Researchers and decision-makers from across Canada attended a two-day workshop in Vancouver, June 17 and 18, 2001, entitled “Concepts and Measures of Continuity of Care”. Participants were researchers who are actively engaged in continuity-related research in Canada, or policy makers who are interested in measuring continuity-related health system performance. In addition, we invited several experts in continuity-related research. The workshop’s objective was to arrive at a better understanding of the diverse ways that continuity of care has been defined and to examine measurement approaches. The ultimate goal was to identify key indicators of continuity that are appropriate to different settings and purposes.

The first day focused on gathering consensus on the common concepts of continuity. We also highlighted conceptual differences that arose. The participants largely endorsed the common themes that were identified in the discussion paper and helped refine these into core elements and types of continuity. The second day of the workshop focused on the measurement of continuity with a view to recommending continuity indicators for monitoring health system performance.

Overview of Workshop Activities

Day 1: Arriving at a Common Concept of Continuity of Care

The workshop began with an introduction from conference co-organizer, Jeannie Haggerty (Université de Montréal). This was followed by presentations from recognized leaders in the field, including Barbara Starfield (primary care, Johns Hopkins University) and George Freeman (primary care, Imperial College, London). Carol Adair (mental health, Alberta Mental Health Board), Donna Lynn Smith (nursing, University of Alberta).

Following the presentations there was a discussion facilitated by Louise Lemieux-Charles. The goal of which was to build consensus about core concepts of continuity. The discussion revolved around the following questions: Why are definitions of continuity of care divided into provider-oriented categories? Why are there divisions in types of care when cross-boundary so salient? Can generic elements to super impose over different types of continuity be identified?

Day 2: Identifying Measures of Continuity of Care

The morning began with an overview of the previous day’s activities followed by a presentation from Rick Hudson (BC Ministry of Health) giving the policy maker’s perspective on continuity. There was discussion and questions from decision makers.
Workshop co-organizer, Robert Reid (Centre for Health Services and Policy Research, UBC), presented on the issues related to continuity measures.

Participants broke out into four small groups identified by program area: primary care; acute hospital care; continuing and long-term care; and mental health care. The tasks for these groups were to: 1) assess the relevance and usefulness of each of the categories of continuity measures to the specific program area; 2) identify major research gaps in the knowledge about continuity in this context; 3) identify the measures that are likely to be most useful and relevant to policy and the data that is needed. The small groups reconvened and reported back, presenting the three main measures that were most useful in each of the program areas.

In the afternoon, the participants broke up into four small groups again. The objectives of two groups were to: develop approaches to measure continuity when the trajectory of patient care requires making transitions between program areas or organizational units; and identify areas of research related to the measures of continuity in this area. The objective of the other two groups was to develop a framework to assess continuity in a health care system. The participants reconvened one last time to report back on the afternoon small group sessions. Jeannie Haggerty presented the workshop wrap-up.

**Brief Summary of Workshop Presentations and Small-Group Discussions**

**Day 1: Arriving at a Common Concept of Continuity of Care**

**Presentations:**

Robert Reid & Jeannie Haggerty: Presentation of Discussion Paper
The review of the literature lead to the identification of five common themes surrounding continuity across the health care disciplines.
- Individual: care received and experienced by individuals over time.
- Longitudinal: care over time
- Sustained and consistent care: discrete service elements complement each other within a coherent management plan
- Information and information transfer: refers to accumulated knowledge of the patient as well as transfer of patient information from one provider to another.

George Freeman
Dr. Freeman discussed the multidisciplinary ‘scoping exercise’ that was recently conducted to identify key issues relating to continuity in the United Kingdom. This exercise lead to the identification of six core elements of continuity.
- Experienced continuity: care as experience by individuals
- Longitudinal continuity: the chronology of health seeking behavior by a patient with respect to a given provider over time; may refer to either concentration of care or duration of affiliation.
• Relational or personal continuity: refers to the strength or quality of relationship with a provider.
• Informational continuity; sharing of information between providers in the care of a patient.
• Flexible continuity: care is adjusted to the evolving needs of the patient over time.
• Cross-boundary continuity:

Barbara Starfield:
In defining continuity generally as an "uninterrupted succession", Dr. Starfield differentiated between two kinds of longitudinal relations
• Maintaining aspects of care that are intrinsically longitudinal, such as the relationship with a given provider.
  This aspect of continuity is person-focused
• Bridging of discrete events over time and over a patient's trajectory with a given illness (management of disease, coherency of management plan, within and between providers)
  • Problem recognition and management of disease
  • Coordination between different providers to manage disease; requires clear delineation of responsibilities.

Dr. Starfield identified information transfer as the essence of continuity and the one that would be amenable to measurement.

Carol Adair
An extensive review of the mental health literature lead identification of continuity items that fell into four domain groupings:
• Relationship base - respect, caring, support and advocacy within the provider-client relationship
• Responsive treatment - the management plan needs to be flexible to the client's changing needs over time
• Actions to ensure access - actions taken on the part of the provider to actively ensure that needed care is made available.
• Linking across and coordination of services within the system

Donna Lynn Smith
Although no specific elements of continuity were identified with respect to nursing care, Dr. Smith emphasized the ways in which the care needs of individuals can vary over their episode of care, and the challenge of adapting care to those needs. She also made the point that adapting that care requires professionals with expert knowledge.

Rick Hudson
A decision-maker’s perspective of continuity. Dr. Hudson discussed the importance of linking continuity with performance measures and its particular interest to policy makers. His recommendations included:
• Focus on outcomes related to continuity sensitive conditions (e.g., high blood pressure)
• Focus on transfer of care across providers and organizations as well as systems to improve prescribe follow-up.
• Continuity of management of one problem may improve outcomes for not only that problem but for others.

