduce the gaps in care for adults with behavioural issues. A series of actions to promote tailoring and adoption of best practices by local health authorities are outlined. Evaluation is planned for evaluating transitions from acute care.
Tate, 2015 England	Report by health authority	Request funding for development and testing of the Care of Elderly IC model.	A specialist in elder care works closely with local hospitals and community teams to support return of older adults to the community.	The proposed model aims to improve patient flow through the hospital, improve bed management across the region and improve the patient experience. It proposes analysis of health care use and satisfaction of care with already available data.
Royal College of Physicians, 2013 England	Report by professional organisation	Set out a vision for the Future Hospital that encourages integration across health professionals, within hospital services, and with community services.	New structure for hospital services that encourages integration across health professionals, services, and hospital wards as well as provision of specialist care by hospital staff in the community.	The proposed model redesigns services for acute care needs and considers the need to interface with community and social services. Quality improvement using routine data collection is recommended.
Ontario Association of Community Care Access Centres, 2013 Canada	Report by health association	Explore health care programs that have the potential to be scaled-up in Ontario. Programs included in analysis:	N/A	For each model, "Lessons for Ontario" are provided. E.g., (1) A shared commitment to patient-centred care at home can improve discharge planning effectiveness; (2) Create data connectivity to connect care venues; (3) Clearly identify the scope of services and responsibilities for care received.
		Home First (in Canada)	Through partnership between hospitals and community agencies, seniors are provided services to recover from hospital or wait for a nursing home bed at home.	192,344 people helped to return home in one fiscal year (2012/13). 50% of patients returning home was within one day of referral.
		Intermountain Health (in the United States)	Coordination between hospital and a home/community care network of providers for hospital discharge.	Readmission rates in the lowest 3% of hospitals across the U.S.
		IC Model (in Barcelona)	Distributed care model with a case manager to coordinate services across and within health and social sectors.	Keystone of the program was a strong case manager. No program evaluation is reported.

Continued

Table 2: Continued

Author, Year, Country of Origin	Document Type	Document Purpose and Included Programs	Program Description(s)	Program Results/Key Messages
Joint Improvement Team, 2015 Scotland	Report by intersectoral committee	Describes 10 actions for organisations to improve hospital discharge. One program met inclusion criteria: the discharge hub.	A discharge hub will provide a single point of contact for communication, advice, and education to streamline patient flow and discharge from hospital.	Ten ideas are provided in this document to reduce hospital discharge delays that are based on evidence from the literature and promising practices. No program evaluation is reported.
NHS West London Clinical Commissioning Group, 2015 England	Report by intersectoral committee	Describe a vision of whole systems IC that adds horizontal integration to existing vertical integration.	Extend existing models of vertical health integration to include all health and social care using a pooled capitated budget.	The process and implementation plan to improve care for those over age 75 who require acute care are described. Evaluation of QoL, quality of care, and health utilization data is planned.
Baird Kanaan, 2009 United States	Report by research-policy institute	Describe 9 case studies to illustrate how to reduce hospital readmissions. 2 were relevant to this review.	N/A	Evaluation is reported individually for each program. Common features to successful programs are patient-centred care, locally tailored solutions, a supportive environment, and incentives.
		Care Coordination Network (Summa Health System)	Streamline transitions from hospital to nursing facility by development of standardized communication tools and information technology.	Reduced hospital readmission rates, lengths of stay, and cancellations of tests and surgeries.
		HealthCare Partners Medical Group	Stratification to determine needed disease-related management/ self-management interventions.	Reduction in readmissions and total cost of care.
Hounslow and Richmond Community HealthCare NHS Trust, 2013 England	Report by health region and council	Determine feasibility of integrating community health and social care in Hounslow and Richmond.	Proposes complete integration of community health service and social services. Includes a hospital discharge pathway as an essential program.	This report provides the estimated costs and benefits of a new integrated organisation. The next step is the development of a robust business case.
Williams, 2015 England	Report by health region and council	Update the board on development of an IC Pathway for Older People in Glasgow.	Package of services and system improvements to increase timely discharge from acute care with emphasis on intermediate care.	Delayed discharges have dropped by 49%; bed days lost has dropped by 41%. Next steps include developing intermediate care wards.
Snowdon & Cohen, 2011 Canada	Research/policy institute	Examine how 7 comparator countries are working to redesign health systems. Included program: Unique Care Team (England)	Case management approach of coordinating community health and social care for those going home from hospital.	Reduction in bed days that is projected to provide savings of £300,000 per year.

