Rapid Synthesis

Identifying the Effects of Home Care on Improving Health Outcomes, Client Satisfaction and Health System Sustainability

9 February 2018

McMaster University | McMaster HEALTH FORUM

EVIDENCE >> INSIGHT >> ACTION

Rapid Synthesis:
Identifying the Effects of Home Care on Improving Health Outcomes, Client Satisfaction and Health System Sustainability

Three-day response

9 February 2018

McMaster Health Forum

The McMaster Health Forum's goal is to generate action on the pressing health-system issues of our time, based on the best available research evidence and systematically elicited citizen values and stakeholder insights. We aim to strengthen health systems – locally, nationally, and internationally – and get the right programs, services and drugs to the people who need them.

Authors

Michael G. Wilson, PhD, Assistant Director, McMaster Health Forum, and Assistant Professor, McMaster University

Timeline

Rapid syntheses can be requested in a three-, 10-or 30-business-day timeframe. This synthesis was prepared over a three-business-day timeframe. An overview of what can be provided and what cannot be provided in each of the different timelines is provided on the McMaster Health Forum's Rapid Response program webpage (www.mcmasterforum.org/find-evidence/rapid-response).

Funding

The rapid-response program through which this synthesis was prepared is funded by Alberta Health. The McMaster Health Forum receives both financial and in-kind support from McMaster University. The views expressed in the rapid synthesis are the views of the authors and should not be taken to represent the views of Alberta Health.

Conflict of interest

The authors declare that they have no professional or commercial interests relevant to the rapid synthesis. The funder played no role in the identification, selection, assessment, synthesis or presentation of the research evidence profiled in the rapid synthesis.

Merit review

Our 10- and 30-business-day rapid syntheses are reviewed by a small number of policymakers, stakeholders and researchers in order to ensure scientific rigour and system relevance. Our three-business-day rapid syntheses do not undergo merit review given the compressed timeline in which they are produced.

Acknowledgments

The author wishes to thank Chloe Gao, Sabrina Lin, Eilish Scallan and Sera Whitelaw for their assistance with data extraction.

Citation

Wilson MG. Rapid synthesis: Identifying the effects of home care on improving health outcomes, client satisfaction and health system sustainability. Hamilton, Canada: McMaster Health Forum, 9 February 2018.

Product registration numbers

ISSN 2292-7999 (online)

KEY MESSAGES

Question

- What is the effectiveness of home care on improving health outcomes, client satisfaction and health system sustainability?

Why the issue is important

- Enhancing access to home and community care has been established as a key priority across provincial and territorial health systems in Canada.
- A key reason for this is an aging population and the continued increases in the rates of chronic disease that are expected, which can often be effectively managed in home and community settings, thereby reducing the reliance on care in other more expensive settings (e.g., hospitals).
- To support this priority, the federal government has invested $6 billion over 10 years, which started with $200 million in 2017-18 to improve access to appropriate services and supports in the home and community.
- Given this, provincial and territorial health systems (including Alberta Health, which requested this synthesis) are now actively engaged in enhancing access to home and community care through these types of actions.

What we found

- We identified three overviews of systematic reviews and 36 systematic reviews related to the question.
- Of these, two overviews of systematic reviews and 10 systematic reviews provide general/broad assessments of the effects of home care (e.g., in comparison to care provided in other sectors such as specialty care in hospitals and long-term care).
- The remaining overviews of systematic reviews addressed three priority areas identified by the requestor:
  - 10 systematic reviews are about home care as a component of interdisciplinary team-based community care and/or as part of integrated care with other sectors;
  - one overview of systematic reviews and seven systematic reviews are about home care focused on restorative approaches to care; and
  - nine systematic reviews are about supports for caregivers as part of home care.
- Client-directed funding options for home care were also identified as a priority by the requestor, but no systematic reviews were identified on this topic.

QUESTION

What is the effectiveness of home care on improving health outcomes, client satisfaction and health system sustainability?

WHY THE ISSUE IS IMPORTANT

Enhancing access to home and community care has been established as a key priority across provincial and territorial health systems in Canada.(1) A key reason for this is an aging population (2-6) and the continued increases in the rates of chronic disease that are expected,(2) which can often be effectively managed in home and community settings, thereby reducing the reliance on care in other more expensive settings (e.g., hospitals).

To support this priority, the federal government has invested $6 billion over 10 years, which started with $200 million in 2017-18.(1) The investment is meant to support collaborative work to "improve access to appropriate services and supports in home and community, including palliative and end-of-life care, by pursuing one or more of the following actions:

- spreading and scaling evidence-based models of home and community care that are more integrated and connected with primary health care;
- enhancing access to palliative and end of life care at home or in hospices;
- increasing support for caregivers; and
- enhancing home care infrastructure, such as digital connectivity, remote monitoring technology and facilities for community-based service delivery."(1)

Given this, provincial and territorial health systems (including Alberta Health, which requested this synthesis) are now actively engaged in enhancing access to home and community care through these types of actions.

Box 1: Background to the rapid synthesis

This rapid synthesis mobilizes both global and local research evidence about a question submitted to the McMaster Health Forum's Rapid Response program. Whenever possible, the rapid synthesis summarizes research evidence drawn from systematic reviews of the research literature and occasionally from single research studies. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies, and to synthesize data from the included studies. The rapid synthesis does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

Rapid syntheses can be requested in a three-, 10- or 30-business-day timeframe. An overview of what can be provided and what cannot be provided in each of these timelines is provided on the McMaster Health Forum's Rapid Response program webpage (www.mcmasterforum.org/find-evidence/rapid-response)

This rapid synthesis was prepared over a three-business-day timeframe and involved three steps:

1) submission of a question from a policymaker or stakeholder (in this case, Alberta Health);
2) identifying, selecting, appraising and synthesizing relevant research evidence about the question; and
3) drafting the rapid synthesis in such a way as to present concisely and in accessible language the research evidence.

A fourth step of finalizing the rapid synthesis based on the input of at least two merit reviewers was not included for this rapid synthesis as it is not included in the scope of work for a three-business-day timeline.

WHAT WE FOUND

In total, we identified three overviews of systematic reviews and 36 systematic reviews. In addition to including overviews of systematic reviews and systematic reviews that provide general/broad assessments of the effects of home care (e.g., in comparison to care provided in other sectors such as specialty care in hospitals and long-term care), we prioritized those focused on the main areas of interest identified by the requestor, which include:

- home care as a component of interdisciplinary team-based community care and/or as part of integrated care with other sectors (particularly for clients with chronic disease or complex care needs);
- home care focused on restorative approaches to care (i.e., an approach to care that focuses on helping clients regain or maximize their functional independence at home, rather than simply doing tasks for them);
- supports for caregivers (e.g., in-home respite services and adult day programs); and
- client-directed funding options for home care (i.e., funding clients directly to hire their own home care).

In addition, when we identified several systematic reviews on the same or similar topics, we prioritized the inclusion of overviews of systematic reviews and systematic reviews that were recently conducted, which we defined as searches having been conducted within the last five years.

We summarize the key findings from each overview of systematic reviews and systematic review that provide general/broad assessments of the effects of home care in Table 1. We then summarize the key messages from those addressing the four priorities outlined above in Tables 2-5. For the systematic reviews included in the tables, we provide the focus of the review, key findings, last year the literature was searched, and the proportion of studies conducted in Canada. In the key findings provided, we focused on extracting information related to the three outcomes prioritized in the question, which include health outcomes, client satisfaction and system sustainability (e.g., cost considerations). Given the short timeline for this rapid synthesis (three business days), we do not provide a narrative synthesis of the results from the tables.