Summary of Discussion: Arriving at Consensus about Core Concepts of Continuity

There was some agreement surrounding a generic definition of continuity. A definition of continuity should capture the longitudinal element, should refer to patients (not systems), and it should incorporate the context of care provided (i.e. acute vs primary; across different providers).

Asking participants to distil the definition of continuity down to a single essence was a bit more difficult and contentious. Some participants argued that the essence of continuity is the flow of information (from one provider to another, within and across disciplines and within and across institutions). Others supported the argument that the interpersonal or knowledge components are the essence of continuity. Some noted this distinction between information transfer and transfer of knowledge could lead to informal and formal continuity. They were concerned that informal continuity is too difficult to measure and we should focus on formal, measurable continuity.

There was little agreement among participants when asked to identify key outcomes salient to the issue of continuity, although they agreed that linking continuity with outcomes is important.

Day 2: Identifying Measures of Continuity of Care

Morning Small Group Sessions: Measuring Continuity in Different Care Contexts

Group A: Measurement in Primary Care

The group felt that the existing measures for longitudinal and relational continuity are good but not perfect (i.e. they should capture the context of care). However, they felt that to adequately measure information transfer and consistency of a management plan in primary care we need better tools and better information systems.

The group suggested that future research in continuity measures for primary care should focus on: creating/validating team-based measures; delving into patient-doctor relationship literature to develop measures that capture the experiential element of continuity; and, examining the link between information transfer and knowledge of the patient. There was some discussion of creating registry and recall systems but no definitive recommendation for what these systems should look like.
Group B: Measurement in the Acute Care Setting

The group identified a definite gap in all continuity measures for this area they made several suggestions for sources of data (e.g. satisfaction surveys, chart audits, incident reports) and types of questions to ask. (e.g. do you know who to contact if something happens?) They agreed that measures for continuity in acute care should capture the patient orientation and the process (handing off and picking up of information).

Group C: Measurement in Continuing and Long Term Care

The group identified multiple layers in the measurement of chronological/longitudinal continuity in continuity and long-term care: continuity of the case manager; provision of care by the team; and levels of direct care. Concentration of Care with particular providers was identified as important in this area.

The group felt relational measures in this area need development. Qualitative measures were recommended to understand the client’s perspective and survey tools were suggested to provide a breadth of understanding. New measures should capture the relationship the client has with each provider, as well as linkages between and among providers (i.e. what proportion of episodes of care are linked among providers?).

Fundamental questions that measures of information transfer should address were identified. Is it done? Do systems exist? Is it effective? What is the impact?

The distinction between continuity of knowledge and information transfer was reiterated. Although the group did not identify specific measures to capture continuity of knowledge they acknowledged the measure needs to capture its complexity: the contextual understanding of the patient and the patient’s care.

Continuity of a management plan was discussed but no specific measures were recommended.

Group D: Measurement in Mental Health Care

Like the primary care and continuing care groups, this group recommended that longitudinal/chronological measures should reflect continuity of team care as well as single provider care.

Existing measures of relational continuity were felt to be good but not perfect. The group recommended the Enablement Index (Freeman) and the Patient Perception measure (Stewart). They also suggested that new measures should include both qualitative and quantitative aspects.

The group recommended the development of new continuity measures for information transfer in mental health. The new measures should capture the timeliness, applicability,
and completeness of transfer. Measures of continuity of knowledge should reflect how well providers know their clients.

There was concern from the group surrounding the definition of the consistency of a management plan. They did not recommend any measure but suggested the creation of a patient registry.

The group noted that most contacts in mental health care are not with the medical system, therefore the information is not available in existing administrative data, posing a possible barrier to measurement.

**Afternoon Small Group Sessions: Measuring Continuity Across Care Contexts**

**Group A: Measuring Continuity Across Program Transitions**

Using a patient with a chronic illness requiring complex care, the group identified several types of breaking points: for the patient (e.g. life cycle transition), for the provider (e.g. informal to formal care); and within the system (e.g. restructuring). The group recommended identifying whom, how and where those transitions are coordinated. They suggested filling gaps in our current knowledge about facilitating program transitions by: asking patients what they want and examining how other sectors do it. They also called for a link between continuity measures to health outcomes.

**Group B: Measuring Continuity Across Program Transitions**

The second group used cancer care as an example of potential breaking points in transitions (e.g. from primary, to acute, to community to palliative). They recommended using case managers or patient advocates to maintain continuity and suggested chart audits and patient surveys to measure transition discontinuity.

The group also recommended preventive health maintenance (e.g. creating call-back lists to follow-up with patients like veterinarians do for cat immunizations; dentists and preventive dental care follow-up)

Continuous, information availability and follow-up were identified as unifying themes.

**Group C: Developing a Regional Reporting Framework**

This group suggested many methods for comparing continuity between regions by looking at rural or remote service provision, care for First Nations people, care in the inner city, and care to homeless people or refugees.

Primary care capacity-access was identified as a means of assessing continuity in a health system. Measures included: counting the number of primary care providers/100,000 population; measuring provider turnover; and counting the number of visits / year to a primary care provider.
Methods of assessing continuity of care from the hospital to the community were discussed. The group suggested identifying the desired performance in this kind of transition and comparing it to the actual performance (e.g. time period from release to community to actual follow-up).

**Group D: Developing a Regional Reporting Framework**

This group recommended two measurement approaches to compare continuity across regions: focusing on discontinuity and avoiding bad outcomes (quantity), and focusing on continuity as a positive attribute (quality). They suggested looking at continuity-sensitive populations (e.g. mental health; frail elderly), and benchmarking continuity-sensitive outcomes. They also suggested routinely surveying providers and patients.