Continued

Table 2: Continued

Author, Year, Country of Origin	Document Type	Document Purpose and Included Programs	Program Description(s)	Program Results/Key Messages
Cunnane, 2013 England	Report by health authority	Share practices from Denmark and Sweden to facilitate integration activities in England. Included program: The Esther Project (Sweden).	Case study used to motivate the development of clinical integration to facilitate reduced hospital use.	Reductions for admission delays and waiting times for specialists. Process of imagining care from patient perspective allowed for design of services to meet care gaps.
Walker, 2011 Canada	Report by government	Recommend how to address alternate level of care in Ontario. Included program: Toronto Central Virtual Ward Pilot.	Short period of high-intensity care provided at home post-hospitalisation for those with complex care needs.	Early evidence indicates that the program is successfully stabilizing high-risk patients without hospital care, but no specific outcome data is provided.
O'Sullivan, 2014 Ireland	Dissertation: program evaluation	Describe the implementation and evaluation of a protocol for transitional care.	A protocol assists with coordination of care to implement a home-based interim home support program following hospitalization.	Only those who helped develop the protocol had high knowledge and satisfaction with it.
British Columbia Provincial Seniors Hospital Care Working Group 2012 Canada	Clinical Care Guideline	Direct senior care by describing the 48/6 Model of Care.	"IC initiative that addresses six care areas of functioning through patient screening, assessment" and care planning. (p. 1)	A process for developing a care plan and transition plan that addresses the six areas of function in order to improve health outcomes and reduce readmissions is outlined.
Government of British Columbia, 2012 Canada	Report by health authority	Describe in brief the 48/6 model of care and planned evaluation.	As per BC Seniors Hospital Care Working Group, 2012a.	Plan to evaluate compliance with screening and care plan development for six functions.
Asmus-Szepesi et al., 2011 Netherlands	Journal article	Protocol: Evaluation study of the PReCaP.	As per Asmus-Szepesi et al., 2015.	Provides data on a pilot evaluation of the triage instrument to justify sample size and evaluate logistics.
Asmus-Szepesi, 2015 Netherlands	Dissertation (quasi-experimental)	Describes and evaluates the PReCaP.	As per Asmus-Szepesi et al., 2015.	See Asmus-Szepesi et al., 2015.
de Vos et al., 2012 Netherlands	Journal article	Protocol: Description of the PReCaP intervention.	As per Asmus-Szepesi et al., 2015.	Planned evaluation of: Effect (physical function, functional decline risk factors, QoL, caregiver burden); process evaluation; intervention fidelity.

Continued

Table 2: Continued

Author, Year, Country of Origin	Document Type	Document Purpose and Included Programs	Program Description(s)	Program Results/Key Messages
Department of Health, 2009 England	Report by government	Provide an overview of the IC Pilots Programme and Evaluation with summaries of the 16 pilots. 2 were relevant to this review.	N/A	Provides an introduction to the pilot program and a brief summary of planned evaluation of the program.
		Torbay	Integrate health settings and services to enhance hospital discharge planning.	Institutional and residential health care service use has decreased. Community health and social care has increased.
		Church View Medical Practice	Organizational integration of one GP practice with its local hospital and virtual ward model post-discharge.	See Roland et al., 2012.
RAND Europe, 2012 England	Report by research institute	Provide evaluation of the IC Pilots. Included programs: as per Department of Health, 2009.	As per Department of Health, 2009.	As per Department of Health, 2009.
Bäck & Calltorp, 2015 Sweden	Peer-reviewed journal article.	Describe the Norrtaelje model of integrated health and social care in Sweden.	This model includes (1) funding responsibilities for a single population; (2) focus on population health promotion; and (3) a common health and social care organization.	Costs were lower than in other municipalities; tools were used to effectively pool and redistribute funds; increased number of people with a geriatrician; lower waits for nursing home.
Buurman et al., 2010 Netherlands	Peer-reviewed journal article	Protocol: RCT to determine the effect of a pro-active, multi-component, nurse-led transitional care program.	Standardized handover process from hospital to community and community follow-up via home visits.	Evaluation not yet completed. Planned outcomes: Primary: ADL. Secondary: mortality; cognition; QoL; caregiver burden; patient and caregiver satisfaction; health care utilization. Qualitative data re: feasibility.
Bergmo et al., 2015 Norway	Peer-reviewed journal article	Protocol: Describe the PAtient-Centred Team (PACT) model and design for an effectiveness and cost-effectiveness study.	Interdisciplinary teams of both hospital and community staff that facilitate transition from hospital to community including hospital follow-up.	Evaluation not yet completed. Planned outcomes: Primary: QoL, physical health (SF36). Secondary: other dimensions of SF36; health resource use; patient perception of health and service; health self-efficacy; cost utility.

