Continuity of Care for Community-Dwelling Seniors

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Key Implications for Decision Makers

- This study is useful to decision makers wanting to measure continuity during the transition from hospital to homecare. Right now, there is no consistent, proven way to measure continuity of care in this area, even though the trend in Canada is to shorten hospital stays, leading to longer convalescence at home.

- Not only may attitudes and demeanour affect the flow of services and the perception of the flow of services, they may also affect quality of care and may indirectly influence health outcomes. Both caregivers and care receivers need to be sensitive to the possibility that their attitudes matter to health outcomes.

- Participants cited a variety of barriers to the personal actions they could take to ensure continuity of care. Patients mentioned their (or a family member’s) poor health or difficulties with memory. Informal caregivers most frequently mentioned a lack of services or equipment for homecare. Case managers and hospital nurses most often mentioned system-related barriers such as lack of funding or scheduling and co-ordination, whereas community nurses most often said the barriers were a lack of time and a heavy workload.

- Clear definitions of each element of continuity need to be set out, because terms like “needs-based” care can mean very different things to formal care givers than they do to patients. Communication came up among patients and informal caregivers, who listed communication with doctors and care providers as ways they could ensure continuity of care.

- This study found no differences between rural and urban subjects in their concept of continuity of care. This means it appears that lack of access to health services by rural stakeholders has not changed their views of what is necessary to achieve continuity of care.
Executive Summary

Purpose

This study identified elements of continuity of care during the transition period from hospital to community, as identified by stakeholders.

Implications

Continuity of care is complex for seniors who convalesce at home following a brief stay in hospital. Because seven elements of continuity of care have been identified, and because there are significant differences as to what different stakeholders view as important, there is no single way to measure the essence of continuity of care in the hospital to homecare setting. Based on input from the interviewees and focus group participants, it is clear that most of the continuity-of-care elements have both subjective and objective aspects. This means it may be difficult to identify a single measure or standard for the smooth “flow” of services. What may be seen as continuous care by one patient may be seen as less than ideal by another. It is also clear that what the formal system calls “continuous care” may not be the same as what patients and/or informal caregivers would call it. This shows how important communication and information flow throughout the care process is, and how all stakeholder groups — including patients and informal caregivers — need to be involved in care planning and care delivery. In short, in an integrated healthcare system, both formal and informal stakeholders need to be actively involved.

Methodology

A total of 248 individuals participated in the study. Patients ranged in age from 65 to 89 years (Mean=72.70, sd=5.44; 23 males and 27 females). Informal caregivers ranged in age from 35 to 84 years. Hospital nurses, case managers, and community nurses were also interviewed. All participants were located in the same district health council region.

In phase one of the study, an exhaustive interview strategy was used. Initially, participants saw a picture of the flow of care from a stay in hospital to convalescence at
home. All subjects were asked what continuity of care meant to them — to explain the roles they felt they could play in helping continuity along, and to specify barriers, if any, that might prevent them from fulfilling these roles. In phase two of the study, the research literature was reviewed to determine whether measurements existed for the continuity of care elements identified in phase one. These measurements were adopted or modified for use, where possible. Where no measurement index could be found, an index was created. Following this, several focus groups gave feedback on the feasibility and validity of the suggested ways to measure continuity.

Results

Seven primary elements of continuity were identified by the five stakeholder groups: perception of good care, access to needs-based health services, stakeholder knowledge and communication, care provider attitudes and competency, consistency of care providers, uninterrupted delivery of care, and waiting time.

There were significant differences in how often the elements were mentioned. Patients and informal caregivers mentioned perception of good care, care provider attitudes, and waiting time more frequently than the case managers, community nurses, and hospital nurses. The latter stakeholder groups mentioned knowledge and communication, consistency of care providers, and uninterrupted delivery of care more frequently. Access to needs-based health services was mentioned often by all stakeholder groups. The informal stakeholders mentioned elements that were more subjective in nature, whereas the elements emphasized by the representatives from the formal system were more objective and system-based. After reviewing measurement literature and holding several focus groups, measurement indicators were developed for each element of continuity of care.

