TITLE: Campus of Care Models for Adults with Disabilities and Seniors: A Review of Clinical Benefits and Harms and Cost-Effectiveness

DATE: 29 February 2012

CONTEXT AND POLICY ISSUES

Integration of continuing care services has been proposed as a means to improve the quality of care and the efficiency of resource use required for the health and social care of the elderly.\(^1\) One such model is the campus of care, which consists of a cluster of buildings located on the same parcel of land, and provides a full array of continuing care accommodation and care options. This model may minimize the need for seniors to move to a new physical location as they transition from independent living to supportive living or long-term care, however transitions between levels of care within the campus model may still be perceived as disempowering by residents.\(^2\)

The purpose of the report is to review the clinical and cost effectiveness of the campus of care model to help inform policy decisions regarding the delivery of continuing care services.

RESEARCH QUESTIONS

1. What are the benefits and harms of campus of care health service models for patients and the health system?

2. What is the cost-effectiveness of campus of care models?

3. What are the public and private costs of campus of care models?

KEY MESSAGE

Clinical and economic studies comparing the benefits, harms, costs and cost-effectiveness of campus of care models with usual continuing care, are lacking.

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METHODS

Literature Search Strategy

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2012, Issue 1), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No methodological filters were applied to limit retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2002 and February 2, 2012.

Selection Criteria and Methods

One reviewer screened the titles and abstracts of the retrieved publications and evaluated the full-text publications for the final article selection, according to the selection criteria presented in Table 1.

Table 1: Selection Criteria

<table>
<thead>
<tr>
<th>Population</th>
<th>Seniors</th>
<th>Adults with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Campus of care models*</td>
<td></td>
</tr>
<tr>
<td>Comparator</td>
<td>Standard of care or status quo</td>
<td></td>
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<tr>
<td>Outcomes</td>
<td>Q1: Quality of life, clinical benefit, clinical harm, clinical outcomes, patient satisfaction</td>
<td></td>
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<tr>
<td></td>
<td>Q2: Cost-effectiveness</td>
<td></td>
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<tr>
<td>Study Designs</td>
<td>HTAs, systematic reviews, meta-analyses, RCTs, non-randomized studies, economic evaluations</td>
<td></td>
</tr>
</tbody>
</table>

* The literature search included the following: housing for the elderly; multilevel or integrated or continuum or continuing care; retirement village; campus care model. HTAs=health technology assessments; RCTs=randomized controlled trials

Exclusion Criteria

Studies were excluded if they did not meet the selection criteria, were duplicate publications, or were published prior to 2002.

SUMMARY OF EVIDENCE

Quantity of Research Available

A total of 92 articles were identified from the database and grey literature search. Of these, eight articles were selected for full text screening and none met the inclusion criteria. The study selection process is outlined in the flowchart in Appendix 1.

Additional references of potential interest are provided in Appendix 2.
CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING

No conclusions can be drawn regarding the benefits, harms, costs and cost-effectiveness of campus of care models due to the lack of comparative studies.

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REFERENCES


Appendix 1: Selection of Included Studies

90 citations identified from electronic literature search and screened

84 citations excluded

6 potentially relevant articles retrieved for scrutiny (full text, if available)

2 potentially relevant reports retrieved from other sources (grey literature, hand search)

8 potentially relevant reports

8 reports excluded:
- irrelevant intervention (1)
- irrelevant comparator (2)
- other (review articles, editorials, qualitative studies) (5)

0 reports included in review
Appendix 2: Additional Reports

Comparative studies of two different campus of care models


Meeting the medical and social needs of elderly people is likely to be costly, disruptive, and at odds with personal preferences if efforts to do so are not well coordinated. We compared two different models of primary care in four different continuing care retirement communities. In the first model, used in one community, the physicians and two part-time nurse practitioners delivered clinical care only at that site, covered all settings within it, and provided all after-hours coverage. In the second model, used in three communities, on-site primary care physician hours were limited; the same physicians also had independent practices outside the retirement community; and after-hours calls were covered by all members of the practices, including physicians who did not practice on site. We found that residents in the first model had two to three times fewer hospitalizations and emergency department visits. Only 5 percent of those who died did so in a hospital, compared to 15 percent at the other sites and 27 percent nationally. These findings provide insight into what is possible when medical care is highly integrated into a residential retirement setting.


OBJECTIVE: To examine the associations between 2 types of continuing care retirement communities' (CCRC) residents regarding physical function and perceived quality of life. METHODS: Cross-sectional study (n=406). Eligibility criteria include age 65 years or older, residents of independent living units, and intact cognition (MMSE>=24). All-inclusive CCRCs provide unlimited access to home health services and nursing home care as needed in return for the entry and monthly fee. Fee-for-service CCRCs offer home health and nursing home services at a full fee-for-service rate. Outcomes were functional status (ADLs and IADLs) and perceived quality of life. Multivariate regressions were used to examine the associations between residents of different types of CCRCs on selected outcomes while adjusting for covariates. RESULTS: The all-inclusive CCRC sample was more likely to be married (53.8% versus 33.4%; P < .001), with more years of education (17.9 versus 14.4; P < .0001), and had few physician visits in the previous year in comparison to the FFS CCRC sample. Multivariate results indicate that the FFS group had worse ADL (beta=0.95; P=.0003), IADL (beta=0.57; P=.02) function than the all-inclusive group. There was no significant difference in perceived quality of life scores between the 2 groups. CONCLUSIONS: Residents of both CCRCs reported equally good quality of life scores. Residents of the all-inclusive CCRC seem to have had better ADL and IADL function than the FFS CCRC residents. Prepaid home health services and nursing home care in the all-inclusive CCRC may facilitate ADL and IADL functional independence.
Descriptive report on an in-home support program as part of a campus of care model


Integrating community-based health and social care for older persons is said to help individuals maintain high levels of independence, well-being and quality of life and contribute to health systems sustainability by moderating the demand for costly emergency services and inappropriate hospital care. Rural settings, however, pose challenges distinct from those in urban areas. Using North Renfrew Long-Term Care Services as a case study, this paper discusses the principles and practices of a small, rural community service agency located in Renfrew County, Ontario, that provides to its scattered populations a range of services across the care continuum. Services include community support programs, supportive housing and long-term care beds as well as an innovative 24-Hour Flexible In-Home Support Pilot program adapted from the ground breaking "night patrol" system in Denmark.

Qualitative study on campus of care community


PURPOSE: This article investigates how continuing care retirement community (CCRC) residents define transitions between levels of care. Although older adults move to CCRCs to "age in place," moving between levels of care is often stressful. More than half a million older adults live in CCRCs, with numbers continually increasing; yet, no studies address transitions between levels of care in these communities. DESIGN AND METHODS: I completed 23 months of live-in observation and conducted 35 face-to-face in-depth interviews with CCRC residents across 3 levels of care. I performed a thematic analysis of observation notes and interview transcripts. RESULTS: Residents perceived transitions as both disempowering and final. They discussed decreases in social networks that occurred after such moves. Resident-maintained social boundaries exacerbated these challenges. IMPLICATIONS: Although the transition to institutional living is one of the most important events in older persons' lives, transitions within CCRCs also are consequential especially because they are coupled with declining functional ability. These findings may inform policy for retirement facilities on topics such as increasing privacy, challenging social boundaries, and educating residents to prepare them for transitions.