ADL = activities of daily living; GP = general practitioner; IC = integrated care; QoL = quality of life; RCT = randomized controlled trial

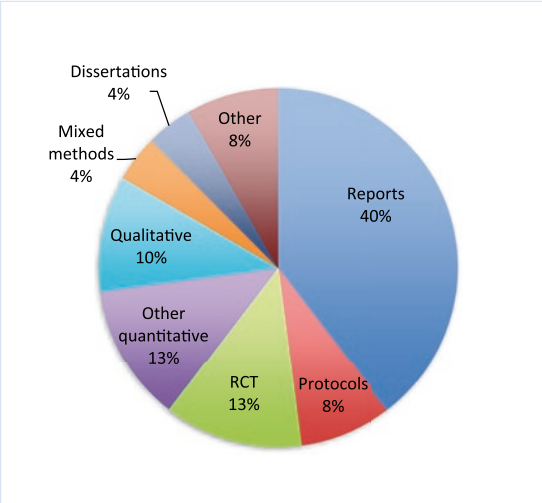

Figure 2: Types of documents included in the scoping review of integrated care initiatives

In the 48 documents, there were 37 different uses of language or terminology for integrated care or integration. The four most common were (1) integrated health and social care (or services) (11.1% of the tracked terms); (2) integrated care (9.9%); (3) integrated care model (7.4%); and (4) service integration (6.2%).

The next step in conceptualizing integrated care was to track how the documents defined integrated care. Ten of the 48 documents provided explicit definitions of integrated care (20.8%). All of the definitions referred to improving partnerships or coordination of care, with most referring specifically to coordination and partnerships across different health and/or social care settings and/or services. Thirteen (27.1%) of the documents did not provide an explicit definition, but the characterization of integrated care was evident from the description of the goals of care. Seven of these 13 documents characterized integrated care by describing locally developed or adopted models of integrated care, whereas six of these 13 documents were aiming to reduce the absence of integration (such as system fragmentation, a lack of coordination, or siloed care). Finally, more than half (25; 52.1%) of the documents provided no definition or characterization of integrated care.

Another approach we took to understanding how integrated care is being conceptualized was to track the breadth of the initiatives. Of three levels of breadth reported in these documents, the narrowest application was within-hospital integration, whereby the goal was to improve coordination, communication, and care pathways within the hospital setting. This was the least common approach, with only two articles describing this type of integrated care (British Columbia Provincial Seniors Hospital Care Working Group, 2012; Joint Improvement Team, 2015). Vertical integration of health services was the second most common type of integrated care described, with 17 of the 45 initiatives (37.8%) aiming to integrate inpatient hospital services and at least one other level of care. Of these initiatives, the most common

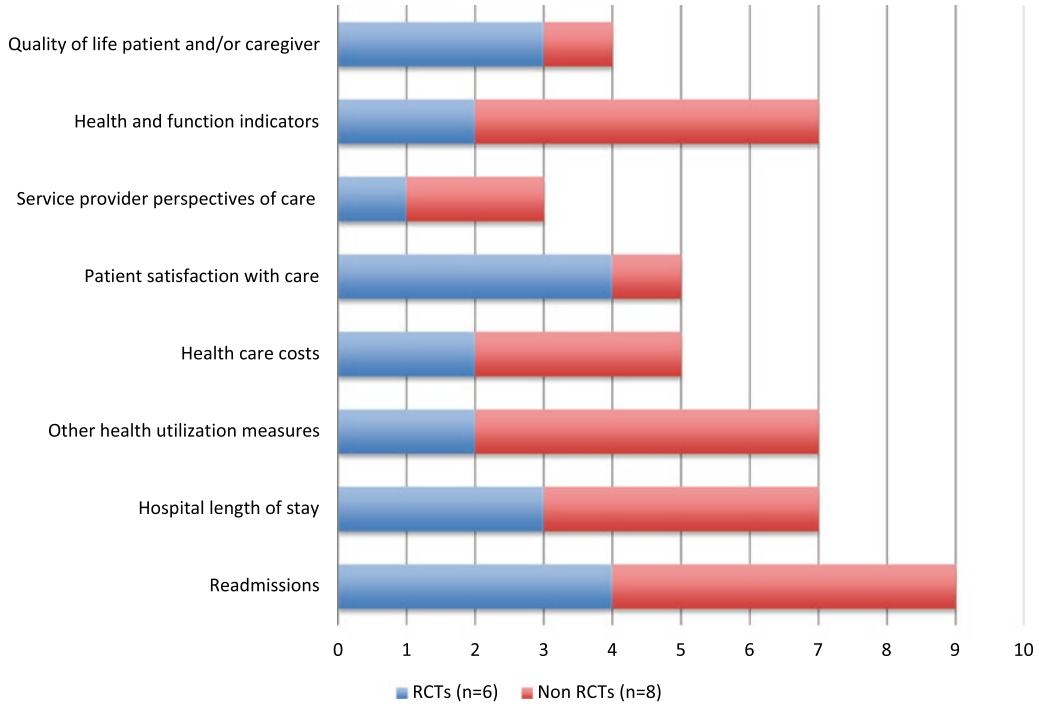

Figure 3: Outcomes measured in quantitative peer-reviewed literature

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approach to integration was to integrate inpatient hospital care and primary care (10 initiatives; 22.2%). Other approaches included linking inpatient hospital services with inpatient rehabilitation initiatives, the Emergency Department, GPs, and/or nursing homes. Initiatives that aimed for both horizontal integration of community health and social initiatives, and vertical health services integration were most common (26 of 45 initiatives; 57.8%). These initiatives had the most breadth of service inclusion – for example, including palliative care, ambulance services, geriatric day centres, and mental health services in addition to hospital care and health and social community care. The broadest vision of integrated care was a proposal by National Health Service (NHS) Forth Valley (2012) for whole-system integration of the health, social, housing, education, and voluntary sectors.