In response to the question “What kinds of action could you personally take to ensure continuity of care?”, both patients and informal caregivers listed communication with doctors and care providers. Patients also mentioned that they could be co-operative by complying with the care plan established by professionals and follow physicians’
recommendations. The most frequently mentioned theme by all formal care providers was communication, and the importance of ensuring accurate information was also stressed. In general, the actions mentioned by the informal stakeholders were more passive in nature.

Participants cited a variety of barriers to the personal actions they could take to ensure continuity of care. Patients mentioned their (or a family member’s) poor health or difficulties with memory as a potential barrier. Informal caregivers most often stated that the barrier was lack of services or equipment for homecare. Case managers and hospital nurses most often mentioned system-related barriers such as lack of funding or scheduling and co-ordination, whereas community nurses most often said the barriers were a lack of time and a heavy workload.
Study Rationale

As suggested in a comprehensive review conducted for CHSRF by Reid, Haggerty, and McKendry (2002), there has been little research on continuity of care outside the domain of primary care. Indeed, they drew the following conclusions about research in this area, all of which were important considerations for the present study:

- Most continuity of care research deals exclusively with the primary care setting.
- The elements making up continuity of care are specific to the setting in question. Thus, the definition and measurements of continuity pertaining to primary care settings would be different than those pertaining to community care settings.
- Seldom have a cross-section of stakeholders been consulted for their views on continuity. For example, patients have rarely been asked for their views on continuity of care. Typically, most of those involved in research, planning, or consultations in relation to continuity-of-care issues are from the formal healthcare system (such as hospital administrators and physicians.)

Our own review of the relevant literature has shown that the Canadian healthcare system is placing greater emphasis on the co-ordination of the formal and the informal systems of care in order to help bridge the service gaps and to alleviate rising healthcare costs. If this is indeed the case, then it would be logical to consult a wide range of stakeholders from the formal and informal systems when addressing quality-of-care issues such as continuity of care. Thus, the purpose of the present research project was to understand the multi-dimensional nature of continuity of care in the context of seniors being released to community-based care following a brief (less than 10-day) hospital stay.

Study Objectives

1. Identify the elements of continuity of care in the context of transition from hospital-based care to community-based care.
2. Understand continuity of care from the perspectives of different stakeholder groups (i.e., hospital nurses, community nurses, case managers, patients, informal caregivers).
3. Discover the roles that different stakeholder groups thought they could play to ensure or maximize continuity of care.

4. Examine whether urban/rural differences existed in the elements suggested by the stakeholders. For the current study, rural was operationalized as living or working in an area that was at least 80 kilometers from an urban centre (more than 50,000 people) and having a population of less than 10,000 (Pong & Pitblado, 2001).

5. Develop measurement indices for different elements of continuity of care.

Methodology

Participants

Subjects from five stakeholder groups (hospital nurses, community nurses, case managers, patients, informal caregivers), half from urban settings and half from rural settings, were interviewed. These subjects were recruited with the help of the research partners (e.g., the Sudbury Regional Hospital, the Manitoulin-Sudbury Community Care Access Centre, and the Victoria Order of Nurses - Sudbury Chapter).

A total of 248 individuals participated in the study. Patients (N=50) ranged in age from 65 to 89 years (Mean=72.70, sd=5.44; 23 males and 27 females). Informal caregivers (N=50) ranged in age from 35 to 84 years (Mean=62.54, sd=11.14; 16 males and 34 females). Hospital nurses (N=57), case managers (N=51), and community nurses (N=40) also participated. All participants (rural and urban) were located in the same District Health Council region.

In the second phase of the study, once the elements of continuity of care had been identified, healthcare administrators and healthcare workers participated in four focus groups to provide the researchers with feedback and suggestions concerning the measurement indicators developed for each element of continuity identified in the first phase.

Procedures - Phase I

Hospital nurses first approached patients to inquire about their willingness to participate in a research project. If the patient was interested, a nurse-researcher visited the patient,
explained the study, and asked if they would participate once discharged from the hospital. Patients were contacted five days after discharge to organize an interview. Informal caregivers were recruited by asking the patients whether they had someone who could help care for them and if that individual would be interested in participating. The named individual was contacted by phone to arrange for an interview.

