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GUEST EDITORIAL

Transitions, Continuity, and Nursing Practice

Margaret B. Harrison

Continuity of care is a term commonly used in nursing and in health-care circles. The continuity-of-care concept is considered both an aim and a philosophy that affects the delivery of care. Most clinicians consider continuity a standard of care. The notion of continuity has been conceptually intertwined with discharge planning, transitional care, coordinated care, continuing care, and ongoing care.

A distinction must be made between regular, ongoing sources of care, referred to as longitudinality, and the concept of continuity (Bedder & Aiken, 1994; Rogers & Curtis, 1980; Starfield, 1980). A definition that encompasses longitudinality, but also integration and comprehensiveness across transitions, with care provided over time in various episodes, is crucial. Consideration must be given to care activities (therapeutic and self-care) and linkages (communication, documentation, referrals, etc.) and the balance of care provision between professionals on the one hand and individuals and families on the other (Harrison, Browne, Roberts, Graham, & Gafni, 1999). For patients this means receiving the care they need, over time, in a coordinated and connected manner, with planned and supported continuity between the care they receive from professionals such as nurses and the care they may be assuming (or resuming) themselves. From a provider's perspective, it means articulating *transfe*r rather than *admit and discharge,* where responsibility typically begins and ends. Ideally it involves an in-reach and outreach that may not be formally funded or administered, by either the setting or the sector of care. To achieve continuity, settings and providers must make a proactive, systematic, intersectoral effort at the transition points.

Continuity always involves transitions on the part of individuals, such as well to ill, home to hospital, and the gaps they may encounter along the way. For nurses, transitions are a focus of practice, as continuity involves transitions in care and affects mainly populations with complex health issues. During times of transition, the nurse is very often the health professional most involved in evaluation and in planning and delivering the change in care that is required. Complex health populations are characterized by requiring care in more than one health sector, having two or more chronic conditions, or when day-to-day management calls for the participation of the individual and the family (Harrison, Browne, Roberts, Tugwell, & Gafni, 2002).

Transition may take many forms. A developmental transition could be that from couple to family in maternity care or from pediatric to adult care in the management of muscular dystrophy or cystic fibrosis. Health-sector transitions include hospital to home or home to long-term care. There may be transitions related to the illness itself such as diagnosis to treatment to palliation in cancer care. Sometimes two or more transitions occur at the same time — for example, condition and sector transitions in the case of diagnosis in an outpatient venue and subsequent hospitalization for complex medical or surgical care. Nursing bridges all types of single and multiple transitions. Once the diagnostic procedures and medical treatments are complete, the nursing care shifts to support for self-management and the maintenance of wellness throughout the transitions. Nursing therapeutics may be restorative, promotive, preventative, or interventive in nature (Chick & Meleis, 1986; Meleis, Sawyer, Im, Messias, & Schumacher, 2000; Schumacher & Meleis, 1994). Nursing care is critical to successful transition.

Continuity-of-care concepts date back to the rise of hospital care in the early 1900s (Shamansky, Boase, & Horn, 1984). Nurses provided leadership in research focused on transitions and continuity. One of the first studies was an investigation of the hospital-to-home transition (n = 200) conducted in Cleveland by Mary Strong Burns, RN, early in the last century (Burns, 1921). Discharge planning grew out of the early work on hospital-to-home transition. More recently, continuity has become a focus of professional and accreditation bodies, and, although still largely centred on hospital transitions, has broadened to include transitions in other sectors. This is partly due to the profound shift in the direction of health-care delivery in the mid-1980s in North America, from largely institutionally based care to community- and home-based alternatives. This direction has continued and challenges existing structures and processes across the entire continuum to address continuity. Research, however, remains developmental. A report commissioned by the Canadian Health Services Research Foundation (CHSRF), involving a literature review and consultation process, concluded that (1) continuity is perceived differently in primary care, mental health care, nursing, and condition-specific care; and (2) it is premature to identify specific indicators of continuity (Reid, Haggerty, & McKendry, 2002). The CHSRF identified two core elements: experience of care by an individual with his/her provider, and the fact that care continues over time. Conceptual and measurement issues in continuity clearly merit more research attention, and this effort must be addressed by many disciplines using multi-method approaches.

For this issue of the Journal, we received papers describing research studies, addressing methodological issues, and analyzing theoretical issues related to continuity of care. The authors report on transitions within several different complex populations. Durbin and colleagues evaluate the structure of community and outpatient programs dedicated to continuity in mental health care. They conclude that program structure and delivery do not influence the continuity of care experienced by clients, but that "subjective continuity" may be more dependent on provider and relationship variables and should be further examined. Sword and colleagues address continuity following a reduction in the length of postpartum hospital stays in Ontario. The authors raise concerns about current health strategies and the lack of attention to a potentially significant aspect of care, informal and voluntary supports during the postpartum period. This may be an overlooked component of multi-interventions for families following childbirth. Flanagan describes transitional measures for newly released prisoners with significant health problems such as AIDS, tuberculosis, and hepatitis. A key issue in enhancing continuity for these groups is improved tracking of information across correctional and intermediary settings.

The research papers are augmented by several invited pieces focusing on different aspects of continuity. A recent nurse-led community service (Karen Lorimer) for a population with chronic wounds demonstrates the iterative process of producing and using evidence to improve continuity. Capturing meaningful outcomes and the challenge this presents across the continuum of care is addressed in the Designer's Corner as Diane Doran reflects on a recent Ontario-wide initiative. Policy analyst and family physician Sam Shortt challenges health ministries to think more broadly about continuity within primary care, and particularly to go beyond the singular focus on longitudinality. Knowledge transfer presents special challenges during transitions and across the continuum. Graham and Logan summarize several frameworks that can be used to guide nurses in implementing research-based practice across the continuum of care.

Transitions are an important research focus for nursing practice, and the CHSRF report deals with continuity according to its notions about informational, relational, and management continuity (Reid et al., 2002). The range of subjective, cognitive, behavioural, environmental, emotional, and physical conditions that are present during transitions demands a comprehensive nursing research approach. Such an approach is necessary to deepen our understanding of the phenomenon of transitions — both the continuity gaps and the effectiveness of interventions to narrow them. Since this is an emerging area of research, any inquiry will have to entail both clinically focused research and a health-services perspective using quantitative and qualitative approaches. Conceptualization issues will be advanced through rigorous concept analysis and qualitative inquiry into the phenomenon from the perspective of individuals and families as well as the perspective of providers and the system.

The nature of continuity requires a multi-interventional approach, one that challenges the value of traditional evaluation methodologies. The coming of age of health-services research is a positive step in this direction, and nurse investigators must be key players here as well. The challenge is ours to take up.

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Discourse

Reflections on Continuity in Contemporary Canadian Primary Care

Sam Shortt

Though subject to various conceptualizations, continuity may be said to capture several key components: an awareness on the provider's part of basic health and related information about the patient; a relationship with the patient that extends over time; a patient-provider relationship that incorporates mutual trust and personal regard; and, finally, a commitment on the part of the provider to collaborate with the patient in the management and coordination of diverse care services (Reid, Haggerty, & McKendry, 2002; Saultz, 2003). Continuity, so defined, is more central, in Canada, to primary care (McWhinney, 1998), home care, and long-term care than it is to the more episodic character of specialty or hospital care.

The literature indicates that continuity is strongly linked to increased quality of care and enhanced outcomes. Continuity has been shown to be associated with improved management of specific clinical conditions such as diabetes (Parchman, Pugh, Noel, & Larme, 2002), with enhanced preventive care (Kasper, 1987) including childhood immunization (Christakis, Mell, Wright, Davis, & Connell, 2000), and with an increased likelihood of patients complying with prescribed treatments (Hjortdahl & Laerum, 1992). Continuity is also associated with higher patient satisfaction with care (Nutting, Goodwin, Flocke, Zyzanski, & Stange, 2003), which is an important component of quality. Finally, patients whose primary care incorporates continuity have lower rates of hospitalization (Gill & Mainous, 1988; Mainous & Gill, 1998) and make less frequent use of emergency departments (Christakis, Mell, Koepsell, Zummerman, & Connell, 2001).

If the issue is as clear-cut as these findings suggest, there is a powerful incentive for policy-makers to create models of primary care delivery that ensure continuity. But is the evidence as compelling as it appears, or does the notion of continuity demand more nuanced scrutiny?