Finally, we categorized the features of the integrated care initiatives to determine commonalities. See Table 3 for feature definitions and Table 4 for results. We identified three overarching categories of features: philosophy and policy, clinical features, and administrative and operational features. The category of *philosophy and policy* was defined as information that conveys the underlying beliefs or attitudes embodied in the initiative. All the initiatives stated their goals.

The most common goal was to make the most efficient use of health care resources by minimizing hospital lengths of stay, reducing hospital readmissions, and supporting older adults in the community (66.7% of initiatives). The second, third, and fourth most commonly reported goals had similar frequency rates: enhancing coordination (42.2%), being patient-centred (40.0%), and improving health outcomes (35.6%). Almost a quarter (24.4%) of the initiatives identified stakeholder engagement as an important part of their development and feedback mechanisms, reflecting a dedication to sustainable decision-making. Another quarter of the initiatives (24.4%) identified the importance of the development of a shared inter-agency culture or model of care to promote high-quality care provision. These categories of goals were not mutually exclusive. For example, two initiatives used fictitious older adult exemplars to engage administration and staff across health settings and services in the development of solutions to care barriers (Cunnane, 2013; Thistlethwaite, 2011). The pseudopatient was given a name, and depicted with a written case story and image, to help health professionals "look through the eyes of the patient" in developing patient-centered care solutions that transcended care boundaries.

The second overarching category was *clinical features* of the initiatives, defined as elements of the initiative that are related to direct clinical care. All 45 initiatives provided at least one detail about their clinical components. The descriptions were typically comprehensive and detailed allowing for the development of several subcategories. Consistent with the finding that most of the initiatives were aiming for horizontal, or horizontal and vertical, integration, 71.1 per cent of the initiatives described specific strategies that were in use, or were planned, to ensure care coordination across care settings. The other clinical features for which there was the most consensus were (1) individual care coordination (51.1% of initiatives), (2) multidisciplinary teams (51.1% of initiatives), (3) post-hospitalization care support (48.9% of initiatives), and (4) individualized comprehensive assessment (44.4%).

The final overarching category was *administrative and operational features* of the initiatives, defined as elements that were not directly related to clinical care. Details on these features were more difficult to extract than the clinical features because the administrative structure was often not described. When possible, we used supplementary information from health region websites to determine the administrative and operational structure of organizations named in the articles. For example, several articles from England identified the use of clinical commissioning groups that organize the delivery of several levels of health care. Three quarters (75.6% or 34) of the initiatives identified at least one administrative or operational feature of the initiative. For the remaining one quarter, the description did not include the operation of the initiative or health system, making it unclear whether or not these initiatives have autonomous administrative structures. One exception was an initiative that was deliberately avoiding macro-level integration (Cunnane, 2013). Since it was the only article describing this approach, we did not include it in the article count for Table 4.

The most common features for administrative and operational features were administrative or organizational integration (20 of the 34 initiatives; 58.8%), financial integration (55.8%), and specific strategies to promote organizational integration (47.1%). Administrative integration was most typically in the form of system-wide horizontal or vertical mergers. In fewer cases, the administrative structure was developed for a specific initiative. For example, for the implementation of a transitional care bridge model in the United States, an administrator worked across sites to implement the initiative (Altfeld, Pavle, Rosenberg, & Shure, 2012). Financial integration was most typically described as some type of fund sharing structure, either vertically or horizontally, although other types of fund sharing were described, such as agencies working together to secure grant funding.