Hospital nurses from a variety of floors (i.e., vascular, medical, psychiatric) were initially approached by a clinical leader to ask whether they would be willing to participate. The interviewer then scheduled a time and place for the interview (normally during work time). Case managers and community nurses were sent a memo through their workplace explaining the study and requesting their participation. Most were interviewed during work hours at their central office.

It was important that the interview protocol did not define continuity *a priori* for the participants. After extensive pilot testing, it was found that the best interview protocol was to present a picture (see Appendix A) to the interviewee consisting of four scenes connected by arrows depicting the following text at the top of each scene: ‘Entered the hospital’, ‘Cared for in hospital’, ‘Discharged and sent home to continue recovery’ and ‘Cared for at home’. An exhaustive interview process was employed for each question. Participants were repeatedly asked to clarify their statements and the interviewer repeatedly summarized what the interviewee had said to that point, continuing to do so until no new ideas could be generated.

First, participants were referred to the picture and asked how they would define continuity of care in this context. Next, participants were asked to identify the important elements of continuity as they had defined it. Following this, participants were asked to suggest (personal) actions they could take to ensure or facilitate this continuity. Finally, participants were asked to suggest the problems/barriers that could make it difficult to complete the personal actions they had suggested. As a conclusion to the interview, the participants were asked once again for a definition of continuity and then thanked for their participation. Most participants were interviewed in-person, however, four patients and their caregivers were interviewed on the phone. The interview length ranged from 8-45 minutes (M=15.84 minutes, s.d.=8.14).
Procedures - Phase II

The research literature was reviewed to determine whether measurement indices existed for the continuity-of-care elements identified in Phase I. These indices were adopted or modified for use, where possible. Where no measurement index could be found, an index was created. Following this, several focus groups were run to gain feedback on the feasibility and validity of the suggested measurement indices.

Results

Elements of Continuity of Care

After several iterations of the content analysis including collapsing of definitional categories, seven distinct elements of continuity of care were identified. These elements, their definitions, and representational stakeholder quotes are shown in Table 1.
<table>
<thead>
<tr>
<th>Theme</th>
<th>Definition (plus exemplary participant quotations)</th>
</tr>
</thead>
</table>
| Stakeholder Knowledge and Communication | Everybody, including the patient, is working together in a co-ordinated fashion to ensure that care providers and patients are aware of and understand the patient’s situation, condition and needs.  
“Being told what is happening and why. For example, why am I on a restricted diet” (patient)  
“Everybody working together for benefit of patient” (informal carer)  
“Appropriate teaching to client at every step” (case manager) |
| Uninterrupted Delivery of Care       | No gap in services or in meeting health needs, including follow-up.  
“What is started in hospital is continued at home without interruption” (case manager)  
“It doesn’t stop once they leave here” (hospital nurse) |
| Waiting Time                        | The patient does not have to wait long for services/care.  
“Not having to wait for help” (patient)  
“Service provided. Not waiting 6 months” (informal caregiver) |
| Access to Needs-Based Health Services | The patient has access to the same services in the hospital and in the home. The services are effective in meeting the patient’s needs.  
“Someone available when you need that care” (patient)  
“Having identified needs met on an ongoing basis” (case manager)  
“Continue meeting needs in home” (hospital nurse) |
| Perception of Good Care             | The patient feels that he/she is receiving good quality care.  
“Getting good care that you need when you are sick” (patient)  
“Means that you are being cared for properly” (caregiver) |
| Care Provider Attitudes and Competency | The care providers act in a friendly and professional manner toward the patient.  
“Caring people, caring nurse taking care of you” (patient)  
“People that look like they really care about you” (caregiver) |
| Consistency of Care Providers       | The patient is receiving care from the same providers throughout the care process.  
“Ideally it is having the fewest people looking after the person” (community nurse)  
“Same providers during their stay and once they get home” (case manager) |
An analysis of the subjects and the stakeholder groups in which they belonged revealed some interesting differences and similarities in their perspectives with respect to continuity of care. The frequency with which each element was mentioned and the differences among stakeholder groups for each element are shown in Table 2.

- All stakeholder groups identified “access to needs-based health services” and “stakeholder knowledge and communication” as fundamental to continuity of care.
- “Waiting time,” “perception of good care,” and “care provider attitudes and competency” were mentioned primarily by patients and informal caregivers (i.e., those in the informal care system).
- “Uninterrupted delivery of care” and “consistency of care providers” were mentioned primarily by nurses and case managers (i.e., those in the formal healthcare system).