Box 2: Identification, selection and synthesis of research evidence

We identified research evidence (systematic reviews and primary studies) by searching (in February 2018) Health Systems Evidence (www.healthsystemsevidence.org) using the following combination of search filters: home care (under priority areas) AND overviews of systematic reviews and systematic reviews of effects (under type of document) AND (Financial arrangements (all) OR Skill-mix – multidisciplinary teams OR Integration (under System arrangements > Delivery arrangements) OR caregivers (in the open search field)).

The results from the searches were assessed by one reviewer for inclusion. A document was included if it fit within the scope of the questions posed for the rapid synthesis.

For each systematic review we included in the synthesis, we documented the focus of the review, key findings, last year the literature was searched (as an indicator of how recently it was conducted), methodological quality using the AMSTAR quality appraisal tool, and the proportion of the included studies that were conducted in Canada.

The AMSTAR tool rates overall methodological quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, a review that scores 8/8 is generally of comparable quality to a review scoring 11/11; both ratings are considered "high scores." A high score signals that readers of the review can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the review should be discarded, merely that less confidence can be placed in its findings and that the review needs to be examined closely to identify its limitations (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1):S8).

Table 1: Summary of findings from systematic reviews that provide general/broad assessments of the effects of home care

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Overview of systematic reviews	Impact of home care versus alternative locations of care on elder health outcomes (7)	The overview includes three comparisons of home care to alternative locations. In the 11 reviews that compared home support versus independent living at home, most favoured home with support. There were mixed findings from three systematic reviews that compared home care to institutional care. Lastly, no difference between rehabilitation at home and conventional rehabilitation were found in most of the seven reviews that evaluated care in these settings. The methodological quality of included systematic reviews was moderate, with a median AMSTAR score of 6 (range 4 - 10 out of 11). The authors conclude that the evidence on the impact of home care compared to alternative-care locations on health outcomes for older adults is mixed. However, the conclusions indicate that the findings support positive health impacts of home support interventions for community-dwelling elders compared to independent living at home.	2016	No rating tool available for overviews of systematic reviews	Not applicable (synthesis includes systematic reviews, not individual studies)
Overview of systematic reviews	Effectiveness and cost-effectiveness of home palliative-care services for adults with advanced illness and their caregivers (8)	A meta-analysis of included studies found increased odds of dying at home in home-based palliative-care services. A narrative synthesis of the data found a small but statistically significant beneficial effect of home palliative-care services compared to usual care on reducing symptom burden for patients, but no effect on caregiver grief. The evidence about cost-effectiveness was inconclusive. The authors concluded that the "results provide clear and reliable evidence that home palliative care increases the chance of dying at home and reduces symptom burden in particular for patients with cancer, without impacting on caregiver grief."	2012	No rating tool available for overviews of systematic reviews	Not applicable (synthesis includes systematic reviews, not individual studies)
Systematic review of effects	Admission avoidance hospital-at-home model (9)	Admission avoidance hospital-at-home refers to an approach to care that provides time-limited treatment from healthcare professionals in the patient's home for a condition that would normally require hospital inpatient care.	2016	9/10 (AMSTAR rating from McMaster	0/12

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		The review included 16 randomized controlled trials with a total of 1,814 participants. These trials included participants with a mix of conditions, including chronic obstructive pulmonary disease (n=3 trials), stroke (n=2 trials), acute medical condition among mainly elderly (n=6), and with a mix of conditions (n=5 trials). Based on these trials, the review indicates that the admission avoidance hospital-at-home model: • likely makes limited to no difference on mortality at six-month follow-up and on the likelihood of being transferred or readmitted to hospital; • may reduce the likelihood of living in residential care at six-month follow-up; • improves patient satisfaction with healthcare received; • provides limited evidence on the effect on caregivers; • may be less expensive than admission to an acute hospital ward when the costs of informal care are excluded; and • shows variation in the reduction of hospital length of stay with estimates ranging from a mean difference of -8.09 days in a trial with older adults' experiencing varied health problems, to a mean increase of 15.90 days in a study with patients recovering from a stroke. Based on these findings, the authors concluded that "admission avoidance hospital at home, with the option of transfer to hospital, may provide an effective alternative to inpatient care for a select group of elderly patients requiring hospital admission...[but] the evidence is limited by the small randomised controlled trials included in the review, which adds a degree of imprecision to the results for the main outcomes."		Health Forum)	
Systematic review of effects	Hospital at home for end-of-life care (10)	The four included randomized controlled trials indicated that: • home-based end-of-life care increased the likelihood of dying at home compared with usual care; • there are mixed results for admission to hospital for those receiving home-based end-of-life care; • patient satisfaction may be slightly improved with home-based end-of-life care after one month, but reduced at six months; • the effect on caregivers is uncertain; and • there was no evidence about costs to patients and caregivers.	2015	9/10 (AMSTAR rating from McMaster Health Forum)	0/4

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		The authors concluded that there is evidence to support the use of home-based end-of-life care programs for increasing the number of people who will die at home.			
Systematic review of effects	Efficacious components of in-home end-of-life care programs (11)	Many randomized controlled trials have evaluated in-home end-of-life (EOL) programs, and these programs are typically multifaceted, vary in the components, and have been found to be beneficial and reduce costs. However, it is unclear which components of these programs have the biggest impact on improving outcomes as compared to usual care. The review included 19 systematic reviews from which 40 relevant studies were identified and included in the analysis. From these studies, 30 unique components were identified from a content analysis of the program descriptions, with an average 11 components per program. Most of the included programs used a core team that typically included nurses, and usually physicians and allied healthcare professionals such as social workers. Volunteers were also included in some of the teams. Other models typically used a nurse coordinator who monitored need and coordinated needed care. The six most common components of the programs were: 1) incorporating linkages with acute care; 2) using multidisciplinary approaches to care; 3) using end-of-life expertise and training in the program; 4) providing holistic care; 5) providing pain and symptom management; and 6) providing professional psychosocial support. Many of the included programs also "provided linkages with community services, provided around-the-clock on-call for telephone contact and home visits, were linked to the individual's primary care or attending physician, included ongoing assessment of the individual's condition, and involved physicians who made home visits." The 40 studies reviewed showed significant improvements in the six outcome domains that were evaluated: quality of life, satisfaction with care, performance status, pain management, non-pain symptom management, supporting home deaths, and reductions in healthcare use or costs. In addition, improved outcomes were found in each of the above six outcome domains for the most common program components.	2014	No rating tool available for overviews of systematic reviews	Not applicable (synthesis includes systematic reviews, not individual studies)

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		A significant cost reduction was found in nine studies, and the most common components of those programs included incorporating linkage to acute care, providing around-the-clock availability, and using customized care planning.			
Systematic review of effects	Preventing 30-day hospital readmissions (12)	The review pooled the results from 42 randomized controlled trials to identify the impact of interventions used to reduce early hospital readmissions. Across all trials, test interventions (case management, patient education and home visits) prevented early readmission. Interventions that involved more professionals in the care delivery and in supporting the patient's capacity for self-care were more effective than other interventions. The authors noted that many of the studies in the review were conducted in single, academic centres, which raises questions regarding applicability. There was also evidence of publication bias, however the overall effect of this on the review is not known.	2013	11/11 (AMSTAR rating from McMaster Health Forum)	2/45
Systematic review of effects	Effectiveness and cost-effectiveness of home palliative-care services for adults with advanced illness (13)	Of the 23 studies included in this review, 16 were randomized controlled trials, four were cluster randomized controlled trials, and two were controlled before-and-after studies. The included studies examined the effectiveness of home palliative-care services on health outcomes for patients and their caregivers compared to usual care for adults with advanced illness. Five studies reported that the intervention of home palliative care significantly relieved the symptom burden for patients. However, the included studies found that there were no significant differences in caregiver-related outcomes. Findings were conflicting regarding the satisfaction of home palliative care compared with the satisfaction of usual care, with three randomized controlled trials finding statistically significant positive effects, whereas the other two reported no significant differences. Six studies compared the impact of the intervention on the total care costs. All six studies found that there was a lower cost with the intervention. The authors stated that the results suggest that home palliative care provides benefits to patients without having a negative impact on their caregivers, and that it is more cost-effective compared to usual care. Also, it was noted that the overall quality of the included studies was high, but the quality of the evidence was limited by the number of participants lost to follow-up, and the amount of obtained participant data needed to conduct a powered analysis.	2012	11/11 (AMSTAR rating from McMaster Health Forum)	1/23