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Table 3: Definitions of features of integrated care programs categories

Main Categories	Definitions
Program philosophy and policy	Information that conveys underlying beliefs/attitudes embodied in the program or intervention.
Stated principles and/or goals of initiative	The stated intentions of the program/intervention. Conveyed as aims, goals, principles, or objectives.
Stakeholder engagement	Involvement of stakeholders in designing or evaluating the program or intervention.
Cross-agency shared culture/model of care	Development, selection, or intention to develop shared objectives or model of care to guide delivery of high-quality care.
Clinical features	Elements or components of the program/intervention that are related to clinical care. There was no effort to judge whether or not the element was consistent with integrated care; they were extracted and categorized at face value.
Strategies for care coordination between care settings	Specific activities to help align and/or coordinate patient care provided between agencies or sectors.
Individual care coordination	An individual or team is assigned to each patient to coordinate the older adult's care. A case manager provides health professional care in addition to care coordination.
Multidisciplinary teams	A team that includes at least two different professional backgrounds cares for the older adult.
Post-hospitalization support	Support services provided immediately after hospital discharge to prevent readmissions/improve care transition success.
Assessment	A clinical assessment of the older adult.
Patient/family/caregiver involvement	Inclusion of the older adult and/or family members in care by providing communication, education and/or support.
Strategies for care coordination within one setting	Specific activities to help align and/or coordinate patient care within one agency.
Individualized care plan	A care plan is developed for the older adult as a part of the intervention or program that is specific to his or her needs.
Case-finding model	Systematic search for people that would benefit from the program or intervention.
Service outside of office hours	Service is provided evenings, nights and/or weekends.
Clinical accountability	One individual or a clearly defined group of people is designated as ultimately responsible for the client's needs being met.
Single/coordinated program entry	Admission into the program/intervention is streamlined though one professional, one group of professionals, or one agency.
Administrative and operational features	Elements of the program/intervention that are not related to clinical care.
Organizational/Administrative integration	There is in place, or there is planning to share, the activities and duties required to plan and direct the program/intervention across agencies, sectors, or professional groups.
Financial integration	There is some type of sharing of funds across agencies, or sectors.
Strategies to promote organizational integration	Activities that are undertaken to help align and/or coordinate the services provided within or between agencies or sectors.
Operational/management integration	Activities to run the day-to-day functions of the program or intervention are shared by more than one agency, sector, or professional group.
Integrated information technology	Activities are in place, or are planned, for computer systems that allow for sharing and storing information across more than one agency, sector, or professional group.
Cross-agency training and education for service providers	Professional education delivered to multi-professional, multi-agency, and/or multi-sector groups. Or, education that promotes interprofessional and/or inter-agency learning.
Continual quality improvement	Mechanisms are in place, or are planned, to ensure quality improvement in care delivery. Does not include study outcomes if there is no clear indication of how the outcomes will be used for quality improvement.
Integrated governance	Indication of a governing body that has jurisdiction over more than one agency or group.

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Table 4: Features of integrated care initiatives ($n = 45$ initiatives)

Categories and Subcategories	Illustrative Example(s)	# of initiatives (%)
Program Philosophy and Policy		**45 (100)**
Stated principles and/or goals of initiative		**45 (100)**
Streamlined/reduced institutional health use	Reduce hospital readmissions, length of stay and unnecessary transfers to nursing home; keep care closer to home.	30 (66.7)
Coordination, collaboration, communication	Team collaboration; inter-sectoral collaboration; coordinated care pathways; communication between primary and secondary care.	19 (42.2)
Patient-centred	Put the citizen at the centre of care; increase patient involvement; adhere to a patient-centred model.	18 (40.0)
Improved health outcomes	Optimize client health and function; apply preventive care to reduce long-term needs.	16 (35.6)
Timely and responsive care	More responsive system; rapidly meet needs; shorten time from assessment to delivery of services.	9 (20.0)
Efficiency	More efficient assessment; full utilization of health and social resources.	8 (17.8)
Safety	Ensure safe hospital discharge; safeguard from risk.	8 (17.8)
Accessible	Improve access to care and services; equitable services; easy access to services.	7 (15.6)
Comprehensiveness	Provide more services in the home; comprehensive assessment.	5 (11.1)
Stakeholder engagement in planning and evaluation	Older adults, caregivers, senior management team, direct service providers, advocacy organizations, voluntary sector and/or government involved in planning and/or implementation.	**11 (24.4)**
Development, use, or recognition of need for a cross-agency shared culture/model of care	Use of a shared culture and objectives to motivate staff to provide high-quality care; model development to show how all services interact.	**11 (24.4.)**
Clinical Features		**45 (100.0)**
Strategies for care coordination between care settings		**32 (71.1)**
Standardized procedures for transferring written client information from one setting to another	Discharge plan faxed to all community providers; required elements for hospital discharge documentation; discharge letter sent to GP within 3 days; electronic forms.	13 (28.9)
Development and use of protocols and/or pathways	Shared protocols between health and social services; protocol to facilitate hospital and community communication; referral pathways.	13 (28.9)
Staff spans boundaries between hospital and community to provide services	Hospital in-reach where community-based staff provides service within the hospital; hospital out-reach where hospital staff provide service in the community.	13 (28.9)
Pre-discharge appointment/service scheduling	GP appointment scheduled prior to discharge; community nurse mobilizes community support prior to discharge.	9 (20.0)
Inter-agency patient care communication	GPs and community staff dial-in to hospital for case conferences; discharge plan sent to GP prior to discharge for review/alterations.	8 (17.8)
Individual care coordination		**23 (51.1)**
Care coordinators	System navigators; coordinators with no health or social training; patient flow coordinator; link nurses.	11 (24.4)
Case management (coordinates and provides health professional care).	Following the patient actively through care trajectory and intervening on medical and social issues; complex case management program; ensure compliance with care.	14 (31.1)
Multidisciplinary teams		**23 (51.1)**
Crosses agency or sector boundaries to provide care across settings	Multidisciplinary team providing care across institutional and community settings; multi-agency team.	8 (17.8)
Specific to one care setting	Inpatient multidisciplinary teams; primary care geriatric consultancy team; intermediate care team.	15 (33.3)
Post-hospitalization support strategies		**22 (48.9)**
Home visit(s)	GP home visit within 3 days of discharge; home visit by primary care nurse within 1 week of discharge; trained social support volunteer visits.	10 (15.6)
Other/unspecified post-hospitalization support	Volunteers assist patients when they initially arrive home from hospital; social care installs needed equipment; early specialist clinic follow-up; pharmacist session within 5 days of discharge; GP follow-up in clinic.	10 (22.2)
Telephone follow-up	Case manager provides health advice; monthly calls over 2-year period; check-up 1 month post-discharge.	7 (15.6)