### Table 2 Cell counts for each theme mentioned within each stakeholder group

<table>
<thead>
<tr>
<th>THEME</th>
<th>All Participants</th>
<th>Patient N=50</th>
<th>Informal Caregiver N=50</th>
<th>Case Manager N=51</th>
<th>Community Nurse N=40</th>
<th>Hospital Nurse N=57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception of Good Care</td>
<td>65</td>
<td>31&lt;sup&gt;a&lt;/sup&gt;</td>
<td>24&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1&lt;sup&gt;b&lt;/sup&gt;</td>
<td>6&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>62%</td>
<td>48%</td>
<td>5.8%</td>
<td>2.5%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Access to Needs-Based Health Services</td>
<td>102</td>
<td>16</td>
<td>26</td>
<td>16</td>
<td>17</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>41%</td>
<td>32%</td>
<td>52%</td>
<td>31.3%</td>
<td>42.5%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Stakeholder Knowledge and Communication.</td>
<td>76</td>
<td>8&lt;sup&gt;b&lt;/sup&gt;</td>
<td>10&lt;sup&gt;d&lt;/sup&gt;</td>
<td>22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>18&lt;sup&gt;ac&lt;/sup&gt;</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>30.6%</td>
<td>16%</td>
<td>20%</td>
<td>43.1%</td>
<td>45%</td>
<td>31.6%</td>
</tr>
<tr>
<td>Care Provider: Attitudes and Competency</td>
<td>37</td>
<td>17&lt;sup&gt;b&lt;/sup&gt;</td>
<td>13&lt;sup&gt;d&lt;/sup&gt;</td>
<td>2&lt;sup&gt;bd&lt;/sup&gt;</td>
<td>3&lt;sup&gt;b&lt;/sup&gt;</td>
<td>2&lt;sup&gt;bd&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>14.9%</td>
<td>34%</td>
<td>26%</td>
<td>3.9%</td>
<td>7.5%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Consistency of Care Providers</td>
<td>51</td>
<td>0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>19&lt;sup&gt;ac&lt;/sup&gt;</td>
<td>24&lt;sup&gt;ac&lt;/sup&gt;</td>
<td>8&lt;sup&gt;ad&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>20.6%</td>
<td>0%</td>
<td>0%</td>
<td>37.3%</td>
<td>60%</td>
<td>14%</td>
</tr>
<tr>
<td>Uninterrupted Delivery of Care</td>
<td>78</td>
<td>8</td>
<td>5&lt;sup&gt;b&lt;/sup&gt;</td>
<td>26&lt;sup&gt;b&lt;/sup&gt;</td>
<td>10&lt;sup&gt;b&lt;/sup&gt;</td>
<td>29&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>31.5%</td>
<td>16%</td>
<td>10%</td>
<td>51%</td>
<td>25%</td>
<td>50.9%</td>
</tr>
<tr>
<td>Waiting Time</td>
<td>22</td>
<td>10&lt;sup&gt;b&lt;/sup&gt;</td>
<td>9&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2</td>
<td>0&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td></td>
<td>8.9%</td>
<td>20%</td>
<td>18%</td>
<td>3.9%</td>
<td>2.5%</td>
<td>1.75%</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>4%</td>
<td>0%</td>
<td>2%</td>
<td>1.9%</td>
<td>2.5%</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

*Column totals exceed 100% due to multiple responses. For the statistical comparison of frequencies (as indicated by the lettered superscripts) between individual cells within rows: a > b and c > d.
It is important to note that the elements mentioned more frequently by stakeholders representing the informal system (patients and informal caregivers) are subjective in nature, representing individual perceptions of “waiting”, “attitude”, and “goodness of care”. For example, whereas case managers and community nurses mentioned the importance of uninterrupted delivery of care being important to continuity, the patients and informal caregivers mentioned not having to wait for services as important to continuity.

No statistically significant differences were found between rural and urban stakeholders in their descriptions of continuity of care.