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Effects of 'hospital-in-the-home' models (14)	The review pooled the results of 61 randomized controlled trials to examine the effect of 'hospital-in-the-home' (HITH) services that substitute for inpatient hospital time. Across all studies, the intervention was associated with reductions in mortality, readmission rates and cost, and increases in patient and carer satisfaction, and with no change in caregiver burden. The authors noted that the results suggest that a greater use of HITH services improves patient outcomes, and where suitable, care should be administered in the home. However, the authors of the study noted that the findings were limited by the wide range of HITH services, which made it difficult to determine which elements of care directly affected the outcomes, and the overall effect of this on the review is not known.	2012	7/11 (AMSTAR rating from McMaster Health Forum)	?/61 (countries in which studies were conducted were not reported)
Systematic review of effects	Interventions to prevent falls among institutionalized or non-institutionalized older adults with and without cognitive impairment (15)	This review included 111 studies examining fall-prevention interventions among older adults with and without cognitive impairment. It was found that programs involving a single exercise intervention can reduce the risk of falls among older adults with and without cognitive impairment, regardless of setting. Home visits by professionals and modification of environmental hazards were found to only reduce the risk of falls among adults without cognitive impairment in non-institutional settings. Exercise in combination with other interventions, including education, assessment, and environment modification, was associated with positive effects in institutionalized older adults with cognitive impairment. The author noted that only 12 of the 111 studies involved cognitively impaired older adults. Thus, the findings in this review concerning healthy older adults with normal cognitive ability should be considered more definitive than those for older adults with cognitive impairment.	2012	4/11 (AMSTAR rating from McMaster Health Forum)	Not reported in detail
Systematic review of effects	Costs and cost-effectiveness of assisted living technologies (ALTs) that support older adults to 'age in place' (16)	Of the eight studies included in the review, five were randomized controlled trials, two were conducted as a part of quasi-experimental studies, and one was a retrospective match comparative study. Five studies reported that the intervention had lower short-term costs than the comparator group. One study, which measured costs before and after the introduction of tele-surveillance, found that the intervention lowered healthcare expenditure in the intervention group. However, there was no control group in this study for ethical reasons. Another study reported a lower total mean cost of care in the intervention group once the costs of home healthcare were excluded. One study found that	2012	5/9 (AMSTAR rating from McMaster Health Forum)	1/8

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		there was no difference in costs between the intervention group and comparator. After the intervention, however, there were increases in clinical visits but decreases in hospital and nursing-home stays for the intervention group. Although a majority of the studies reported the assisted living technology intervention group as having lower costs than the control group, the author noted that the heterogeneity of the individual costs and outcomes, and the low methodological quality of all studies, must be considered.			
Systematic review of effects	In-hospital or home-care interventions to reduce hospital readmissions in the elderly (17)	This review included 32 studies which identified various interventions that effectively reduce the risk of hospital readmissions in patients 75 years and older. Seventeen clinical trials examined the effectiveness of in-hospital geriatric evaluation and discharge management. All included interventions of this type employed geriatric assessment during the hospital stay and comprehensive discharge planning, which were compared with a usual-care control group. The majority of the trials did not provide any evidence for the effectiveness of this intervention. Fifteen studies assessed interventions involving home follow-up, as compared to usual care. The studies produced variable findings with seven trials demonstrating effectiveness of home follow-up to reduce the risk of readmissions. The remaining studies were unable to demonstrate any significant effect on readmission outcomes. The authors note that the results of this report suggest that interventions that incorporate post-discharge home follow-up are more likely to produce positive effects on readmission outcomes. However, the authors acknowledged that the heterogeneity of the interventions reviewed in this paper and the variable methodological quality of all studies warrant further investigation.	2009	6/10 (AMSTAR rating from McMaster Health Forum)	0/32
Systematic review of effects	Models of home and community care for older adults (18)	This report included 35 studies, and aimed to evaluate the outcomes of case-managed, integrated or consumer-directed home- and community-care services for older persons. Seven randomized controlled trials, two non-randomized trials and three observational studies compared case-managed care to usual non-coordinated care. Overall, the studies examining case-managed care services suggest that this type of care improves function and medication management, while increasing the use of community services.	2009	7/10 (AMSTAR rating from Program in Policy Decision-making)	3/34

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		Two randomized controlled trials, two non-randomized trials and seven observational studies compared integrated care to non-integrated usual care. While the studies produced variable findings with regards to integrated-care outcomes for elderly patients, the majority of the studies indicate that integrated care did not improve clinical outcomes. Three randomized controlled trials, one non-randomized controlled trial and two observational studies compared consumer-directed care to usual care. The findings of the studies suggest that consumer involvement in directing care improved satisfaction with care and community-service use, but did not exert significant effects on clinical outcomes. Evidence from the included randomized controlled trials suggest that case management may improve function and appropriate use of medications, while increasing use of community services. However, studies were heterogeneous in methodological quality and results were inconsistent.			

Table 2: Summary of findings from systematic reviews about home care as a component of interdisciplinary team-based community care and/or as part of integrated care with other sectors

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Home-based primary-care interventions (19)	This review included results from 19 studies and aimed to address three questions. 1) What are the effects of home-based primary-care (HBPC) interventions on health outcomes, patient and caregiver experience, and service utilization among adults with chronic conditions? 2) How do the effects of HBPC interventions differ across patient characteristics and organizational characteristics? 3) Which characteristics of HBPC interventions are associated with effectiveness? With respect to the first question, there was insufficient evidence to conclude that HBPC is effective in improving function and/or decreasing mortality among adults with chronic diseases. However, HBPC interventions were found to improve patient satisfaction with care, quality of life, and caregiver outcomes. HBPC interventions were also found to reduce hospitalization. Four studies stratified outcomes by patient subgroups to explore how the effects of HBPC interventions differ across patient characteristics (question 2). Individuals who were more frail, sicker, or at higher risk of experiencing negative outcomes benefited from HBPC to a greater extent than those who were less ill. No studies examined the impact of HBPC across various organizational characteristics. Due to the considerable variability existing across services provided as part of HBPC interventions, the review was able to extract an apparent pattern or package of services associated with improved outcomes. The authors indicate that this review suggests that HBPC may reduce utilization of inpatient care, while improving clinical outcomes and patient and caregiver experiences. However, the authors acknowledged that the body of evidence is still comparatively small.	2015	7/10 (AMSTAR rating from McMaster Health Forum)	1/18
Systematic review of effects	Outcomes from home-based primary-care programs for homebound older adults (20)	The purpose of the review was to describe the effect of home-based primary care for homebound older adults on individual, caregiver and system outcomes. The review included the results from nine studies: one randomized controlled trial, four observational studies and four program descriptions	2014	8/11 (AMSTAR rating from McMaster Health Forum)	1/9