Mobile and busy patients may prefer rapidity of access to the comfort of continuity. In an Alberta study, for example, 43% of walk-in clinic patients sought services during hours when the offices of their regular family physicians were open (Szafran & Bell, 2000), which suggests that rapid access trumps continuity for patients with acute illnesses. Moreover, the apparently positive impact of continuity on quality of care may apply selectively to the treatment of chronic conditions and prevention but not to much of the acute care provided by family physicians. In a sample of Ontario walk-in clinics, family practices, and emergency departments assessed for eight sentinel conditions, the walk-in clinics and emergency departments (venues that are not associated with continuity) scored significantly higher for quality than the family practices (Hutchison et al., 2003). Finally, in a survey of physicians in walk-in clinics and office-based family physicians, those in walk-in clinics were less satisfied with their relationships with patients but more satisfied with availability of consultations, support staff, income, and vacation coverage (Williams et al., 2002). Importantly, physician and nurse employment satisfaction have been shown to be associated with the quality of care provided (Grindel, Peterson, Kinneman, & Turner, 1996; Weisman & Nathanson, 1985; Williams & Skinner, 2003). These disparate findings suggest that continuity may not be essential for quality care and indeed for the type of care that is preferred by some patients.

Continuity in primary care is traditionally conceived of as applying to the relationship between the patient and the family physician. This iatrocentric model requires re-evaluation. Compelling clinical evidence that nurse practitioners can deliver quality primary care dates from a landmark 1974 Canadian study (Spitzer et al., 1974). Twenty-five years of further research, summarized in a systematic review (Horrocks, Anderson, & Salisbury, 2002), has not altered this essential conclusion. The review's authors conclude that the literature indicates patients are more satisfied with nurse practitioner care than physician care and that there are no differences, in terms of patient health status, in the two types of care; though nurse practitioners tended to spend more time with patients and to order more tests, no differences were noted in the number of prescriptions, return visits, or referrals to specialists. Despite such clear evidence, the integration of nurse practitioners into the delivery of primary care has been slow to occur in Canada. This reticence is related to issues of funding and definition of practice boundaries and to practitioner concerns about liability. However, if continuity is deemed a desirable characteristic and if, as many predict, the current shortage of family physicians becomes more acute, a window of opportunity may exist for expanding current concepts of continuity to include team care.

A neglected component of most discussions of continuity is a recognition that the concept refers not simply to human relationships but also to the flow of information supporting such relationships — that is, instead of relying solely on contact with a single practitioner or team of providers, we should build an element of continuity into disparate sources of care through the electronic patient record. At present the availability of patient data is not conducive to continuity. For example, when patients are discharged from hospital a summary of their admission is sent to the family physician and to the home-care provider, if this service has been ordered. Unfortunately, these discharge summaries are rarely received in a timely manner and often are uninformative on key points. A study of summaries concerning internal medicine patients discharged from two Ottawa teaching hospitals found that 34% lacked an admission diagnosis, 25% lacked a discharge diagnosis, 23% did not include discharge medications, and 40% were never received by the family physician (van Walraven & Weinberg, 1995). A subsequent randomized trial comparing the traditional dictated report with a report generated from a database found that family physicians considered the latter to be just as complete and informative as the traditional report (van Walraven, Laupacis, Seth, & Wells, 1999). The ability to ensure that information follows the patient across disparate sectors of the health-care system would represent a significant contribution to continuity of care.

Clearly, continuity is a goal to be pursued in primary care. However, policy-makers must appreciate the fact that continuity of care means considerably more than simply ensuring that each person is able to register with a family physician. Flexibility of care venue, team continuity, and the use of integrating information technology are all areas of innovation in primary care that offer an opportunity to place current concepts of continuity into a broader policy context.

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Résumé

Structure des programmes et continuité des soins de santé mentale

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La continuité en tant qu'objectif est un sujet fort débattu dans le domaine des soins de santé mentale mais encore peu étudié, en partie à cause des difficultés que sa mesure pose. Un petit nombre de projets de recherche ont permis d'établir, en évaluant le degré d'utilisation des services, les caractéristiques des programmes que l'on peut associer à la continuité. Récemment, un projet de planification a fourni l'occasion d'étudier, à l'aide d'un nouvel instrument d'auto-évaluation, l'effet de ces facteurs sur la continuité. On a mesuré neuf caractéristiques et fait appel à la régression linéaire pour analyser leur incidence sur la continuité, tout en tenant compte également des caractéristiques des clients. On a constaté que les programmes fournissant certains services le soir ou la fin de semaine affichaient un degré de continuité élevé et que ceux où l'on fournissait davantage de soins dans le milieu affichaient un degré moindre. Cette dernière observation était inattendue et reflète peut-être les efforts que l'on consacre pour tenter de joindre des personnes ayant de la difficulté à accéder aux services. Le lien entre les sept autres caractéristiques et la continuité n'était pas significatif. Les chercheurs explorent les raisons susceptibles d'expliquer cette conclusion.

Mots clés : santé mentale, continuité des soins, structure des programmes

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Program Structure and Continuity of Mental Health Care

Janet Durbin, Paula Goering,
David L. Streiner, and George Pink

Continuity has been a much discussed but under-researched objective of mental health care, in part due to measurement challenges. A small body of research has identified program features associated with continuity, based on measures of service use. A recent planning project provided an opportunity to examine the effects of these features on continuity using a new self-report continuity measure. Nine program features were measured and linear regression analyses were used to assess the relationship between these features and continuity, controlling for client characteristics. Client continuity was higher in programs that offered some night or weekend coverage and lower in programs that provided more care in the community. This latter finding was unexpected and may represent program efforts to engage individuals experiencing difficulties with service access. The association between each of the other 7 program features and continuity was not significant. Possible explanations for this finding are explored.

Keywords: mental health, continuity of care, program structure

> *Having to navigate that system almost made me stop going because it was just impossible.*
>
> *I wish I had…some little extra support for getting over that bad time. I wouldn't have had to leave the job.*
>
> – Onken, Dumont, Ridgway, Dornan, and Ralph (2002, p. 53)

Introduction

During the last few decades, as the locus of mental health care delivery has shifted to the community from psychiatric institutions, attention has focused on ensuring that clients have timely access to needed services in the community. Psychiatric hospitals once functioned as self-contained settings that met client needs for basic supports (e.g., food, shelter) as well as mental health treatment and rehabilitation services (Bachrach, 1984). Once the patient was discharged, responsibility for accessing supports and services shifted to the individual. However, following the first wave of deinstitutionalization in the 1950s and 1960s, it became clear that many discharged individuals were lacking both basic supports and adequate mental health care. This was attributed in part to a limited and fragmented community mental health system unequipped to engage and keep the most needy in care (Mueser, Bond, Drake, & Resnick, 1998).

Ensuing discussions about how to resolve this problem centred on the concept of continuity of care, which Bachrach (1981) describes as "a process involving the orderly uninterrupted movement of clients among the diverse elements of the service delivery system" (p. 1449). Bachrach (1981, 1993) outlines a number of interrelated service delivery principles that form the basis for creating continuity in the treatment of individuals with chronic mental illness. These include *longitudinality* (episodes are consecutive and related, and continue until need ends); *individualization* (care is planned with and for the patient); *comprehensiveness* (all needs are addressed); *flexibility* (the flow of services corresponds to changes in the patient's circumstances); *relationship* (patients are able to rely, over time, on having associations with persons who are interested in them and respond on a personal level); *accessibility* (patients are able to reach the service system when they need it and in a way they can handle); and *communication* (there are links between the patients' helpers so they can share information and integrate care). Two broad themes identified in Bachrach's definition continue to underpin discourse in the field. These include longitudinal continuity — the consumer maintains a connection with services and providers over time; and cross-sectional continuity — care is accessible and responsive, based on the needs of the consumer (Johnson, Prosser, Bindman, & Szmukler, 1997). Recent discussions have added the notion of "experienced continuity" to emphasize the importance of assessing the perceptions of users, which may differ from that of the provider (Adair et al., 2003; Beecher, 2003; Freeman, Crawford, Weaver, Low, & de Jonge, 2003; Johnson et al.).