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Table 4: Continued

Categories and Subcategories	Illustrative Example(s)	# of initiatives (%)
Assessment of long-term needs in the home following early discharge	Temporary home support for 2 weeks until assessment of long-term needs can be made; discharge within 72 hours rather than assessing long-term needs in hospital.	5 (11.1)
Assessment		**20 (44.4)**
Multi-domain/Joint health and social assessment	Comprehensive geriatric assessment; assessment of social, health, and care needs at once.	10 (22.2)
Assessment of discharge needs	Assessment of post-hospital health, social and care needs.	12 (26.7)
Patient/family/caregiver involvement		**16 (35.6)**
Communication/support	Health goal-setting; involvement in care plan development; family conference; advance care planning.	12 (26.7)
Education	Education regarding discharge plans and services; disease specific education; self-management education.	7 (15.6)
Strategies for care coordination within one setting		**15 (33.3)**
Regular multidisciplinary meetings	Weekly case reviews; daily hospital rounds.	9 (20.0)
Development and use of protocols and/or pathways	Evidence-based interdisciplinary protocol for common geriatric conditions; ward checklists for discharge planning; hip fracture care pathway.	5 (11.1)
Other	Toolkit for developing care plans; guide for post-hospital visits; patient information tools; all interdisciplinary information in one care plan.	5 (11.1)
Individualized care plan	Care plan for post-discharge; joint health and social care plan; patient goal care plan; multidisciplinary plan.	**13 (28.9)**
Case-finding model	Risk stratification; screening for functional decline, need for community services, or risk for readmission.	**12 (26.7)**
Service outside of typical office hours	Seven-day service, out-of-hours urgent response team.	**10 (22.2)**
Clinical accountability	A nurse is in charge of the admission and discharge decisions; community-based team has full responsibility for community care and coordinating acute care needs.	**8 (17.8)**
Single/coordinated program entry	Community hub provides a single point of access for care needs; integrated collaborative intake; all referrals directed through a coordinator.	**6 (13.1)**
Administrative and Operational Features		**34 (75.6)[a]**
Organizational/administrative integration		**20 (58.8)**
Integration of vertical and horizontal organizational structures	Merging of posts of chief executive of health and adult social services; administrative structure that executes policy and mission of health and social services.	11 (24.4)
Integration of vertical health organizational structures	Vertical administrative integration of health services; organizational integration of a GP practice and an acute care hospital.	9 (20.0)
Financial integration		**19 (55.8)**
Sharing/pooling budget for health and social care	Shared funding envelope for health and social care by city council and health region; integrated health and social commissioning.	7 (20.6)
Other fund sharing model	Aging agencies grouped together to get grant funding for a transitional care program; capitation; single funding envelope for vertical and horizontal integration.	7 (20.6)
Sharing/pooling budgets for vertical health integration	Fund pooling for hospital and community specialist care; funding bundle for geriatric rehabilitation services; health services organized by region rather than service.	5 (14.7)
Strategies to promote organizational integration		**16 (47.1)**
Formal service/business agreements	Signed contract of agreement between health agencies for admission criteria; service provision agreement with partner organization; clarification of roles and responsibilities in legal formal agreement.	10 (29.4)
Co-location of staff	Co-location of health and social teams in the community; co-location of community providers in hospital; creation of care hubs; care organized by geographical zones.	10 (29.4)
Inter-agency communication and/or working groups	Meetings between managers and professionals from hospital, primary care and home care; task force with representation from multiple disciplines and facilities.	5 (14.7)