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		Out of the nine interventions, eight showed positive effects on at least one inclusion outcome, with seven affecting two outcomes. Six of the interventions shared the following characteristics: interprofessional care teams, regular interprofessional care meetings, and after-hours support. The authors noted the low study quality and age heterogeneity as limitations to this review. However, they concluded that home-based primary care could effectively support homebound older adults, while reducing emergency department visits, hospitalizations and long-term care admissions.			
Systematic review of effects	Effectiveness of structured interdisciplinary collaboration for adult home-hospice patients on patient satisfaction and hospital admissions and readmissions (21)	No studies were identified that met the inclusion criteria.	2014	5/7 (AMSTAR rating from McMaster Health Forum)	0/0
Systematic review of effects	Transitional care interventions to prevent readmission for people with heart failure (22)	This review included 47 trials that examined the efficacy, comparative effectiveness, and harms of transitional care interventions to decrease readmission and mortality rates for hospitalized patients with heart failure (HF). Two home-visiting trials reported 30-day readmission rates. One trial demonstrated a lower risk of readmission among patients receiving home visits as compared with the usual-care group. The other trial found no statistically significant reduction in readmission rates. Four other trials examined the effectiveness of different intervention types in reducing 30-day all-cause readmission, including tele-monitoring trials and cognitive training. However, none of these interventions produced any significant findings. Both home-visiting programs and multidisciplinary heart failure (MDS-HF) interventions reduced all-cause readmissions over three to six months. Evidence was insufficient to conclude that tele-monitoring, nurse-led clinic and educational interventions were effective in reducing all-cause readmission. Home-visiting programs, MDS-HF clinic interventions and structured telephone support were found to reduce mortality compared with usual care. Tele-monitoring, nurse-led clinics, and educational interventions did not reduce mortality.	2013	9/11 (AMSTAR rating from McMaster Health Forum)	3/50

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		The authors indicate that the findings of this review suggest that home-visiting programs and MDS-HF clinic interventions may be effective in reducing readmissions and mortality up to six months after a hospitalization for patients with HF. However, the authors noted that the methodological limitations of the included studies warrant cautious interpretation of such findings.			
Systematic review of effects	Case management approaches to home support for people with dementia (23)	The review examined 31 randomized controlled trials (RCTs) in order to examine the effectiveness of case management approaches to home support for people with dementia. In this review, case management refers to methods of care that are provided in the community and focused on meeting the needs of persons with dementia. In examining the effectiveness of this type of care for people with dementia, the perspectives of a range of people were considered, including patients, carers and staff. The effects of case management approaches can be considered on a short-term (less than 12 months), medium-term (equal to or greater than 12 months, but less than 18 months), and long-term (greater than or equal to 18 months) basis. In the short term, there was a reduced proportion of institutionalization among those who received a case-management approach. Fewer days were spent in a residential home/hospital unit, though results suggest that people who receive case management may stay in hospital for longer and use care services more when compared with standard models of care. Four studies indicated that carer burden improves at six months. There were no significant effects among other psychosocial variables. In the medium term, some studies suggest that the proportion of institutionalization is reduced among persons receiving case management, when this was the explicit goal of the intervention. Case management was shown to improve quality of life, social support and satisfaction among carers at 12 months. Use of services increased among case-management groups, while costs of services decreased. In the long term, institutionalization was reduced for people who had received case management at 18 months, but not at 24 months. Evidence shows that case management reduced neuropsychiatric symptoms among people with dementia. One study indicated positive impacts on quality of life and carer burden in the longer term. Case management reduced hospitalizations and emergency visits among carers, and services such as home care and resource centres were used more often by persons in the	2013	11/11 (AMSTAR rating from Program in Policy Decision-making)	0/14

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		case-management group. Results suggest that expenditure is lower among people in case-management groups.			
Systematic review of effects	Transitional-care programs for improving outcomes for heart failure (24)	The review examined 20 articles to evaluate the impact of transitional-care programs on heart-failure-patient outcomes. The effects of transitional-care programs were measured across hospital readmission rates, quality of life, and cost-effectiveness. While the structure of interventions across studies varied greatly, all involved patient contact during hospitalization and after discharge. Eight studies did not indicate a significant improvement in readmission rates following intervention. While there were decreases in readmissions across time, there was insufficient evidence among papers to draw conclusions regarding benefits of transitional-care programs over time. Five studies indicated an improvement in quality of life among patients after intervention. Results indicate the increased length and intensity of post-discharge interventions would contribute to enhanced testing of these effects. Three studies indicated a reduction on cost among intervention groups, a result which may be attributable to decreased readmission rates. Taken together, the results of this review indicate that transitional-care programs contribute to a number of outcomes. These programs have the potential to reduce readmissions, enhance quality of life, and reduce the cost of care for heart-failure patients. Further research should evaluate the sustainability of these programs.	Not reported (published in 2014)	3/10 (AMSTAR rating from McMaster Health Forum)	1/20
Systematic review of effects	Services for reducing the duration of hospital care for acute stroke patients (25)	The review pooled the results from 14 randomized controlled trials to establish the effects and costs of early supported discharge (ESD) compared to conventional services that substantially involve in-hospital rehabilitation. The primary resource outcome was the length of index hospital stay, whereas the primary patient outcome was the composite end-point of death or long-term dependence recorded at the end of scheduled follow-up. The scope of multidisciplinary ESD teams varied between the 14 included trials. In nine articles, the ESD team coordinated discharge from hospital and delivered patient care at home. In three trials, the ESD team planned and supervised post-discharge care delivered by community-based agencies. In the remaining two trials, no ESD planned or provided post-discharge services.	2012	10/11 (AMSTAR rating from McMaster Health Forum)	1/12

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		Estimated costs ranged from 23% less to 15% greater for the ESD group compared to conventional-care groups. The economic analyses suggested that the opportunity savings from hospital bed days released tended to be greater than, or similar to, the cost of the ESD service. The ESD group reduced the length of hospital stay by approximately seven days compared to the conventional group. Sub-group analyses by stroke severity revealed that the reduction in length of hospital stay was greater in the severe stroke group. Authors note missing and imputed data, limited included studies, and broad inclusion criteria as potential causes of bias, but report that the quality of included evidence was generally good.			
Systematic review of effects	Evidence of what works to support and sustain care at home for people with dementia (26)	The review found that after diagnosis of dementia, locally-based, multi-component interventions including education, cognitive stimulation, cognitive training and cognitive rehabilitation may be useful to support family carers to support people with dementia to live at home. The evidence on community-based services is limited and the authors express caution towards its recommendations. This is also true for hospital-related areas of interest, such as what is most beneficial in preventing and/or delaying onset of dementia, developing tools to measure subjective quality of life, and developing more effective approaches to end-of-life care.	2012	6/9 (AMSTAR rating from Program in Policy Decision-making)	
Systematic review of effects	Home-based multidisciplinary rehabilitation following hip-fracture surgery (27)	This review included five studies examining multidisciplinary home rehabilitation (MHR) on functional and quality-of-life outcomes after hip-fracture surgery. Overall, MHR was found to demonstrate better functional status and lower extremity strength over the short term as compared to those not receiving treatment. Over the long term, the MHR group showed greater improvements in balance confidence, functional status, and lower extremity muscle strength as compared to the no-treatment group. The effect of MHR on quality of life and mobility were inconsistent across studies. The studies evaluated within this review suggest a trend towards positive outcomes from MHR program of care as compared to no treatment following hip-fracture surgery. However, robust conclusions cannot be made due to the low number of included studies.	Not reported (published in 2013)	7/10 (AMSTAR rating from McMaster Health Forum)	0/5