Despite wide acceptance of the conceptualizations of Bachrach and others, continuity research has been relatively simple and not reflective of the complexity inherent in the theories and definitions. For the most part, studies have assessed longitudinal continuity, with utilization data used to examine consistency of service use over time. Several efforts have been made to assess cross-sectional continuity by measuring diversity of service use and met need (Lehman, Postrado, Roth, McNary, & Goldman, 1994; Tessler, 1987), and more recently to obtain the consumer's perspective (Bindman et al., 2000). Overall, measures have tended to be narrow and simplistic, definitions have been inconsistent across studies, and, where an index or scale has been attempted, psychometrics have not been tested and ceiling effects have been noted (Adair et al., 2003).

Perhaps due to this underdevelopment of measures, research on continuity of care has been sporadic over the past few decades (Adair et al., 2003; Johnson et al., 1997). The research literature provides evidence on the characteristics of individuals who are vulnerable to care discontinuity (e.g., those with a diagnosis of personality disorder, substance abuse, or dementia; those who have lower function, are older, or are members of racial minorities) (Bindman et al., 2000; Farrell, Koch, & Blank, 1996; Johnson et al.). Less examined have been provider, program, and system influences. Yet two recent studies found that individual characteristics account for a relatively small amount of variance in the continuity of care (Bindman et al.; Durbin, Goering, Streiner, & Pink, in press). This represents a significant knowledge gap if the field is to implement services and systems of care that promote continuity. Continuity is considered an ethical principle of care (Thornicroft & Tansella, 1999) and is a criterion for assessing performance of many mental health service systems (Druss, Miller, Rosenheck, Shih, & Bost, 2002; McEvoy, Scheifler, & Frances, 1999; Rosenheck & Cicchetti, 1998).

The association between continuity of care and the structural and organizational characteristics of programs merits further examination. These characteristics include staffing, internal policies (e.g., caseload, locus of care, contact rate, hours of operation), and external policies (e.g., partnerships). Many of these elements are relatively easy to measure and, if related to continuity, can serve as a proxy for monitoring attainment of this service objective. Recent frameworks for health services research recommend testing multilevel models of service use that include program characteristics (Hohmann, 1999; Thornicroft & Tansella, 1999). A number of evidence-based practices in community mental health are defined mainly by program elements, including one of the most successful models of community support, Assertive Community Treatment (Bond, Drake, Mueser, & Latimer, 2001; Teague, Bond, & Drake, 1998). Currently there is interest in identifying the subset of service characteristics that are critical to the model's success (Anthony, Rogers, & Farkas, 2003; Phillips et al., 2001). Similarly, an important task in continuity research is to disaggregate, define, and test the effects of the various aspects of service functioning that have been considered elements of continuity.

A recent mental health planning study conducted in the province of Ontario, Canada, afforded an opportunity to examine the relationship between program structure and continuity of care. Study data included a program profile completed by a large number of community mental health programs with diverse approaches to service delivery, and a client survey that contained a new self-report measure of continuity of care, the Alberta Continuity of Services Scale subjective component. This scale addresses a number of the above-cited limitations in measurement of continuity: it is multidimensional, it was developed through a rigorous process of item development and reduction, it has undergone psychometric testing, and it is based on the client's view (Adair et al., 2001; Joyce et al., in press).

The aim of the present study was to analyze these data to learn more about the relationship between program characteristics and continuity of care as experienced by the client. Specific goals were to identify and measure program elements expected to contribute to continuity, and to assess the relationship between these program elements and subjective continuity.

Literature Review

To inform the development of indicators, it is appropriate to consider various levels of evidence (Anthony et al., 2003). Two bodies of knowledge were examined to identify program indicators likely to promote continuity of care. Studies on the association between program structure and continuity were reviewed, including those using uncontrolled and descriptive designs. In addition, research on the features and effectiveness of Assertive Community Treatment (ACT) was examined, given that the primary aim of ACT is to improve continuity of care and that considerable progress has been made in defining and measuring the structural and organizational elements of the model (Teague, Bond, & Drake, 1998). In these studies, continuity was measured primarily by using objective indicators of service use: time to make contact with community programs following discharge, retention in treatment, regularity of community service use, extent of interruptions (including frequency of hospitalization and crises), and receipt of needed services.

A number of studies have assessed the impact on continuity of strategies to increase provider consistency. Smith, Hull, Hedayat-Harris, Ryder, and Berger (1999) evaluated a hospital psychiatric service, reorganized so that a core treatment team (case coordinator and psychiatrist) followed each person from inpatient to ambulatory care. The aim was to reduce disruptions in treatment through timely transfers among levels of care while maintaining consistency of core providers. The results indicated a positive impact, with inpatients from the study unit discharged earlier and attending outpatient care more frequently than inpatients in other units. Salyers, Masterton, Fekete, Picone, and Bond (1998) attribute the successful transfer of clients from intensive to standard case management to a new arrangement that ensured continuity of the treatment team (case manager and psychiatrist). A number of studies have demonstrated that clients who meet with prospective community providers prior to discharge are more likely to link up with aftercare programs (Farrell et al., 1996; Meisler et al., 1997; Olfson, Mechanic, Boyer, & Hansell 1998). Early contact may ease anxieties about the transition to community and form the basis for developing a working alliance. Abbati and Oles (1993) assessed the impact of primary provider turnover in a mental health clinic. Following a change in provider, visits to the clinic decreased while hospital use increased. The authors suggest that providers familiar with a client learn to recognize early signs of relapse and pre-empt problems.

The evidence on caseload size and continuity is mixed. King, LeBas, and Spooner (2000) studied the association between caseload size and perception of personal efficacy among mental health case managers. Those with lower caseloads (5–20 clients) were more likely to rate themselves as able to provide timely responses and to help clients access community services. Kuno, Rothbard, and Sands (1999) found that clients of standard and intensive case management (ICM) programs were equally likely to connect with community care within 90 days of discharge and attend services regularly over the subsequent year, but that ICM clients were more likely to obtain needed services and build support networks. This was attributed to lower caseloads (20–30 clients) that allowed providers to spend more time with clients. These findings differ from those reported by Burns et al. (1999), who compared two types of case management distinguished mainly by caseload size — 10 to 15 clients per case manager (intensive) versus 30 to 35 clients (standard). Retention in treatment was higher in the standard case management programs.

Bauer et al. (1997) evaluated program changes to increase outreach and program accessibility. An outpatient mental health service was reorganized to offer visits as needed and provide telephone follow-up for missed appointments. The aim was to have delivery of care guided by client needs rather than predetermined program procedures. Following these changes, visits to the clinic by all clients increased and use of crisis services and hospital days by high users decreased. On-demand access appeared to create an opportunity for staff to provide timely responses to unplanned needs.

The ACT model was created in the early 1980s to replicate, in a community setting, the continuity of care provided by inpatient facilities (Stein & Test, 1980). This full-service model is intended to provide most of the clinical and support services needed by the client through in-vivo[1] efforts of a specially trained interdisciplinary team. Considerable effort has gone into identifying the critical ingredients of ACT and developing standardized measures for assessing fidelity to the ACT ideal (Teague et al., 1998). Many of these ingredients are intended to implement the service principles identified by Bachrach (1993) as fundamental to continuity of care (Bedell, Cohen, & Sullivan, 2000; Bond et al., 2001; Rapp, 1998; Schmidt-Posner & Jerrell, 1998). In addition to small caseload and continuity of

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[1] Care delivered in the natural settings in which clients live, work, and interact with others (Bond et al., 2001).

staffing, ACT elements intended to promote continuity include multidisciplinary staffing to address all client needs, team approach and 24-hour coverage to support rapid access and ensure availability of a worker who knows the client, and frequent contact in the community to monitor client needs and provide quick responses. The impact of ACT on client continuity of care has been minimally assessed, although higher retention rates have been found in ACT compared with standard care (Marshall & Lockwood, 2003), attributed to the assertive outreach and in-vivo support features of the model (Bond, McGrew, & Fekete, 1995).

In summary, there is a small body of literature supporting the view that program structure and organization can influence the continuity of care experienced by clients. However, current research is limited in two important ways. First, measures of continuity have been primarily simple, unidimensional indicators of service connection. Responsiveness to need and the client's view have rarely been evaluated (Adair et al., 2003; Johnson et al., 1997). Second, studies have been conducted mainly within single programs, so that generalizability to other programs and settings is unknown.