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Table 4: Continued

Categories and Subcategories	Illustrative Example(s)	# of initiatives (%)
Operational/management integration		**13** (**38.2**)
For vertical and horizontal integration	Joint management of health and social services; integrated social and health service commissioning.	7 (20.6)
For vertical health integration	Group staff model; operational merging of hospital and community health services.	6 (17.6)
Integrated information technology	Shared records for clinical care; service utilization tracking to determine patient census and availability of community care.	**13** (**38.2**)
Cross-agency training and education for service providers	Regional education sessions for disease-specific care; on-the-job training in different settings; regular rotation through different care settings.	**12** (**35.3**)
Evaluation for quality improvement	Cycle of continuous quality improvement; preliminary process outcomes provided to service organizations for process improvement; monitor results to inform future operational activity.	**12** (**35.3**)
Integrated governance	Joint political governing committee; overall project board; steering committee responsible for development of inter-sectoral plan.	**9** (**26.5**)

[a] **Proportions for the features in the Administrative and Operational Features category are derived from the total number of programs that provided description of administrative and organizational features (*n* = 34).**

Discussion

The results of this scoping review indicate a heterogeneous literature base for the topic of integrated care approaches to care transitions for older adults. The heterogenous nature was both in regard to the types of documents, as well as how the documents applied the concept of integrated care. The literature ranged from unpublished clinical guidelines to randomized controlled trial results. The integrated care initiatives ranged from efforts to coordinate services within the hospital to comprehensive systems of vertically and horizontally integrated social and health care. That there were numerous grey literature documents indicates that the published peer-reviewed literature provides a narrow view of international developments in integrated care initiatives for care transitions.

One of the objectives of this scoping review was to determine if there is an adequate literature base to conduct a systematic review or meta-analysis (Levac et al., 2010). This review included 11 quantitative studies, but the heterogeneity in population and outcomes would make them difficult to synthesize. Particularly notable was that the studies' authors used different approaches to measuring outcomes. Integrated care goals are often two-pronged, addressing both patient and system efficiency outcomes; it is therefore not surprising that the outcomes in these documents are variable in approach and perspective. However, the lack of a gold standard for measuring the success of integrated care in improving care transitions is perpetuating variability in outcome measurement. Most articles in this study focused on reducing institutional health care use as a desired outcome of improved care transitions, with health and function outcomes being less commonly measured. Outcome measurement in this body of literature had little emphasis on the patient perspective compared to the service perspective, which is inconsistent with the goals purported by these initiatives.

Another challenge for interpreting the quantitative literature is the lack of appraisal of whether the integration goals were achieved, making it difficult to determine the extent of the influence of integration on outcomes. The qualitative literature included in our review revealed challenges with the implementation of integrated care initiatives. For example, Hjelmar, Hendriksen, and Hansen (2011) described how an attempted collaboration between hospital and primary care had difficulty eliciting cooperation for the initiative from the community general practitioners. Further, documenting the success of initiatives in promoting integration is important because integrated care success may be more dependent on the consistency between the macro and micro environment (administration and front-line staff) than on the type of initiative (Calciolari & Ilinca, 2011).

Previous authors have pointed out the lack of standardized, validated tools for evaluating to what extent care is integrated. A systematic review of integrated care delivery and services found only three tools that measure the extent of integration (Armitage, Suter, Oelke, & Adair, 2009), and a recently published protocol also aimed to address this gap by means of an inventory of indicators for assessing achievement of an integrated system (Oelke, Suter, da Silva Lima, &

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Van Vliet-Brown, 2015). The proposed scoping review by Oelke et al. (2015) addresses a sorely needed area of research. We also recommend an inventory of tools that evaluate the patients' perception of care integration. The patient perspective is notably absent from the inventory compiled by Armitage et al. (2009) and is not explicitly addressed in the protocol by Oelke et al. (2015). Incorporating the patient voice into this research is important as, despite the lack of consistency in the definition of integrated care, there is consistency in the view that integrated care requires a patient-centred focus (Hollander & Prince, 2007; Kodner & Spreeuwenberg, 2002; WHO, 2015). The National Voices in England developed a document that provides narrative statements that could be used for developing integrated care indicators. For example, statements that specifically relate to transitions include "When I use a new service, my care plan is known in advance and respected" (National Voices, n.d.).

The second objective of this review was to determine how the concept of integrated care is being applied in the literature on care transitions. Although at least half of the documents in this review did not describe their conceptualization of integrated care, analysis of the initiatives determined that there were three broad applications of integrated care: (1) integration of services within the hospital, (2) vertical integration of health services, and (3) vertical health as well as community horizontal integration. In most of the initiatives included in this review, integrated care was a strategy used across organizational boundaries rather than being applied only within an organization (only two articles focused on within-hospital integration). More than half of the initiatives aimed to integrate community health and social services, indicating that robust community supports beyond health issues are believed to be important for supporting older adults' post-hospitalization.