**Personal Actions to Ensure Continuity of Care** (see Table 3)

In response to the question “What kinds of action could you personally take to ensure continuity of care” (as defined by the participant) both patients and informal caregivers listed communication with doctors and care providers. They made comments indicating that along with their families they could keep the doctor informed and ask care providers for explanations, information, and help. Patients also mentioned that they could be cooperative by complying with the care plan established by professionals and follow the physician’s recommendations. Informal caregivers also mentioned that they could make sure they were a presence in the care process, verifying that the patient was receiving the information/services needed.

The most frequently mentioned theme by all formal care providers was care provider communication, including items such as communicating with each other to facilitate the sharing of information, working as a multi-disciplinary team, attempting to establish inter-agency links, and communicating with patients. In addition, these groups emphasized that care providers must actually do something with the information they receive. Case managers also mentioned making continuity of care a priority by encouraging all agencies, including their own, to provide continuity and by voicing concerns to the appropriate groups. Community and hospital nurses also mentioned care provider information. For example, charts and care plans must be complete, accurate, and updated.
Table 3 Potential actions to be taken by different stakeholder groups to facilitate continuity

<table>
<thead>
<tr>
<th>Personal Action</th>
<th>All Participants N=248</th>
<th>Patient N=50</th>
<th>Caregiver N=50</th>
<th>Case Manager N=51</th>
<th>Community Nurse N=40</th>
<th>Hospital Nurse N=57</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient-Co-operation</td>
<td>20 (8.1%)</td>
<td>17a (34%)</td>
<td>3b (6%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Patient/Family-Communication</td>
<td>57 (23%)</td>
<td>24</td>
<td>29 (58%)</td>
<td>3</td>
<td>0</td>
<td>1a (1.8%)</td>
</tr>
<tr>
<td>Family-Presence</td>
<td>20 (8.1%)</td>
<td>1c (2%)</td>
<td>19b (38%)</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Assess./Discharge Planning</td>
<td>23 (9.3%)</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td>CP-Communication</td>
<td>86 (34.7%)</td>
<td>0</td>
<td>0</td>
<td>32</td>
<td>21</td>
<td>33</td>
</tr>
<tr>
<td>CP-Information</td>
<td>59 (23.8%)</td>
<td>0</td>
<td>1</td>
<td>16</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>CP-Knowledge</td>
<td>19 (7.7%)</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>CP/Pat./Family Education</td>
<td>48 (19.4%)</td>
<td>0</td>
<td>2</td>
<td>21</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>CP-Keeping Track</td>
<td>15 (6.0%)</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>CP-Prioritize Cont. of Care</td>
<td>53 (21.4%)</td>
<td>0</td>
<td>0</td>
<td>23</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>18 (7.3%)</td>
<td>4</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
</tbody>
</table>

* Column totals exceed 100% due to multiple responses. For the statistical comparison of frequencies (as indicated by the lettered superscripts) between individual cells within rows: a > b.

**Barriers to Achieving Continuity of Care**

Participants cited a variety of barriers to the personal actions they could take to ensure continuity of care (see Table 4). Patients mentioned their (or a family member’s) poor health or difficulties with memory as a potential barrier. Informal caregivers most often stated that the barrier was lack of services or equipment for home care. Case managers and hospital nurses most often mentioned system-related barriers such as lack of funding or scheduling and co-ordination, whereas community nurses most often said the barriers were a lack of time and a heavy workload.
Table 4 Barriers which may prevent stakeholder groups from taking action to facilitate continuity