The aim of the present study was to examine the relationship between program structure and continuity of care using a conceptual framework, measures, and data that address these limitations.

Sample

The sampling frame for the planning project included users of community and outpatient mental health programs in three regions of Ontario during the period April to June 2001. Excluded were crisis programs and programs that did not follow a formal service model (e.g., drop-in centres and self-help programs). Based on 3-month client lists that programs submitted to the research team, the team identified approximately 17,000 unduplicated individuals enrolled in 153 programs.

A cross-sectional design using multistage sampling was employed to develop a snapshot of the service users. First, a random sample of clients, stratified by program, was drawn for the staff assessment (n = 2,293). From the staff assessment sample (excluding clients of geriatric programs), a subset of individuals was randomly selected for the self-report survey (n = 432). These individuals could not be contacted by the survey interviewers until their approval was secured by program staff. Unfortunately, program staff were not provided with extra resources for this task and never made contact with many individuals. In addition, a small number of clients declined to participate. In total, 238 individuals (55%) completed surveys, which were linked with the staff assessments for the present study. After cases with missing information had been eliminated, complete data were available for 215 people. Ethics approval for collection of these data was obtained from a university-affiliated hospital in each participating region.

The 215 individuals were enrolled in 81 ambulatory mental health programs, all of which completed profile questionnaires. Four day-hospital programs were excluded from the analysis due to their very short-term involvement with clients, as were seven programs with limited staffing (less than 0.5 FTE program staff) or hours of operation (less than 10 hours per week), since it was unclear whether they were truly stand-alone or part of a larger program.

The final study sample included 70 programs and 196 individuals (i.e., 1–10 clients per program). The programs encompassed outpatient treatment (33, or 47% of sample), case management (19, or 27%), vocational and social (12, or 17%), and housing (6, or 9%). This distribution was similar to that of the regional system, which was composed mainly of outpatient treatment (42%) and case management (29%), with fewer housing (12%) and rehabilitation (16%) programs. No clients in the two ACT programs in the region (2%) participated in the study.

Given the low rate of survey completion, the client sample cannot be considered representative. However, it is consistent with the population of interest — low-functioning individuals with serious mental disorders (Table 1). Comparison of clients in the study sample to the staff-assessment sample shows that they were similar in age ($F = 1.64, p = .20$), proportion with schizophrenia/psychotic disorder ($\chi^2 = 0.31, p = .58$), married/living common law ($\chi^2 = 0.30, p = .58$), and on public assistance/disability ($\chi^2 = 0.81, p = .37$), but the analytic sample contained more females (63% versus 56%, $\chi^2 = 4.21, p = .04$).

Measures

Program Profile

Senior managers of participating programs completed the Program Profile, a survey of program structure and operation that assessed staffing, access to care, service delivery approaches, and partnerships. The survey was developed specifically for the planning project, with domains and items adapted from other measures of program implementation including the Dartmouth ACT Fidelity Scale, or DACTS (Teague et al., 1998), the Case Management Practices Survey (Ellison, Rogers, Sciarappa, Cohen, & Forbess, 1995), and the Community Program Philosophy Scale (Expanded), or CPPS (Jerrell & Hargreaves, 1996). The profile was pilot-tested and items were revised to enhance clarity and utility. Respondents were instructed to use the best information available to answer questions. Data quality checks addressed missing, inconsistent, and outlier responses.

Table 1 ***Client Socio-demographic and Illness Profile***

Client Characteristics		% clients (*n* = 196)
Demographics and Community Functioning	25 and under	6.7
	65+	4.1
	Female	62.8
	Non-white race	26.0
	Married/living common law	35.4
	Not working for pay (full-time or part-time)	68.4
	Receiving public assistance/disability pension	71.1
	Psychiatric admission in past 6 months	13.8
Diagnostic[1] and Illness Profile	Schizophrenia/psychotic disorder	30.6
	Mood disorder	61.7
	Personality disorder	19.4
	Substance abuse disorder	10.7
	Two or more psychiatric diagnoses	49.5
	Medical diagnosis	43.2
	Taking psychotropic medication	89.3
	"Severe" overall impairment[2] (CCAR rating)	7.2
	"Few" strengths and resources[2] (CCAR rating)	21.5

[1] Diagnostic categories are not mutually exclusive; an individual can have multiple diagnoses.
[2] Rating of 7 or higher on a nine-point scale.

Consumer Survey

The consumer survey comprised three sections: the first collected socio-demographic information, the second collected information on current service use and perceptions of unmet need, and the third consisted of the 43-item Alberta Continuity of Services Scale subjective component. This scale was developed through a systematic process including a comprehensive literature review, input from consumers and family members, item generation, field testing for item reduction, and psychometric evaluation. The final tool consists of 43 statements about experiences using mental health services, rated on a five-point scale from strongly disagree to strongly agree (midpoint anchor = "not sure") (Adair et al., 2001; Joyce et al., in press). The rating period — the preceding 18 months — was shortened to 6 months for the present study to minimize recall bias.

The Alberta Continuity of Services Scale was further evaluated using data from the present study (Durbin et al., in press). Thirteen items with low response rates or ceiling effects were removed. Factor analyses of the remaining 30 items yielded three subscales, labelled system access (12 items), interpersonal aspects of care (10 items), and team function and outreach (8 items), accounting for 37% of the total variance. For the three subscales and total score, internal consistency reliability was acceptable (Cronbach alphas of 0.80, 0.80, 0.74, and 0.88, respectively); bivariate correlations between subscales of 0.46 to 0.59 indicated a common underlying construct without redundancy; and associations between subscale scores and independent measures of consumer illness and current service use supported construct validity. Examples of subscale items are: system access (e.g., *There don't seem to be links from one service to the next*), relationship (e.g., *I was asked what I wanted out of treatment*), team function and outreach (e.g., *I am reminded of appointments or called if I miss one*). Given the strong correlation between the three subscales and the total score (r = 0.76–0.86), the total score provided the most reliable estimate of continuity for testing the study questions.

The survey was administered by a trained interviewer during a face-to-face meeting with the client after informed consent had been obtained.

Staff Assessment

The staff rated client impairment using the Colorado Client Assessment Record (CCAR), a standardized measure of client functioning that has undergone several refinements since it was first developed in 1978. In the 1997 version used in this project, staff rated client impairment on a nine-point scale across 21 domains covering symptoms (8 ratings), behaviours (5 ratings), health and self-care (2 ratings), social and community functioning (4 ratings), substance abuse (1 rating), and security/management (1 rating). Staff also rated client strengths and resources across four domains, then rated overall problem severity and overall strengths. The CCAR was completed by a trained program staff member based on his or her knowledge of the client. An interview was not required. Adequate interrater reliability and validity of the CCAR have been demonstrated in Ontario and other jurisdictions (Durbin, Cochrane, Goering, & Macfarlane, 2001; Ellis, Wackwitz, & Foster, 1991). Other client information reported by staff included demographics, community functioning, diagnoses, and use of inpatient and emergency mental health services in the preceding 6 months.

Table 2 *Continuity Indicators*

Program Feature and Intended Benefit	**Source**	**Rating Category Definitions**		
		1	**2**	**3**
Access				
Program staff size Sufficiently large to consistently provide the necessary coverage and staffing diversity.[1]	DACTS	Up to 2.5 program staff FTEs	2.6–6.0 program staff FTEs	> 6.0 program staff FTEs
Hours of operation Broader coverage enables crises to be addressed by staff who know the client well.	DACTS CPPS	None	Some night (after 7 pm) *or* some weekend coverage	Some night (after 7 pm) *and* some weekend coverage
Visit scheduling As-needed visits create flexibility for responding to client needs.	—	< 5% contact with clients as needed	5–20% contact with clients as needed	More than 20% contact with clients as needed
Responsiveness Outreach				
Continuity of program staff[2] Maintaining the same staff over time supports development of relationships and therapeutic alliance.	DACTS CPPS	50% or more staff turnover in past year	Some staff turnover in past year (1–50%)	No staff turnover in past year
Caseload size Smaller caseload gives workers more time to offer outreach, provide direct service, and respond to crises.	DACTS	50+ clients per FTE program staff	21–49 clients per FTE program staff	20 clients or fewer per FTE program staff

Frequency of contact Higher frequency allows for the latitude needed to respond to client needs.	DACTS CPPS	Monthly contact or less for at least 50% of clients	Between categories 1 and 3	Multiple contacts per week for at least 50% of clients
Locus of contact Provision of care in the community can help ensure that clients are engaged and their needs are met.	DACTS CPPS	No contacts in community	Some contacts in community (1–40%)	Over 40% of contacts occur in community
Comprehensive Care / Met Need				
Psychiatrist on staff Program provides psychiatric treatment, reducing need for referral.	DACTS	Not on staff or available	Available through formal agreement	On staff
Interagency collaboration Increases the coordination needed to facilitate access and provide comprehensive care.	CPPS	No signed agreements	1 signed agreement	2 or more signed agreements

[1] This item also addresses the third aim of providing comprehensive care.