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Effectiveness of crisis resolution home-treatment teams for older adults with mental health conditions (28)	This systematic review included three cohort studies, one descriptive study, one survey-related research study, two theoretical papers, and three government policy documents examining the effectiveness of crisis resolution home-treatment teams (CRHTTs) for older people with mental health problems. Overall, CRHTTs were found to be effective in reducing the number of admissions to hospitals, although outcomes measuring length of hospital stay and maintenance of community residence were deemed inconclusive. A scoping exercise identified three types of home-treatment service models: generic home-treatment teams, specialist older adults' home-treatment teams, and intermediate-care services. The review also found a reduction in the number of hospital admissions when older persons with mental health problems were referred to crisis intervention services at a point when they would otherwise have been admitted to the hospital. One study found that 69% of referrals were admitted in the intervention group compared to 100% in the comparison group, while another study found almost no difference. A third study found that only 25% of patients referred to the crisis service were admitted to hospital at the point of referral or within three months of follow-up. The review indicated that there may be a reduction in the length of hospital stay with a crisis-intervention service. One study found no difference in the length of hospital stay six months after introduction of the CRHTT, while another reported a shorter average length of stay for patients referred to crisis service. The review also suggested that crisis interventions may help maintain community living for older people with mental health problems. One study found a higher percentage of people remained at home after two years' follow-up (49%) compared to the comparison group (35%). The authors noted the low quality of evidence informing this review. Most of the included studies were retrospective in nature with poorly defined comparison groups. The review was also biased towards published studies, potentially skewing its results.	Not reported (published in 2011)	5/9 (AMSTAR rating from McMaster Health Forum)	?/4 (countries in which studies were conducted was not reported)

Table 3: Summary of findings from systematic reviews about home care focused on restorative approaches to care

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Overview of systematic reviews	Preventive home visits for older adults (29)	The review included 10 systematic reviews focused on the impact of preventive home visits for older adults on patient outcomes (e.g., mortality and function), on the well-being of caregivers and professionals, and on use of services and organization of care. Four "good-quality" systematic reviews concluded that preventive home visit programs may reduce mortality among the general older adult population and for those who are frail. In addition, two of these meta-analyses found a statistically significant effect of preventive home visits on mortality in studies where the mean age of participants was in the lower third (usually between 72 and 77.5 years). However, two other high-quality systematic reviews found either modest or no effect on mortality for general older adult populations or for frail older adults. Two reviews evaluated the effect of preventive home visits on functional autonomy and found that greater autonomy seems to be achieved in programs that combine comprehensive geriatric assessments with clinical examinations and follow-ups, with one review indicating that comprehensive geriatric exams are the most important for enhancing functional autonomy. However, three high-quality systematic reviews indicate that these positive effects are not found for frail older adults. Lastly, the included systematic reviews do not provide sufficient evidence about whether preventive home visits prevent or delay admission to nursing homes, and effects on hospital admissions were limited or absent in the included reviews.	2011	No rating tool available for overviews of systematic reviews	Not applicable (synthesis includes systematic reviews, not individual studies)
Systematic review of effects	Time-limited home-care re-ablement services for maintaining and improving the functional independence of older adults (30)	This review included two studies comparing the effectiveness of re-ablement to usual home-care services in maintaining/improving the functional independence of older adults. In terms of functional status, very low-quality evidence suggested that re-ablement may be slightly more effective than usual care in improving function at nine to 12 months. It was also reported that re-ablement may lead to little or no improvement on mortality at 12 months' follow-up as compared to usual home care. The authors expressed uncertainty about the influence of re-ablement on quality of life or living arrangements at time points up to 12 months due to low quality of evidence. It was	2015	11/11 (AMSTAR rating from McMaster Health Forum)	0/2

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		noted, however, that individuals receiving re-ablement may be slightly less likely to be approved for a higher level of personal care than people receiving usual care over 24 months of follow-up. Although a small reduction in total aggregated home and healthcare costs was reported for re-ablement in the 24-month follow-up period, the authors noted uncertainty about the size and importance of these effects due to very low quality of evidence. The authors note significant uncertainty with the conclusions of the review due to the poor quality of evidence in the limited number of studies included. They report an urgent need for high-quality trials across different health and social-care systems due to the increasingly high profile of re-ablement services in policy and practice in several countries. High risk of bias, imprecision, compromised randomization, incomplete data collection resulting from participant drop-out, contamination, and baseline differences between comparator groups were noted as key limitations of the included studies.			
Systematic review of effects	Interventions that reduce dependency in personal activities of daily living in community-dwelling adults who use home-care services (31)	The review included 13 studies to identify interventions that reduce dependency in activities of daily living (ADL) in home-care-service users, and to determine the effectiveness of improving the ability to perform ADL. Key components across the studies included: goal-setting at the beginning of the home-care episode; repetitive practice and/or grading of activities; coordination or case management of the home-care episode by an individual or team; provision of equipment; and re-organization of services to maximize efficiency based on approach, tasks, time or specialist knowledge. Of the 13 included studies, 10 were judged to have risk of bias. Overall there was limited evidence that interventions targeted at personal ADL can reduce home-care-service users' dependency on activities.	2014	8/10 (AMSTAR rating from McMaster Health Forum)	3/13
Systematic review of effects	Clinical effectiveness and cost-effectiveness of home-based, nurse-led health promotion for older people (32)	The clinical effectiveness and cost-effectiveness of home-based, nurse-led health promotion interventions for older people in the United Kingdom was assessed within this review. This review included 11 systematic reviews assessing clinical effectiveness, and three economic evaluations assessing the cost-effectiveness. Home-based, nurse-led health promotions were found to improve health outcomes across a variety of clinical dimensions, including a reduction in	2011	9/10 (AMSTAR rating from McMaster Health Forum)	0/11

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		mortality rates, a decrease in fall risks, and an increased level of independence. The cost-effectiveness of the intervention resulted in inconsistent results, in which two studies reported a reduction in cost with the intervention, and one study reported an increase in cost with the intervention. There was considerable heterogeneity among studies included in the clinical-effectiveness analysis, with respect to the nature of the interventions. However, the overall quality of the included studies was found to be good, and the studies were assessed to be of a medium-to-low risk of bias. The findings of the cost-effective analysis were limited by the small number of included studies in the review, and the inconsistency of the results.			
Systematic review of effects	Assessing community-based interventions to improve physical function and maintain independent living in elderly people (33)	The review pooled the results of 89 randomized controlled trials, including 97,984 individuals. Community-based multifactorial interventions in elderly people were assessed to determine the effect on living at home, death, nursing home and hospital admissions, falls, and physical function. Funnel plot data gave no indication of selection bias within the included studies. The community-based interventions reduced the risk of not living at home, nursing-home admissions, hospital admissions and falls. However, risk of premature mortality was not reduced. In both comparison groups, the intervention group also had better physical function.	2005	8/11 (AMSTAR rating from McMaster Health Forum)	Not available
Systematic review of effects	Examining the effectiveness of home visits to prevent nursing-home admission and function decline in elderly people (34)	The review pooled the results of 18 randomized controlled trials to determine the effect of preventive home visits on functional status, nursing-home admission, and mortality. The trial included a total of 13,477 individuals aged 65 years and older. The reduction in the risk of admission was modest and non-significant. Preventive home visits had little effect on functional status, however, in meta-regression analysis, beneficial effects were associated with multidimensional geriatric assessment follow-up. Preventive home visits may reduce premature mortality, but the results were heterogeneous. Overall, preventive home visits were found to be effective only if interventions are based on multidimensional geriatric assessment, include multiple follow-up home visits, and target persons at lower risk for death and those who are relatively young. After meta-regression analyses, there was little evidence that any aspect of methodological quality influenced results in the trials. Furthermore,	2003	8/11 (AMSTAR rating from McMaster Health Forum)	1/18