<table>
<thead>
<tr>
<th>Barrier</th>
<th>All Participants N=248</th>
<th>Patient N=50</th>
<th>Caregiver N=50</th>
<th>Case Manager N=51</th>
<th>Community Nurse N=40</th>
<th>Hospital Nurse N=57</th>
</tr>
</thead>
<tbody>
<tr>
<td>No barriers listed</td>
<td>95 (38.3%)</td>
<td>19 (38%)</td>
<td>27 (54%)</td>
<td>13 (25.5%)</td>
<td>17 (42.5%)</td>
<td>19 (33.3%)</td>
</tr>
<tr>
<td>Workload/Time Related</td>
<td>79 (31.9%)</td>
<td>5b (10%)</td>
<td>6b (12%)</td>
<td>26a (51%)</td>
<td>25d (62.5%)</td>
<td>17d (29.8%)</td>
</tr>
<tr>
<td>Attitude of CP</td>
<td>30 (12.1%)</td>
<td>6 (4%)</td>
<td>2 (4%)</td>
<td>10 (19.6%)</td>
<td>6 (15%)</td>
<td>6 (10.5%)</td>
</tr>
<tr>
<td>Attitude of Patients/Fam</td>
<td>28 (11.3%)</td>
<td>2 (4%)</td>
<td>6 (12%)</td>
<td>5 (9.8%)</td>
<td>2 (5%)</td>
<td>13 (22.8%)</td>
</tr>
<tr>
<td>Staffing</td>
<td>25 (10.1%)</td>
<td>0 (0%)</td>
<td>1 (2%)</td>
<td>12 (23.5%)</td>
<td>6 (15%)</td>
<td>6 (10.5%)</td>
</tr>
<tr>
<td>Services</td>
<td>32 (12.9%)</td>
<td>1b (2%)</td>
<td>7 (14%)</td>
<td>5 (9.8%)</td>
<td>2b (5%)</td>
<td>17a (29.8%)</td>
</tr>
<tr>
<td>Information</td>
<td>38 (15.3%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>14 (27.5%)</td>
<td>9 (22.5%)</td>
<td>15 (26.3%)</td>
</tr>
<tr>
<td>Knowledge</td>
<td>20 (8.1%)</td>
<td>2 (4%)</td>
<td>0 (0%)</td>
<td>6 (11.8%)</td>
<td>5 (12.5%)</td>
<td>7 (12.3%)</td>
</tr>
<tr>
<td>System Related</td>
<td>74 (29.8%)</td>
<td>1b (2%)</td>
<td>3b (6%)</td>
<td>32a (62.7%)</td>
<td>19a (47.5%)</td>
<td>19a (33.3%)</td>
</tr>
<tr>
<td>Health Related</td>
<td>21 (8.5%)</td>
<td>10 (20%)</td>
<td>5 (10%)</td>
<td>1 (2%)</td>
<td>2 (5%)</td>
<td>3 (5.3%)</td>
</tr>
<tr>
<td>Other</td>
<td>13 (5.2%)</td>
<td>2 (4%)</td>
<td>4 (8%)</td>
<td>3 (5.9%)</td>
<td>1 (2.5%)</td>
<td>3 (5.3%)</td>
</tr>
</tbody>
</table>

* Column totals exceed 100% due to multiple responses. For the statistical comparison of frequencies (as indicated by the lettered superscripts) between individual cells within rows: a > b and c > d.

Measurement Indices for the Continuity-of-Care Elements

After reviewing existing measurement literature and conducting several focus groups, measurement indices were developed for each element of continuity of care (see Table 5 for a list and a brief description of the indices). It is important to note that future research will be necessary to assess the validity and reliability of these measurement indices. Most of the continuity-of-care elements have both objective and subjective measurement indices. Whereas the objective measures quantify the tangible aspects of the healthcare delivery system, the subjective measures capture the caregivers’ and/or care receivers’ impression of or subjective feeling toward the service or care. This objective-subjective
distinction is in keeping with the research literature and the nature of the continuity-of-care elements identified during the interview phase of the study.

One important issue, if continuity is to be measured, is the source of the measurement data. Although five stakeholder groups were interviewed, it would not be feasible to gather data from all stakeholder groups. It seems clear that both the formal and informal system should be assessed. Table 5 suggests that the best sources for this data would be the patients receiving the care and the case managers co-ordinating the care. The latter group was chosen in particular because their role is to ensure continuity between hospital and home care. In Ontario the case managers are also responsible for the co-ordination of the formal-system-determined needs-based services. The data collected from the case managers are termed “objective” because the data is derived from the system and not the case managers perception or opinion.