[2] The number of program staff who left the program plus the number who joined the program / total number of program staff.

Program Continuity Indicators

Candidate indicators were based on program elements associated in the literature with care continuity and measured in the profile. Definitions and response categories were based on two well-known scales, the DACTS (Teague et al., 1998) and the CPPS (Jerrell & Hargreaves, 1996). The DACTS measures the degree of program fidelity to the ACT model across 26 elements. The CPPS is less model-specific, designed to characterize the values and practices of community support programs serving clients with severe mental illness along 20 dimensions.

Drawing on these two measures, a three-point, behaviourally anchored response scale was developed per indicator, with higher ratings given to fuller implementation of practices expected to create continuity. A rating of 3 indicated moderate to high implementation of the practice, 2 indicated low to moderate implementation, and 1 indicated absence of the practice or very low implementation. Given the investigators' prior experience with the program profile in multiple planning projects and the range of program types represented in the present study (i.e., from office-based counselling services to intensive, outreach-oriented support programs), these categories were expected to capture the full range of performance as well as make meaningful distinctions.

Table 2 presents the nine selected indicators and response categories, grouped under three service domains related to continuity of care. Face validity was supported in feedback sessions with community providers and health services researchers. However, two program features measured by the DACTS and considered relevant to providing comprehensive and continuous care — team approach and multidisciplinary staffing — could not be calculated as the required data were not available from the profile.

Analysis

Frequency distributions were generated for each program indicator to examine the range of practices captured, and Pearson correlation coefficients were produced to assess bivariate relationships. Validity of the indicators was assessed using a "known groups" analysis. Programs were classified into one of three broad groups[2]: outpatient counselling/treatment (*n* = 33); rehabilitation, including social and vocational programs (*n* = 12); and individualized support, including case management and supported housing programs (*n* = 22). Group differences on the continuity indicators were compared with a priori expectations. Overall, individualized support programs were expected to score the highest on the continuity indicators, counselling/treatment programs were expected to

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[2] Except for three residential programs that did not fit into any category.

score the lowest, and rehabilitation programs were expected to fall in between. Some departures in relative performance were expected for specific indicators. For example, while individualized support programs were expected to give priority to outreach and responsiveness (measured by locus and frequency of contact and by caseload size), both rehabilitation and individualized support programs were expected to emphasize accessibility (indicated by as-needed visits and extended hours of operation), and treatment programs were considered more likely to have psychiatrists on staff. For several indicators (such as program staff size and continuity of staffing), variances were not expected to be associated with program type. Group differences were assessed using chi-squared tests.

The effect of each program feature on client-rated continuity was assessed using linear regression analysis. While techniques such as hierarchical linear modelling are ideal for analyzing mixed-level data, taking advantage of the full power of data available at the client level, the study sample did not meet the minimum requirement for this procedure of three observations per program (Wheaton & Stohschein, 2003). An alternative approach, regression analysis, which modelled relationships at the program rather than the individual level, was employed. This avoided the problem of lack of independence of individual-level observations within each program. Client scores per program were averaged and merged with the program records. Then, given the variable number of clients per program in the sample, program records were weighted[3] to give greater influence to program data that were based on more client observations. In a series of separate linear regressions, the dependent variable — client continuity rating — was regressed on each of the program indicators (coded as two dummy variables), using the sequential method to control for client characteristics associated with continuity (step 1) before adding the program indicator dummy variables (step 2). Client variables included in step 1 were sex, race, and personality disorder. All analyses used SPSS version 11.5.

Results

Table 3 reports the frequency distributions of the indicators for the total sample and by subgroup for the "known groups" analysis. Floor and ceiling effects were not evident. Programs were almost equally distributed across the three levels of implementation for continuity of staff, locus of contact, and psychiatrist on staff, and no rating category including more than 63% of programs. Most likely to be implemented were low caseloads (42% of programs reported caseloads of 20 clients or fewer)

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[3] Weights were calculated to maintain the total sample of 70 (i.e., weight = number of observations per program/196*70).

Table 3 *Indicator Frequency Distribution for Total Sample and by Subgroup*

Program Indicator / Program Type	**Indicator Frequency Distributions Across Rating Categories (%)**		
Progran Size	**Up to 2.5 FTEs**	**2.6-6.0 FTEs**	**6.1+ FTEs**
IND (*n* = 22)	9.1	40.9	50.0
REHAB (*n* = 12)	41.7	41.7	16.7
C/T (*n* = 33)	36.4	42.4	21.2
Total (*n* = 67)	**28.4**	**41.8**	**29.9**
Hours of Operation*	**None**	**Some night *or* weekend**	**Some night *and* weekend**
IND	45.5	13.6	40.9
REHAB	83.3	8.3	8.3
C/T	66.7	24.2	9.1
Total	**62.7**	**17.9**	**19.4**
Visit Scheduling*	**< 5% of contacts as needed**	**5–20% contacts as needed**	**> 20% of contacts as needed**
IND	13.6	50.0	36.4
REHAB	41.7	8.3	50.0
C/T	39.4	48.5	12.1
Total	**31.3**	**41.8**	**26.9**
Continuity of Program Staff	**>50% turnover**	**1–50% turnover**	**No turnover**
IND	36.4	54.5	9.1
REHAB	41.7	16.7	41.7
C/T	33.3	27.3	39.4
Total	**35.8**	**34.3**	**29.9**

Caseload Size	**50 clients or more**	**21–49 clients**	**1–20 clients**
IND	4.5	36.4	59.1
REHAB	8.3	41.7	50.0
C/T	24.2	48.5	27.3
Total	**14.9**	**43.3**	**41.8**
Frequency of Contact	**Monthly or less**	**Weekly**	**Multiple contacts per week**
IND	36.4	45.5	18.2
REHAB	8.3	50.0	41.7
C/T	48.5	30.3	21.2
Total	**37.3**	**38.8**	**23.9**
Locus of Contact***	**None**	**1–40%**	**> 40%**
IND	0.0	22.7	77.3
REHAB	33.3	50.0	16.7
C/T	56.3	40.6	3.1
Total	**33.3**	**36.4**	**30.3**
Psychiatrist on Staff***	**Not on staff or available**	**Available through agreement**	**On staff**
IND	40.9	31.8	27.3
REHAB	75.0	25.0	0.0
C/T	12.5	37.5	50.0
Total	**33.3**	**33.3**	**33.3**
Signed Service Agreements*	**None**	**1**	**2 or more**
IND	40.9	31.8	27.3
REHAB	33.3	25.0	41.7
C/T	75.8	12.1	22.1
Total	**56.7**	**20.9**	**22.4**

Significance of chi-square test result: * $p <= .05$; ** $p <= .01$; *** $p = .001$
Note: IND = individualized support; REHAB = rehabilitation; C/T = counselling/treatment

and psychiatrists on staff (33%); least likely were after-hours access (63% provided none) and signed service agreements (57% had none).

Many of the expected differences between the program subgroups were found. Individualized support programs were more likely to provide in-vivo support and after-hours access, both individualized support and rehabilitation programs were more likely to offer as-needed visits, outpatient treatment programs were more likely to have psychiatrists on staff, and program types did not differ in staff size and turnover rates. Contrary to expectations, there were no significant differences among the three program types in frequency of client contact and caseload size, although more treatment programs reported caseloads of over 50 clients.