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		there was little evidence of funnel plot asymmetry and the results did not differ significantly according to geographical region or group of investigators.			
Systematic review of effects	Assess the effectiveness of home visits for prevention of impairment and death in older adults (35)	The review pooled the results from 64 randomized controlled trials to assess the effectiveness of preventive home visits for community-dwelling older adults without dementia, and investigate factors that may moderate effects. Of the 64 studies, 55 reported on mortality and there was high-quality evidence of no clinically significant difference at the longest follow-up point. Fifteen studies reported the number of hospital admissions, and there was moderate-quality evidence of no clinically or statistically significant difference at the longest follow-up point. Twenty-three studies reported the number of people who fell, and there was moderate-quality evidence of a small, clinically significant effect at the longest follow-up point. Based on sub-group analysis the authors were not able to distinguish any subset of interventions that reliably produced positive outcomes. However, the authors note that they cannot conclude that all of the programs are ineffective. As it was impossible to blind participants to the treatment conditions, all studies were judged to be at high risk for provider and participant bias.	2012	11/11 (AMSTAR rating from McMaster Health Forum)	11/63
Systematic review of effects	Examine the effectiveness of multidimensional preventive home-visit programs for community-dwelling older adults (36)	The review pooled the results from 21 randomized controlled trials to examine the effect of preventive home visits on mortality, nursing-home admissions, and functional status decline. Results of mortality, nursing-home admissions, and functional status decline were heterogeneous and non-significant. Lack of uniform terminology and blinding in included studies may have increased risk of bias in results.	2007	10/11 (AMSTAR rating from McMaster Health Forum)	1/21

Table 4: Summary of findings from systematic reviews about supports for caregivers as part of home care

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Effectiveness of respite care for supporting caregivers of people with dementia (37)	This review included 17 studies that assessed the efficacy of respite care in supporting caregivers of people with dementia. Overall, respite care was found to be effective in decreasing caregiver burden and behavioural problems in individuals with dementia, although adverse effects were noted with regards to accelerated time to nursing-home admission. Four types of intervention programs were investigated – institutional respite programs, daycare programs, residential respite programs, and in-home respite programs. Most (69%) institutional respite programs showed positive effects on at least one of the outcome measures, with the most common being decreases in caregiver burden and other stress-related outcomes, and reductions in the care recipient's behavioural problems. Four studies on institutional respite programs found adverse effects associated with institutional respite programs, including reduction in time to nursing-home placement, decrease in patient sleep quality, and increased stress and burden of caregiver immediately after the respite period. Most (75%) studies investigating daycare programs indicated positive effects on at least one of the outcome measures. Beneficial effects on caregivers were found in the majority of these studies in terms of caregiver burden and similar stress-related outcomes, and on care recipient outcomes (e.g., dementia-specific behavioural problems and sleep quality). However, two-thirds of the studies investigating health resource usage reported accelerated time to nursing-home placement. No significant effect was found on total healthcare cost. Only 25% of temporary residential respite-care programs were reported to have a positive impact on caregivers and care recipients. None of the included studies describing this intervention measured impact on health-resource utilization. The only study investigating in-home respite programs concluded that this type of care may decrease morbidity and mortality in caregivers given that vulnerable caregivers in the intervention group had lower plasma epinephrine values after two weeks of respite.	2015	5/10 (AMSTAR rating from McMaster Health Forum)	1/16

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		Inconsistency of results, the heterogeneous characteristics of informal caregivers and persons with dementia, and other methodological errors were noted as important limitations of this review.			
Systematic review of effects	Effectiveness of supporting informal caregivers of people with dementia (37)	This review analyzed the results of 53 randomized and non-randomized controlled trials. Five main types of support for caregivers were distinguished in this review: psychoeducational interventions, respite care, occupational-therapy interventions, cognitive-behavioral interventions, and miscellaneous interventions. Of studies investigating psychoeducational interventions, 86% reported positive effects, with 83% demonstrating benefits for caregivers and 39% showing benefits for care recipients. The most frequently noted benefits were improvements in patients' self-efficacy, reductions in depressive symptoms and burden scales of caregivers, and delays in nursing-home placement of care recipients. Although 75% of studies investigating respite care indicated benefits for the care recipient, only 33% reported benefits for caregivers, with the effects being generally small or mixed. All of the studies investigating occupational interventions delivered to individuals showed benefits, especially in caregiver self-efficacy outcomes and in the frequency of behavioural problems of care recipients. The only group-based occupational-therapy intervention did not report any benefits. All studies investigating cognitive-behavioural-therapy interventions reported benefits for caregivers, especially in reducing the volume of dysfunctional thoughts. Impact on the care recipient was not measured in any of the studies. Significant heterogeneity in methodology and outcome measures, poor descriptions of implemented interventions, and short follow-up periods were identified as key limitations to this review.	Not reported (published in 2016)	7/10 (AMSTAR rating from McMaster Health Forum)	3/53
Systematic review of effects	Assistive technologies for reducing caregiver burden (38)	This review includes eight studies examining the effect of assistive technologies (ATs) on reducing caregiver burden. Two opposing hypotheses emerged from the analysis and synthesis of research results: 1) AT users and caregivers found that ATs decreased	2015	3/9 (AMSTAR rating from McMaster	4/11

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		caregiver burden; and 2) AT users and caregivers thought that AT could add to caregiver burden. Although this dichotomy highlights the heterogeneity of study results, only two of eight studies reported on the second hypothesis. Authors thus concluded that this review did not find enough evidence to suggest that ATs increase caregiver burden. In studies supporting the benefits of ATs, both AT users and caregivers reported that ATs decreased caregiver burden and helped to maintain the quality of life of caregivers. Assistive technologies assisted caregivers by reducing time, levels of assistance and energy put towards caregiving, anxiety and fear, task difficulty, safety risk particularly for activities requiring physical assistance, and increasing the independence of the user. In studies reporting adverse AT effects, some participants reported that ATs could actually add to caregiver burden. In one study, individuals believed that AT that facilitates virtual communication and monitoring caused a demand for increased attention from family members. Participants who had recent experience with caring for a parent or spouse expressed the physical and emotional burden of the responsibility. Caregivers also perceived caregiver burden as a barrier to use of ATs. The authors noted several limitations of the review, including that many studies included in the review had small samples of caregivers, the review was restricted to English-language studies, and only a small number of studies were included.		Health Forum)	
Systematic review of effects	Effectiveness of interventions for caregivers of people with Alzheimer's disease and neurocognitive disorders (39)	This review includes 43 studies examining the effectiveness of interventions for caregivers of people with Alzheimer's disease and related major neurocognitive disorders, that facilitate their ability to maintain participation in the caregiver role. Overall, strong evidence demonstrated that: multicomponent psychoeducational interventions improve caregiver quality of life, confidence, and self-efficacy, and reduces burden; cognitive reframing reduces caregiver anxiety, depression, and stress; communication-skills training improves caregiver skills and quality of life in individuals with dementia; mindfulness-based training improves caregiver mental health and reduces stress and burden; and professional-led support groups enhance caregiver quality of life.	2014	4/9 (AMSTAR rating from McMaster Health Forum)	6/42

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		Results were also stratified based on intervention modality. It was found that case-management interventions do not affect caregiver burden, quality of life, or well-being, although caregivers receiving occupational therapy case management were found to use significantly more respite services than those receiving a single visit. Group interventions include in-person support groups and internet-based support groups. In-person support groups led by professionals were found to improve caregiver well-being, reduce depression, burden, and stress, and increase caregiver preparation and confidence in managing memory loss. One study examining internet-based support groups did not report any reduction in caregiver burden or improvement in quality of life compared to usual care. Cognitive-behavioural interventions were found to reduce caregiver depression, anxiety, and stress. Single-component interventions, which include a variety of intervention types, generally reported positive outcomes with regards to increasing caregiver skills and decreasing stress and guilt. Lastly, multicomponent psychoeducational interventions – involving a combination of dementia education, skill training, and coping strategies – were found to improve caregiver quality of life, well-being, and self-efficacy in managing problems, while simultaneously reducing caregiver depression and burden. The authors note that key limitations of the reviewed studies include small sample size, unequal representation in the gender of study participants, and the use of different scales in measuring caregiver outcomes.			
Scoping review	Adult day-centre programs and their associated outcomes on clients, caregivers and the health system (40)	Most of the studies identified in this scoping of the literature indicated that adult day-centre programs are associated with positive health-related, social, and psychological and behavioural benefits in people receiving care and for their caregivers. The scoping review also found that people receiving care and their caregivers are highly satisfied with services from adult day centres. The review noted that the findings need to be explored in more depth through systematic reviews (as opposed to this review, which consisted of a scoping review) that empirically assess the effects of different adult day-centre models on a range of relevant outcomes.	2014	Not yet available	Not reported