Table 5 Indices for Measuring Elements of Continuity of Care

<table>
<thead>
<tr>
<th>Element</th>
<th>Objective Measure</th>
<th>Subjective Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Respondent: Case Manager</td>
<td>Respondent: Patient</td>
</tr>
</tbody>
</table>
| Stakeholder Knowledge and Communication | • Referral Data Inventory (RDI) (see Anderson and Hill, 1994)  
• Additional Therapies Form (indicate presence or absence of information) | • Patient Communication Questions (4-point scale (yes, to some extent, no, not applicable) |
|                                | 1. Physiotherapy  
Received in Hospital  
Further sessions required | 1. Were you sufficiently informed about the medications that you were required to take?  
In the hospital?  
While at home? |
|                                | 2. Occupational Therapy  
Received in Hospital  
Further sessions required | 2. Do you feel as though you were kept informed about plans for your care?  
In the hospital?  
While at home? |
|                                | 3. Speech-language adult therapy  
Received in Hospital  
Further sessions required | 3. Were you taught how to take care of yourself before you were discharged from the hospital? |
|                                | 4. Nutrition Counselling Service  
Received in Hospital  
Further sessions required | 4. Were you taught how to take care of yourself by the workers who came into your home? |
|                                | 5. Social Work Service  
Received in Hospital  
Further sessions required | Not applicable |
|                                | • Determination of first and subsequent visits (yes/no) for each type (e.g. physiotherapy, occupational therapy, etc.) of service ordered | |
|                                | 8. Did first visits occur within the priority category identified? | |
|                                | 9. Did subsequent visits continue to occur as scheduled? | |
| Uninterrupted delivery of care | • Time interval between date discharged from hospital and first visit (yes/no)  
1. Did patient receive a call within one to two days after discharge from hospital? | Patient perception of waiting time: (Yes, To some extent, No) |
|                                | • Do you think services were provided in a timely fashion?  
In the hospital? | |

10
<table>
<thead>
<tr>
<th>Element</th>
<th>Objective Measure Respondent: Case Manager</th>
<th>Subjective Measure Respondent: Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>In your home?</td>
<td></td>
</tr>
<tr>
<td>Element</td>
<td>Objective Measure Respondent: Case manager</td>
<td>Subjective Measure Respondent: Patient/Informal Caregiver</td>
</tr>
<tr>
<td>Access to Needs-Based Services</td>
<td>Did the patient receive the services in the home that were ordered for them upon discharge from the hospital? If no, please specify.</td>
<td>Patient Perception of Access to Services: (Yes, To some extent, No)</td>
</tr>
<tr>
<td></td>
<td>Number of patients on waiting list for a service</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Length of wait on waiting list</td>
<td></td>
</tr>
<tr>
<td>Perception of Good Care</td>
<td>Not applicable</td>
<td>Patient Perception of Care: (Very Poor, Poor, Fair, Good, Very Good)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Care Provider Attitudes and Competency</td>
<td>Not applicable</td>
<td>Patient Perception of Attitudes: (Some of the time, most of the time, all of the time)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Implications and Recommendations**

1. Continuity of care in the context of seniors who, following a brief stay in hospital, continue to convalesce at home, is multifaceted. Seven elements of continuity of care have been identified and there are significant differences as to what various stakeholders view as important. Thus a single measure is inadequate to capture the essence of continuity of care in the hospital to home care setting. This could mean that for research and quality-of-care assessment purposes, measuring continuity of care could be a time-consuming exercise. We have attempted to minimize this demand by suggesting that the measurement indices are to be completed by either the case manager or the patient.
2. The next step in the development of measurement indices is to determine the validity and reliability of the measurement indices mentioned in Table 5. It is also important to show which element(s) is/are linked to health outcomes or satisfaction. Findings from future research may make it possible to reduce the number of indices and, thus, make it more convenient to collect data on continuity of care.

3. Based on input from the interviewees and focus group participants, it is clear that most of the continuity-of-care elements have both subjective and objective aspects. Thus, it may be difficult to identify a single measure or standard for the smooth “flow” of services. What may be seen as continuous care by one patient may be seen as less than ideal by another. It is also clear that what the formal system may deem to be “continuous care”, may not be the perception of the patient and/or informal caregiver. This observation emphasizes the importance of communication and information flow throughout the care process and that all stakeholder groups, including patients and informal caregivers, need to be involved in the care planning and care delivery process. In short, in an integrated healthcare system, the formal and informal system need to be actively involved.