There were few significant correlations between indicators, suggesting that programs implemented these features selectively rather than as an aggregate package. Of 36 tested associations, only three were significant (i.e., $p < 0.01$). Greater frequency of contact was associated with lower caseloads ($r = 0.52$), and programs that were more likely to deliver in-vivo support were also more likely to allow as-needed visits ($r = 0.36$) and less likely to have access to psychiatrists ($r = -0.36$). This latter association is explained by the fact that access to psychiatrists was greater in treatment programs that tended to be site-based and conduct little outreach.

The mean continuity rating for the sample was 3.48 on a five-point scale ($sd = 0.32$), with a slight clustering of responses towards the positive end of the scale (skewness = -0.76). Results of the linear regression analyses are reported in Table 4. Client characteristics (sex, race, presence of personality disorder) accounted for 23% of variation in the continuity rating. Only two of the nine program features added significantly to the prediction models. Hours of operation predicted an additional 8% of variation in the rating. Level of in-vivo support also affected continuity but not in the expected direction. Ratings were significantly lower in programs that offered more care in the community (> 40% of client contacts outside of program setting). This finding is difficult to interpret. Given that outreach is used to engage clients with a history of irregular service use, it is possible that the low ratings represent a client subgroup still experiencing difficulties with service access. While several individual risk factors were controlled in the analyses, there may be other unmeasured client variables that account for this finding, such as time in the program. Overall, the results of regression analysis give little support to the hypothesis that the structure and organization of programs influence the continuity of care experienced by the recipients of services.

Table 4 *Effect of Program Variables on Subjective Continuity of Care*

	Regression Coefficients								
Program Feature	**R^2 (Step 1[1])**	**R^2 Change (When Step 2 Added[2])**	**F Change (*df* = 2, 64), *p***	**Constant**	**% Female**	**% Personality Disorder**	**% Non-white**	**Program Indicator –Moderate Rating**	**Program Indicator –High Rating**
Program size	0.23	0.01	0.51, 0.61	3.83	-.26★	-.28★	-.33★	-.08	-.02
Hours of operation	**0.23**	**0.08**	**3.66, 0.03**	**3.71**	**-.32★★**	**-.38★★**	**-.33★**	**.22★**	**.18★**
Visit scheduling	0.23	0.04	1.62, 0.21	3.81	-.28★	-.24	-.35★	-.09	-.07
Staff turnover	0.23	0.01	0.32, 0.73	3.75	-.26★	-.30★	-.34★	.06	.04
Caseload size	0.23	0.03	1.05, 0.36	3.68	-.22	-.32★	-.35★	.07	.15
Frequency of contact	0.23	0.01	0.45, 0.64	3.84	-.29★	-.30★	-.31★	-.08	-.03
Locus of contacts	**0.23**	**0.10**	**4.93, 0.01**	**3.86**	**-.32★★**	**-.33★**	**-.30★**	**.05**	**-.19★**
Psychiatrist on staff	0.23	0.01	.48, 0.62	3.77	-.27★	-.27★	-.32★	.08	0.5
Interagency collaboration	0.23	0.04	1.60, 0.21	3.89	-.31★★	-.26	-.35★	-.17	-.04

[1] Step 1 includes three individual variables: sex, race, personality disorder.

[2] Step 2 includes program indicator, converted from one categorical to two binary variables to indicate moderate (1 = yes) or high (1 = yes) implementation of practice; reference condition is low/no implementation.

Note: Significant *p* values: ★ < = .05; ★★ < = .01; ★★★ < = .001

Discussion

Although continuity of care has been a concern in mental health services since the first wave of deinstitutionalization, limited evidence on strategies for its improvement has been produced. The fact that personal characteristics account for only a small amount of variation in continuity of care (Bindman et al., 2000; Durbin et al., in press) suggests that other factors are at play. The present study drew on conceptual models and empirical research to identify program structural and organizational features expected to influence continuity, and assessed the impact on a sample of service users. The strengths of the study were use of a multidimensional measure of continuity based on client perceptions, and participation from a large number of community services with a broad range of mandates and approaches.

The results are not encouraging. Seven out of nine assessed elements demonstrated no effect on continuity. In-vivo contact had an impact, but the direction was opposite to what was hypothesized. Higher levels of community contact were associated with lower continuity of care. Only hours of operation produced the expected effect, with availability of program staff at night and on weekends creating better continuity for clients.

There are a number of possible explanations for the lack of relationship between these program elements and continuity of care. In previous studies, continuity was operationalized mainly using measures of service connection over time and across organizational boundaries. The Alberta scale is a new self-report measure that evaluates the experience of continuity from the perspective of the client. Measured domains focus not on the quantity of services received but on the quality (e.g., what and when). While previous studies have found a relationship between program structure and patterns of service use, it appears that structure is not predictive of the aspects of the care experience that create continuity for the client and were measured in this study.

In addition, measure and sample-size limitations may have reduced the ability to find a relationship. Given the number of programs in the study and the range of service practices represented, only a three-level response scale could be created for each program indicator. This reduced the precision of the indicators, with the result that the performance threshold for assigning the highest rating on some items may have been too low to influence continuity of care. Regarding the sample, the data analysis was conducted at the program level. Client continuity scores were aggregated to the program level, but the small number of participants per program in the study may not have represented average program experience. While it is difficult to hypothesize the nature of the sample bias, a relationship between program structure and continuity may have been missed.

However, it is also worth considering that program structure and delivery do not influence the continuity of care experienced by clients. Thornicroft, Wykes, Holloway, Johnson, and Szmukler (1998) distinguish structure from process, arguing that programs "act as the vehicle for delivery of treatments but should not be mistaken for the treatments themselves" (p. 424). Investigators in the Robert Wood Johnston and Fort Bragg demonstration projects used this argument to explain their finding of a lack of association between system integration and client outcome (Bickman, 1996; Lehman et al., 1994). They state that integration increased interagency collaboration but did not address quality or appropriateness of the care provided. Similarly, Burns et al. (1999) found no association between caseload size in case management programs and a number of client outcomes; they suggest that form should not be examined in isolation from content (such as provider efforts at coordination).

If subjective continuity is dependent on factors other than program structure, what other determinants should be examined? Provider and relationship variables are promising areas for future examination. In a qualitative study, Ware, Tugenberg, Dickey, and McHorney (1999) identified a number of provider behaviours thought to contribute to continuity of care, including stepping out of prescribed roles, intervening early, and accommodating client preferences. These qualities have formed the conceptual basis for development of a new self-report continuity measure (Ware, Dickey, Tugenberg, & McHorney, 2003). In interviews with outreach workers, Strike, O'Grady, Myers, and Millson (in press) found that flexible role boundaries and "going the extra mile" were considered key to providing responsive care. When Stiffman et al. (2001) modelled adolescent use of mental health services, they found that provider variables — perception of client need, awareness of other system resources, and personal connections — considerably improved the model beyond what client characteristics alone were able to predict. There also is a solid body of literature linking better working alliance between clients and providers with retention in treatment and adherence to treatment plans (Frank & Gunderson, 1990), and a recent study that looked specifically at client continuity of care following psychiatric discharge found that better alliance with inpatient staff predicted higher rates of outpatient follow-up and continuation in community services (Druss, Rosenheck, & Stolar, 1999).

The important role of providers in creating continuity has implications for nurses working in community mental health programs. The Alberta tool indicates that continuity is created when clients have a good relationship with providers, feel that providers are responsive to their needs, and are confident that the care team is working together on their behalf. These elements are already familiar to nurses, as therapeutic alliance, effective listening, and showing empathy are considered the essence of nursing practice (Kai & Crosland, 2002; Peplau, 1988). A recent project developed by nurses used the therapeutic relationship as the building block for a program to transition individuals with chronic mental illness from inpatient to community care (Forchuk, Jewell, Schofield, Sircelj, & Valledor, 1998). Continuity of care is also a service concern in inpatient nursing where priority is given to maintaining consistency of provider and the care team (Reid, Haggerty, & McKendry, 2002). The findings of the present study reinforce the value of nursing practices for creating continuity and may be an area where nursing can provide leadership in the field.