In terms of the initiatives' features, many were consistent with integrated care frameworks, such as having shared values, integrated information systems, jointly managed programs, and co-location (Hollander & Prince, 2007; Kodner & Spreeuwenberg, 2002). However, we expected more documents to describe patient and family involvement due to the consistent focus of patient-centred care in integrated care frameworks (Hollander & Prince, 2007; Kodner & Spreeuwenberg, 2002). Some of the features were more consistent with care coordination rather than integration – for example, scheduling follow-up appointments prior to hospital discharge, or ensuring that written information is provided to the community by the hospital in a timely and standardized fashion (Leutz, 1999). Further, some features may or may not have been in the spirit of integrated care depending on how they were operationalized. For example, when developing the category of patient and family involvement, we included all references to family and patient communication and support without judging the quality of the proposed interactions. Some of the interactions were consistent with the spirit of integrated care in that they involved patient and family input into decision-making and goal-setting, whereas for other initiatives it was simply stated that information about decisions would be provided to families and patients. It is well recognized that depending on the setting and context, coordination or linkage may be a more realistic goal than full integration (Leutz, 1999); however, none of the documents in this review identified the extent of integration that the initiatives aimed to achieve.

The analysis of initiative features in this review confirms that, similar to the larger body of literature on integrated care, micro-level clinical and service delivery integration is typically targeted rather than macro-level integration of funding, administration, and/or organization (Kodner & Spreeuwenberg, 2002). Because there was a higher level of description of programs' clinical features, we were able to ascertain more consensus as to what clinical-level integration entails for older adults' care transitions than for administrative integration. There were three specific clinical features included in more than 50 per cent of the initiatives, but for macro strategies, we were unable to achieve this level of specificity.

A broader description of macro levels of integration is required for integrated care comparison. It may be that the focus on micro clinical integration in this literature reflected the scope of the integration initiatives. However, different health regions and different countries will have varying levels of integration inherent in their health system infrastructure. Thus, in order to compare integrated care initiatives across regions and countries, a full understanding of integration across both the macro and micro domains is needed to truly understand the context of a given initiative. This is particularly important considering the international scope of this literature. Further, it has previously been noted that integration at a macro level does not automatically lead to integration at the micro level (Baillie et al., 2014; Vedel et al., 2011), and that context is particularly important for integration initiatives, as new initiatives need to match local needs (Armitage et al., 2009). A useful way to describe integrated care is in terms of the extent of integration (autonomous, coordinated, or integrated; Leutz, 1999) for each of five integration domains (financial, administrative, organizational, professional, clinical; Kodner and Spreeuwenberg, 2002).

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In summary, the main implication for research from this study is the need for improved consistency and standardization in describing and evaluating integrated care initiatives aiming to improve care transitions. The grey literature provides depth and breadth on possible approaches to integrated care for health policy decision-makers, but few of the initiatives included evaluation. For both grey and empirical literature, description of the macro- as well as micro-level context of integrated care initiatives is important to promote comparison and assist decision-makers, such as health authorities, to determine if the initiatives would be practical in their own contexts. In addition, evaluation of both the achievement of integration and the outcomes of integration is needed to help in understanding how the integration initiative is contributing to outcomes. Of particular importance for the topic of care transitions is the inclusion of the patient perspective when evaluating outcomes. Care transitions research has identified a lack of patient inclusion and satisfaction in care transition decisions and processes (Jackson et al., 2012; Lapum et al., 2011), and integrated care research has indicated that, in some cases, front-line health professionals' perceptions of improvements in care delivery is not always matched by those of patients and families (Holstege et al., 2015). Therefore, consideration of both system and patient perceptions is important for determining the impact of integration initiatives on care transitions.

A limitation of this study was that we included only literature that was very explicit in language regarding integration. There is a large body of research on the topic of care transitions for older adults in which many different care frameworks are explicitly and implicitly used. Frameworks that may have used an approach to enhance integration but did not explicitly use this terminology would not have been captured in this review. This review also did not include documents that focused on preventing hospital admission by providing community-oriented integrated care, as we were interested specifically in older adults who had been hospitalized. The use of content analysis required the authors to interpret the meaning of text based on their own knowledge of clinical and administrative health systems and practices. The lack of use of the "consultation" step in the scoping review process may have limited the relevance of our findings to health decision-makers and health services researchers (Levac et al., 2010).

In conclusion, the literature on using integrated care approaches for transitions from hospital into the community among older adults is diverse in terms of literature type as well as scope and extent of integration. There are opportunities for increasing knowledge on this topic by evaluating integrated pilots and initiatives currently planned or under way. However, to learn how to apply these initiatives in other contexts, increased reporting of how integrated care is conceptualized and whether integration was achieved, as well as a description of the macro-level integration context, is needed.

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