4. In a recent article that appears in *The Gerontologist*, Corazzini-Gomez (2002) has shown that the personality and demeanour of clients affect case managers’ decisions regarding care. Conversely, the present research has found that seniors/patients believe that a caregiver’s attitude is an important element of continuity of care. Together, the Corazzini-Gomez article and the present study show that healthcare is an interpersonal and interactional process. Not only may attitudes and demeanour affect the flow of services and the perception of the flow of services, they may also affect quality of care and may indirectly influence health outcomes. Both caregivers and care receivers need to be sensitized to the possibility that their attitudes matter to the health outcome.

5. When asked to indicate what they could do to enhance continuity of care, patients and informal caregivers (perhaps not unexpectedly) suggested a role much more passive (e.g., they could “follow instructions”) than that suggested by formal
caregivers such as nurses. One of the objectives of our study is to better understand the interface between the formal and informal systems of care (including self-care). If the effectiveness of a care team that includes both formal and informal caregivers is to be maximized, all those involved need to be more proactive. For example, we have found that effective communication amongst members of a team is conducive to strengthening continuity of care. This will only be possible if all those involved make a concerted effort to communicate and work with one another. It appears that the Romanow Commission is in agreement with this approach. In his report, Romanow (2002) urges that “more needs to be done to invest in prevention and promotion activities, including ways of encouraging individuals to take more responsibility for their own health.”

6. Do the opinions of those surveyed in the present research mesh with other Canadians? The answer is yes. The recent Romanow (2002) report suggests that one of the primary concerns of Canadians is access to healthcare services. In the present research “access to needs-based services” was the one element suggested most often by those interviewed and by a majority of people in each stakeholder group. Common access problems include unavailable services and demand for services exceeding supply. Within the present context, Romanow reports that home care has become more important as hospital length of stay becomes shorter and shorter. Continuity of care in the transition from hospital to home-care context cannot be maximized without access to services. Romanow reports that waiting for services is a major concern of Canadians. Likewise, our stakeholders were concerned with waiting time and uninterrupted delivery of care. Romanow reports that Canadians are very concerned about quality of care. The patients and informal caregivers participated in this study suggested that professional attitudes were important to continuity of care. Thus, there appears to be considerable consistency between our results and the broader Canadian reality.

7. Lastly, Romanow (2002) reports that, “Canadians, who live in rural and remote areas [...] often feel they are not getting sufficient access to the health services they need”. Our study found no differences between rural and urban subjects in their concept of continuity of care. What does this mean? It appears that lack of access to health services by rural stakeholders has not changed their views of
what is necessary to achieve continuity of care. As Romanow implies, the healthcare system (formal and informal) will likely have to work harder to facilitate continuity of care in rural and remote areas.

**Research Dissemination**

The following steps have been or will be taken to ensure that the findings of this study are shared not only among researchers, but also with healthcare practitioners, decision-makers, and health services consumers.

1. The salient findings have been posted on the website of the Centre for Rural and Northern Health Research (CRaNHR) at [www.laurentian.ca/cranhr/continuity.html](http://www.laurentian.ca/cranhr/continuity.html). The CRaNHR website is frequently visited by health-service planners, healthcare providers, researchers, and other interested individuals from across Canada and around the world.

2. This specially designed continuity-of-care webpage contains a series of useful suggestions for stakeholders from the formal healthcare system and the informal care system. These suggestions are aimed at improving continuity of care for older persons in the context of the transition from hospital-based care to home care.

3. An issue of *Research in FOCUS on Research* will be devoted to this study on continuity of care. Published by CRaNHR, *Research in FOCUS on Research* is a research summary series, prepared by professional writers and written in user-friendly language, with a view to bringing research findings to a much wider audience. *Research in FOCUS on Research* publications are available free-of-charge to individuals and organizations on the CRaNHR mailing list and other interested persons upon request.

4. Two articles based on this study are in preparation by the investigators for submission to academic and professional journals.
References

1. Anderson MA, Hill PD. Psychometric properties of the referral data inventory. 

2. Corazzini-Gomez K. The relative effects of home care client characteristics on the 

3. Pong RW, Pitblado JR. Don’t take “geography” for granted: Some methodological 


Appendix A

Entered the Hospital

Cared for in the Hospital

Discharged & sent home to continue recovery

Cared for at home

Continuity of Care