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Effectiveness and cost-effectiveness of respite for caregivers of frail older people (41)	The review examined 27 studies to evaluate the effectiveness of respite for caregivers of frail older people. In this context, respite refers to a range of services that relieve family home caregivers. The review examined a number of different forms of respite, including adult daycare, respite packages, in-home respite, host family respite, institutional respite, multidimensional packages, and video respite. Eight studies examined the effectiveness of daycare programs, and results suggested that caregiver outcomes were not affected by this medium of care when compared to the "usual care". One study found a reduced level of hostility among carers in the daycare setting, but there were no differences in depression, stress or anxiety. Quasi-experimental studies indicated more positive outcomes of daycare programs; these studies pointed to positive impacts on caregiver freedom, satisfaction, and relaxation, as well as care receiver well-being and symptoms. Four studies examined respite packages, which include more than one type of respite. The randomized controlled trials indicated few benefits to caregivers. Quasi-experimental studies indicated positive findings, including reduced stress, enhanced morale and reduced burden among caregivers. Four studies examined in-home respite. These studies found that in-home respite is associated with a decrease in burden for spouses. Caregivers reported high levels of satisfaction. One uncontrolled study examined host family respite, in which older people with dementia lived in a group home. Overall subjective outcomes were positive, with experiences being described as "happy". One randomized controlled trial examined institutional respite, and found that this form of intervention reduced psychological symptoms among caregivers, while improving quality of life. However, the reliability of these conclusions was called into question. One uncontrolled study examined the impact of multidimensional packages. This study found that supportive respite services were used in order to provide respite for caregivers, as well as to provide emotional support, support in death, and support following discharge from hospital.	2005	2/11 (AMSTAR rating from McMaster Health Forum)	1/27

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
		One study examined video respite, a mode of intervention in which care receivers watched tapes at home. No final results were identified. Taken together, the results of this review indicate that firm conclusions about the effectiveness of respite programs cannot be made.			
Systematic review of effects	Effectiveness and cost-effectiveness of different models of community-based respite care for frail older people and their carers (42)	This review includes 20 systematic reviews, 22 effectiveness studies, and five economic evaluations assessing the effectiveness and cost-effectiveness of different models of community-based respite care for frail older people and their carers. Types of services studied in the review include day care, host family, in-home, institutional respite, and video respite. Overall, evidence suggests that the impact of respite upon carers and care recipients are generally small, with modest benefits found only for certain subgroups. Many studies report high levels of carer satisfaction. No reliable evidence was found showing that respite can delay entry to residential care or adversely affect care recipients. Only five economic evaluations of respite care services were included in the review, all of which compared daycare with usual care. Daycare was found to be frequently associated with higher costs, with a similar or slight increase in benefits as compared to usual care.	2005	9/10 (AMSTAR rating from McMaster Health Forum)	2/25
Systematic review of effects	Interventions for supporting informal caregivers of patients in the terminal phase of a disease (43)	This review included 11 randomized controlled trials investigating interventions that support informal caregivers of patients in the terminal phase of a disease. Low-quality evidence demonstrated that interventions directly supporting caregivers can significantly reduce psychological distress in the short term. Additional evidence indicated that these short-term interventions may marginally improve coping skills and quality of life, but neither result was statistically significant. One study assessing sleep improvement as a physical outcome found no difference between comparator groups. In one study, a subgroup of intervention participants reported experiencing higher levels of family conflict. Authors note that the present review may be limited by the small amount of trial data, variability in the types of interventions, small sample sizes, and heterogeneity in outcome measures. Some of the evidence also demonstrated risk of recruitment bias, which may have limited the generalizability of the study's results.	2010	10/11 (AMSTAR rating from McMaster Health Forum)	0/13

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
Systematic review of effects	Respite for those providing care to the frail elderly (44)	This review included 104 studies assessing the effectiveness and cost-effectiveness of breaks in care in improving the well-being of informal carers of frail and disabled older people living in the community. Due to the variety of interventions identified and the uncertainty in the evidence, this review was not able to conclusively determine the effectiveness of different models of respite-care provision. Although reduction in carer burden was found at two-to-six months' follow-up in four single-sample studies, this was not reflected in the three randomized controlled trials and quasi-experimental studies included in the review. The review reported a reduction in carer depression in the short term and for home care, but positive outcomes were not reported for daycare. A trend was found indicating that longer interventions have more positive effects on carer well-being. Although respite had no effect on anxiety, positive effects were found in increasing morale and reducing anger and hostility. Single-group studies suggested that quality of life decreased, and rates of institutionalization increased following respite use. It was found that respite care can be influenced by a wide variety of factors, including carer attitudes, the caregiving relationship, and knowledge and availability of services.	2005	8/10 (AMSTAR rating from McMaster Health Forum)	9/104

Table 5: Summary of findings from systematic reviews about client-directed funding options for home care

Document type	Focus of systematic review	Key findings	Year of last search	AMSTAR (quality) rating	Proportion of studies that were conducted in Canada
No systematic reviews identified					

REFERENCES

1. Government of Canada. A Common Statement of Principles on Shared Health Priorities. Ottawa: Government of Canada; 2017. https://www.canada.ca/en/health-canada/corporate/transparency/health-agreements/principles-shared-health-priorities.html (accessed 8 February 2012).
2. CIHI. Health Care in Canada, 2011. A focus on seniors and aging. Ottawa: Canadian Institutes for Health Research; 2011. https://secure.cihi.ca/free_products/HCIC_2011_seniors_report_en.pdf (accessed 15 November 2016).
3. Public Health Agency of Canada. The health and well-being of Canadian seniors. Ottawa: Public Health Agency of Canada; 2010.
4. Statistics Canada. Age and sex, and type of dwelling data: Key results from the 2016 Census. Ottawa: Statistics Canada; 2017. http://www.statcan.gc.ca/daily-quotidien/170503/dq170503a-eng.htm (accessed 12 May 2017).
5. Statistics Canada. Age and sex highlight tables, 2016 Census. Population by broad age groups and sex, 2016 counts for both sexes, Canada, provinces and territories, 2016 Census – 100% data. Ottawa: Statistics Canada; 2017. http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/as/Table.cfm?Lang=E&T=11 (accessed 12 May 2017).
6. Statistics Canada. Infographic: Population trends by age and sex, 2016 census of population. Ottawa: Statistics Canada; 2017. http://www.statcan.gc.ca/pub/11-627-m/11-627-m2017016-eng.htm (accessed 12 May 2017).
7. Boland L, Légaré F, Perez MM, et al. Impact of home care versus alternative locations of care on elder health outcomes: An overview of systematic reviews. *BMC Geriatrics* 2017; 17: 20.
8. Gomes B, Calanzani N, Curiale V, McCrone PP, Higginson IJ, Brito Md. Effectiveness and cost-effectiveness of home palliative care services for adults with advanced illness and their caregivers. *Sao Paulo Medical Journal* 2016; 134: 93-94.
9. Shepperd S, Iliffe S, Doll HA, et al. Admission avoidance hospital at home. *Cochrane Database of Systematic Reviews* 2016; (9).
10. Shepperd S, Gonçalves-Bradley DC, Straus SE, Wee B. Hospital at home: Home-based end-of-life care. *Cochrane Database of Systematic Reviews* 2016; (2).
11. Bainbridge D, Seow H, Sussman J. Common components of efficacious in-home end-of-life care programs: A review of systematic reviews. *Journal of the American Geriatrics Society* 2016; 64(3): 632-639.
12. Leppin AL, Gionfriddo MR, Kessler M, et al. Preventing 30-day hospital readmissions: A systematic review and meta-analysis of randomized trials. *Journal of the American Medical Association Internal Medicine* 2014; 174(7): 1095-1107.
13. Gomes B, Calanzani N, Curiale V, McCrone P, Higginson IJ. Effectiveness and cost-effectiveness of home palliative care services for adults with advanced illness and their caregivers. *Cochrane Database of Systematic Reviews* 2013; (6).
14. Caplan GA, Sulaiman NS, Mangin DA, Ricauda NA, Wilson AD, Barclay L. A meta-analysis of "hospital in the home". *The Medical Journal of Australia* 2012; 197(9): 512-519.
15. Guo J-L, Tsai Y-Y, Liao J-Y, Tu H-M, Huang C-M. Interventions to reduce the number of falls among older adults with/without cognitive impairment: An exploratory meta-analysis. *International Journal of Geriatric Psychiatry* 2014; 29(7): 661-669.