In addition to the measurement and sample issues cited above, several other limitations need to be considered when interpreting the present results. First, standard program indicators do not exist. The assessed program characteristics were based on a literature review and stakeholder input. However, measures of several elements were not available in the study dataset — for example, multidisciplinary staff and team approach/shared caseloads — and other important program elements may have been missed. Second, the program profile is a self-report tool and sources of information used by respondents varied. Although the quality of the submitted data was checked (e.g., responses within accepted range, internally consistent), study resources did not permit a more comprehensive audit to verify accuracy. Finally, it is possible that program structure is more important for those most vulnerable to care discontinuities. As some of these subgroups (such as younger individuals and those with substance abuse disorders) were not well represented in the sample, potential associations may have been missed.

Conclusion

Continuity of care is a much-discussed but under-researched objective of service delivery. Part of the problem has been lack of suitable measures. This study examined the relationship between program structure and continuity, using a new multidimensional measure based on client perception. Measured program elements were associated with objective continuity in previous research but were not related to subjective continuity in the present study. It appears that program practices that help clients continue in treatment and access diverse services are not effective for meeting client expectations for responsive and coordinated care. Continued investigations of the determinants of both objective and subjective continuity are needed, using larger and more varied client and program samples and testing more complex models. A closer examination of high-risk subgroups could help to identify approaches that respond to specific vulnerabilities.

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Résumé

Les soins de santé de transition offerts aux ex-détenus après leur mise en liberté aux États-Unis

Nancy A. Flanagan

La planification des soins destinés aux détenus après leur mise en liberté peut favoriser la continuité des soins, car elle permet d'améliorer l'accès au système de santé, de réduire les épisodes de soins actifs, de contenir la propagation de maladies transmissibles et de limiter les répercussions financières sur les systèmes publics de santé. Ce projet visait à décrire les soins de santé de transition destinés aux détenus souffrant du sida, de tuberculose, d'hépatite, de maladie mentale ou de toxicomanie. Également, on a étudié le lien entre la taille de la prison et la coordination des soins. Les programmes de soins de transition varient considérablement; on n'a trouvé aucun lien significatif entre le nombre de détenus mis en liberté annuellement dans chaque État et la coordination des soins de santé qui leur sont destinés. Tous les répondants ont rapporté l'existence d'une forme ou autre de planification des soins de transition, habituellement pendant la période précédant de un à six mois la mise en liberté. Les plans tiennent tous compte de la prestation des médicaments, de l'aiguillage vers des organismes de santé communautaire, de l'établissement de rendez-vous et de la recommandation de mesures visant à prévenir la transmission. La majorité des répondants ont indiqué que la planification des soins de transition était coordonnée par des infirmières autorisées. Ils ont aussi fait état de l'établissement de mesures spécifiques à l'intention des détenus souffrant du VIH/sida, de tuberculose, de maladie mentale ou de toxicomanie. Ces données permettront aux infirmières et aux autres prestataires de soins de cerner les tendances en matière de planification des soins de transition et d'assurer la continuité des soins offerts aux ex-détenus.

Mots clés : mise en liberté, soins de santé de transition

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Transitional Health Care for Offenders Being Released from United States Prisons

Nancy A. Flanagan

Ex-offender managed health care can enhance post-release continuity of care by increasing access, decreasing acute-care episodes, controlling the spread of communicable diseases, and reducing the financial impact on public health-care systems. This study describes transitional health care for inmates with AIDS, tuberculosis (TB), hepatitis, mental illness, and substance abuse. The relationship between size of prison system and coordination of care was also investigated. A mail survey was completed by 33 chief medical officers of prison systems in the United States. Transitional health-care programs for ex-offenders vary widely and no significant relationship was found between number of inmates released per state annually and state coordination of transitional health care for supervised ex-offenders. All respondents reported some type of transitional health-care planning, usually either 1 month or 6 months prior to release. This included provision of post-release medication, referral to community health agencies, scheduling of appointments, and instruction in prevention of transmission. The majority of respondents reported that transitional health-care planning was coordinated by registered nurses. Specific measures for inmates with HIV/AIDS, TB, mental illness, and substance abuse were reported. Information about existing transitional health-care programs can help nurses and other health-care providers identify trends in transitional health-care planning and ensure continuity of care for released offenders.

Keywords: prison discharge planning, correctional health care, vulnerable populations model, transitional health care

In 2001 approximately 592,000 Americans were returned to communities after release from prison (Hughes & Wilson, 2003). Offenders have a higher prevalence of tuberculosis (TB), substance abuse, chronic medical conditions, AIDS, and mental health problems than the general population in the United States (Hammett, Harmon, & Maruschak, 1999; National Commission on Correctional Health Care [NCCHC], 2002). The higher prevalence of illness is related to pre-arrest poverty, poor living conditions, intravenous drug use, and inadequate health-maintenance and disease-prevention practices (Hammett, Roberts, & Kennedy, 2001; Petersilia, 2000). Ex-offenders are a vulnerable population because of high-risk behaviours and lack of knowledge about health promotion and disease prevention. The release of vulnerable offenders presents a challenge and threat to local, state, and national public health departments and criminal justice agencies.

Identification of offender health-care needs and development of transitional planning for post-release managed care may improve ex-offenders' accessibility to health services, reduce the threat to public health, and directly affect criminogenic behaviour that is related to substance abuse or mental illness. Outreach, discharge planning, entitlement security, and case management have been suggested as ways to improve the quality of ex-offender health care, reduce taxpayer costs, and lower recidivism rates. Managed health care for newly released offenders may also decrease the spread of communicable diseases such as AIDS, hepatitis, and TB.

The efficacy of transitional health care has been demonstrated by a small number of community drug treatment and mental health programs for ex-offenders. Such programs may reduce the current recidivism rate of 40%. The recidivism rate is the measure of offenders who are returned to state or federal institutions within 3 years (General Accounting Office [GAO], 2001).

Health-Care Needs of Offenders

In 1996, between 98,500 and 145,500 HIV-positive inmates were released from US prisons and jails. The prevalence of HIV and AIDS is estimated to be higher among the prison population than among the general US population. The estimated prevalence of other infectious diseases among prisoners in the United States includes 566,000 cases of TB, 1.3 to 1.4 million cases of hepatitis C, and 155,00 cases of hepatitis B (Hammett et al., 1999; Klopf, 1998; Leh, 1999; NCCHC, 2002). It is also estimated that 84% of inmates released from state prisons in 1999 had substance-abuse problems and 14% had diagnosed mental health problems (Bureau of Justice Statistics, 2002).

Larger prison systems, with their greater numbers of offenders, are estimated to harbour concomitantly more infectious diseases (Hammett et al., 1999). The age of persons in prison has also advanced due to longer prison sentences. Advanced age and poor health-promotion and disease-prevention practices before incarceration increase the offender's likelihood of developing a chronic illness (Maruschak & Beck, 1997). Increased prevalence of infectious disease and chronic illness in larger prisons highlights the need for pre- and post-release continuity of care in larger prison systems. Large prison systems such as those of California, New York, Pennsylvania, and Texas supervise more than half of the offenders released in the United States (Petersilia, 2003). The need for large systems to address continuity of care and potentially reduce the prevalence of infectious disease, substance abuse, and mental illness in the community becomes even greater when one considers their disproportionate share of high-risk releases that can impact community health and public health systems.

Correctional nurses report that offenders need education in basic health, medications, self-care, hygiene, nutrition, dental care, exercise, disease prevention, and screening (Flanagan & Flanagan, 2001). Offenders also need information on communicable diseases (AIDS, sexually transmitted diseases, TB, hepatitis) and common chronic diseases such as hypertension, diabetes, and asthma. Only 35% of offenders in state prisons participate in education programs (GAO, 2001) and only 27% participate in vocational programs (Petersilia, 2001). Educational programming may be affected by the fact that 70% of inmates function at the two lowest levels of prose and numeric literacy (Petersilia, 2001, p. 366). Community social support can affect treatment compliance. One of the main sources of social support is family, and family contact decreases from 54% during the first year of incarceration to 39% after the fifth year (Lynch & Sabol, 2001).

At release, ex-offenders have little money, few unemployment benefits such as Medicaid, Supplemental Security Income, or welfare benefits, and limited job opportunities. Public housing opportunities are reduced for ex-offenders who have been charged with a drug offence unless the ex-offender can document participation in a treatment program. Ex-offender education and vocational skills are also weak. Low literacy and numeracy levels mean that ex-offenders lack the basic life skills needed to complete application forms, write business letters, calculate price discounts, or read a bus schedule.