16. Graybill EM, McMeekin P, Wildman J. Can aging in place be cost effective? A systematic review. *PLoS ONE* 2014; 9(7).

17. Linertová R, García-Pérez L, Vázquez-Díaz JR, Lorenzo-Riera A, Sarría-Santamera A. Interventions to reduce hospital readmissions in the elderly: In-hospital or home care. A systematic review. *Journal of Evaluation in Clinical Practice* 2011; 17(6): 1167-1175.

18. Low L-F, Yap M, Brodaty H. A systematic review of different models of home and community care services for older persons. *BMC Health Services Research* 2011; 11(9).

19. Totten AM, White-Chu EF, Wasson N, et al. Home-based primary care interventions. Rockville: Agency for Healthcare Research and Quality; 2016.

20. Stall N, Nowaczynski M, Sinha SK. Systematic review of outcomes from home-based primary care programs for homebound older adults. *Journal of the American Geriatrics Society* 2014; 62(12): 2243-2251.

21. Joseph R, Brown-Manhertz D, Ikwuazom S, Singleton JK. The effectiveness of structured interdisciplinary collaboration for adult home hospice patients on patient satisfaction and hospital admissions and re-admissions: A systematic review. *JBI Database of Systematic Reviews and Implementation Reports* 2016; 14(1): 108-139.

22. Feltner C, Jones CD, Cené CW, et al. Transitional care interventions to prevent readmissions for persons with heart failure: A systematic review and meta-analysis. *Annals of Internal Medicine* 2014; 160(11): 774-784.

23. Reilly S, Miranda-Castillo C, Malouf R, et al. Case management approaches to home support for people with dementia. *Cochrane Database of Systematic Reviews* 2015; (1).

24. Stamp KD, Machado MA, Allen NA. Transitional care programs improve outcomes for heart failure patients: An integrative review. *Journal of Cardiovascular Nursing* 2014; 29(2): 140-154.

25. Fearon P, Langhorne P. Services for reducing duration of hospital care for acute stroke patients. *Cochrane Database of Systematic Reviews* 2012; (9): Cd000443.

26. Dawson A, Bowes A, Kelly F, Velzke K, Ward R. Evidence of what works to support and sustain care at home for people with dementia: A literature review with a systematic approach. *BMC Geriatrics* 2015; 15(1): 59.

27. Donohue K, Hoevenaars R, McEachern J, Zeman E, Mehta S. Home-based multidisciplinary rehabilitation following hip fracture surgery: What is the evidence? *Rehabilitation Research and Practice* 2013; 2013: 875968.

28. Toot S, Devine M, Orrell M. The effectiveness of crisis resolution/home treatment teams for older people with mental health problems: A systematic review and scoping exercise. *International Journal of Geriatric Psychiatry* 2011; 26(12): 1221-1230.

29. Tourigny A, Bédard A, Laurin D, et al. Preventive home visits for older people: A systematic review. *Canadian Journal on Aging* 2015; 34(4): 506-523.

30. Cochrane A, Furlong M, McGilloway S, Molloy DW, Stevenson M, Donnelly M. Time-limited home-care reablement services for maintaining and improving the functional independence of older adults. *Cochrane Database of Systematic Reviews* 2016; (10).

31. Whitehead PJ, Worthington EJ, Parry RH, Walker MF, Drummond AE. Interventions to reduce dependency in personal activities of daily living in community dwelling adults who use homecare services: A systematic review. *Clinical Rehabilitation* 2015; 29(11): 1064-1076.

32. Tappenden P, Campbell F, Rawdin A, Wong R, Kalita N. The clinical effectiveness and cost-effectiveness of home-based, nurse-led health promotion for older people: A systematic review. *Health Technology Assessment* 2012; 16(20).

33. Beswick AD, Rees K, Dieppe P, et al. Complex interventions to improve physical function and maintain independent living in elderly people: A systematic review and meta-analysis. *The Lancet* 2008; 371(9614): 725-735.

34. Stuck AE, Egger M, Hammer A, Minder CE, Beck JC. Home visits to prevent nursing home admission and functional decline in elderly people: Systematic review and meta-regression analysis. *Journal of the American Medical Association* 2002; 287(8): 1022-1028.

35. Grant S, Parsons A, Burton J, Montgomery P, Underhill K, Wilson EM. Home visits for prevention of impairment and death in older adults: A systematic review. *Campbell Collaboration* 2014 10(3): 1-86.

36. Huss A, Stuck AE, Rubenstein LZ, Egger M, Clough-Gorr KM. Multidimensional preventive home visit programs for community-dwelling older adults: A systematic review and meta-analysis of randomized controlled trials. *Journals of Gerontology Series A - Biological Sciences and Medical Sciences* 2008 63(3): 298-307.

37. Vandepitte S, Van Den Noortgate N, Putman K, Verhaeghe S, Verdonck C, Annemans L. Effectiveness of respite care in supporting informal caregivers of persons with dementia: A systematic review. *International Journal of Geriatric Psychiatry* 2016; 31(12): 1277-1288.

38. Marasinghe KM. Assistive technologies in reducing caregiver burden among informal caregivers of older adults: A systematic review. *Disability and Rehabilitation: Assistive Technology* 2016; 11(5): 353-360.

39. Piersol CV, Canton K, Connor SE, Giller I, Lipman S, Sager S. Effectiveness of interventions for caregivers of people with Alzheimer's disease and related major neurocognitive disorders: A systematic review. *American Journal of Occupational Therapy* 2017; 71(5): 7105180020p1-7105180020p10.

40. Ellen ME, Demaio P, Lange A, Wilson MG. Adult day center programs and their associated outcomes on clients, caregivers, and the health system: A scoping review. *The Gerontologist* 2017; 57(6): e85-e94.

41. Mason A, Weatherly H, Spilsbury K, et al. The effectiveness and cost-effectiveness of respite for caregivers of frail older people. *Journal of the American Geriatrics Society* 2007; 55(2): 290-299.

42. Mason A, Weatherly H, Spilsbury K, et al. A systematic review of the effectiveness and cost-effectiveness of different models of community-based respite care for frail older people and their carers. *Health Technology Assessment* 2007; 11(15): 1-157.

43. Candy B, Jones L, Drake R, Leurent B, King M. Interventions for supporting informal caregivers of patients in the terminal phase of a disease. *Cochrane Database of Systematic Reviews* 2011; (6).

44. Shaw C, McNamara R, Abrams K, et al. Systematic review of respite care in the frail elderly. *Health Technology Assessment* 2009; 13(20): 1-224.

McMaster University

McMaster HEALTH FORUM

>> Contact us

1280 Main St. West, MML-417
Hamilton, ON, Canada L8S 4L6
+1.905.525.9140 x 22121
forum@mcmaster.ca

>> Find and follow us

mcmasterforum.org
healthsystemsevidence.org
mcmasteroptimalaging.org

mcmasterforum

FORUM+

McMaster University