Ex-offenders continue to underutilize the health care that is available and lack the political and economic resources to coordinate their care (Pollack, Khoshnood, & Altice, 1999). Their reluctance to connect with community services is a result of lack of awareness and poor practices regarding health promotion and disease prevention, anxiety and distrust related to pre-incarceration health-care experiences, and lack of political and economic resources (Conklin, Lincoln, & Flanigan, 1998; Hammett, Gaiter, & Crawford., 1998). Loss of health-care benefits and lengthy enrolment periods for health coverage also limit their access to care. Dual or multiple diagnoses such as HIV/AIDS, mental illness, and substance abuse make treatment compliance difficult due to competing physical and emotional needs. Mental illness may increase suspicions regarding treatment services, continuing substance abuse may serve to reduce the money and programs available for the treatment of HIV/AIDS, and the treatment regimen for those with HIV/AIDS is lengthy and costly. The prevalence of communicable disease, weak social supports, lack of education, poor job skills, lack of housing, and low financial status make ex-offenders a vulnerable population that can have a great impact on local, state, and federal public health departments and social service agencies.

Transitional Health-Care Planning

Transitional health care, as recommended by the National Commission on Correctional Health Care (NCCHC, 2002), includes continuation of support services and medical treatments. Transitional health-care planning activities begin while an offender is in prison and continue in the community after he or she is released. Its short-term goals include accurate assessment of health-care needs, seamless transfer from the prison health-care provider to the community provider to ensure continuity of care, and interagency collaboration and communication. The long-term goals of transitional health care include maintenance of treatment regimens, promotion of health for the individual and the community, and reduction of recidivism related to health problems such as mental illness or substance abuse. Jail or prison programs that include transitional health-care planning serve as a bridge between the correctional facility and the community (Rich et al., 2001). Identification of offender health-care needs and development of pre-release managed care can facilitate use of community services and continuation of treatment (Conklin et al., 1998). Continuity of care can improve treatment compliance, which reduces the person's likelihood of transmitting disease to the community and developing drug resistance due to failure to follow drug protocols (Glaser & Greifinger, 1993).

Outreach, discharge planning, entitlement security, and case management have been suggested as ways to improve quality and reduce the cost of health care for ex-offenders and the community (Conklin et al., 1998; Pollack et al., 1999). Case management can include establishing an offender treatment plan; making appointments for medical conditions and providing accompaniment to appointments; referral to community services for assistance with housing (homeless shelters, boarding houses, care homes, halfway houses), nutrition, and entitlement; community programs; transitional post-release residential treatment programs; substance abuse assessment and treatment; case conferences; teleconference or telemedicine technologies to link inmates with community providers; providing transportation to appointments/treatments; and mental illness or substance abuse assessment and treatment (NCCHC, 2002; Rich et al., 2001). Some models simply incorporate transfer to a pre-release facility near anticipated community return sites, to facilitate community linkages with health services for follow-up care and re-supply of medication (Hammett et al., 2001).

In a study of 51 state and federal prison systems, over 50% of participating facilities referred inmates for Medicaid benefits, HIV monitoring, counselling, medications, and substance abuse treatment (Hammett et al., 1999). Referral can range from distribution of pamphlets to scheduling and providing pre-release meetings with service providers. Simply recommending a visit to a community agency is just a small part of transitional health-care planning and does not ensure continuity of services or treatment.

Studies of health-care coverage for post-release services and medications have found that delay in benefit coverage may affect continuation of services (Hammett et al., 2001).

The federal government is providing funding to support a variety of general transitional health-care models. The goal of the Going Home Re-entry Initiative for Serious and Violent Ex-offenders, developed by the United States Department of Justice (2002), is to reduce recidivism by supporting the development of model re-entry programs that encourage individuals, government agencies, social service organizations, community organizations, and faith-based organizations to make re-entry of the offender population a priority. Funding supports three phases of activity — collaboration, mentoring, and local involvement between correctional agencies and community organizations — to provide a bridge between prison and community. The first phase, Protect and Prepare, takes place within the prison and includes education, mental health treatment, substance abuse treatment, and assessment. Both the second phase, Control and Restore, and the third phase, Sustain and Support, take place in the community and can include monitoring, mental health and substance abuse treatment, mentoring, and community service networking.

A model developed by the National Institutes of Corrections and Abt Associates Inc., called Transition from Prison to Community Initiative (TPCI) (Parent & Barnett, 2002), includes assessment and classification, planning, release supervision, provision of services, reinforcement or response to offender behaviour, and discharge. In the assessment and classification phase, which takes place within the prison, the inmate's strengths and weaknesses are identified so that treatment and programming can be determined. This phase is continuously evaluated for appropriate programming changes. The second phase, development of the Transition Accountability Plan (TAP), requires collaboration among the prison, the offender, and the community. The TAP specifies activities that must occur before the identified release date, participants' responsibilities, a timetable, outcomes, and a case management plan. The case manager role moves from the prison, through parole, to the community support or human service agency. The case manager coordinates, facilitates, and monitors services. The release phase includes identification of a release date, which takes into account risk assessment and risk management. The fourth phase of the TPCI consists of supervision and services. A case manager monitors the offender, intervenes to provide offender accountability or rewards, functions as advocate for both the offender and the community, and makes referrals. Offenders receive continuous feedback about positive and negative behaviours in the response phase. The discharge phase of TPCI releases the ex-offender from supervision and indicates full reintegration into the community. After discharge, the ex-offender uses community services for assistance.

Transitional health-care planning is complicated by type of prisoner release. Offenders who complete their entire prison sentence can be released with no post-release supervision or reporting requirements (unconditional release). Nineteen percent of offenders are released without supervision (Petersilia, 2003). Lack of post-release supervision eliminates the parole officer as a source of community support, hinders post-release follow-up, and can serve to prevent mandated post-release care. Offenders who are released with conditions such as parole or post-release supervision may be easier to follow after release. A mandate for treatment may be imposed post-release but usually applies only to offenders for whom conditional release is appropriate.

Offenders released without discharge planning have difficulty connecting with community services and can have treatment initiated within the correctional setting disrupted post-release. Linkage with community services and continuation of treatment are further hindered if the ex-offender is reluctant to use community health services. Ex-offenders released without planning repeat the pre-incarceration practices of underusing health services, engaging in a poor health-promotion and disease-prevention lifestyle, and relying on costly emergency treatment.

Cost of Transitional Health-Care Planning

The 1996 US Supreme Court case of *Estelle v Gamble* established that prisoners have the right to reasonable access to and provision of health care that meets minimal standards of adequacy. The fastest-growing portion of correctional agency budgets is health care. An average of 10–15% of each state operating budget is devoted to health care (Petersilia, 2003). Increases in prison health-care costs are attributable to increased numbers of inmates who are sick and old and have multiple health problems. Increased spending for health care may strain the resources of states with diminished tax bases and reduced budgets.

The Hampden County Correctional Center in Ludlow, Massachusetts, is proof that a well-managed transitional health-care program can have excellent results (Conklin et al., 1998). The program had an overall operating cost of 8.5% of the total $42-million operating budget of the correctional centre. Cooperative agreements between public health departments, regional medical centres, local health-care agencies, and schools of medicine, dentistry, social work, optometry, and nursing facilitated a cost-effective health-care program. Any increased costs to correctional facilities or public health departments may be offset by decreased costs due to lowered transmission of communicable disease, lower recidivism rates secondary to untreated substance abuse and mental illness, and decreased use of expensive emergency medical care (Hammett et al., 2001; NCCHC, 2002; Vigilante et al., 1999). The efficacy of transitional health care in reducing costs has been demonstrated by ex-offender community drug treatment programs (Travis, 2000), intensive case management for HIV-positive ex-offenders in Rhode Island (Rich et al., 2001), and a prototype managed-care model in Massachusetts (Conklin et. al.). There are no published reports on cost reduction or cost benefit of transitional health-care planning in larger prison systems with a higher prevalence of infectious disease and concomitantly higher health-care costs.

Transitional Health Care and Interdepartmental Coordination

Pre-release health-care planning requires communication between the institution and the community. Coordination among correctional facilities, parole departments, local, state, and federal public health agencies, judicial organizations, police, health-care providers, and social service agencies is necessary to ensure continuation of health care and to avoid duplication of services. Court interventions may be needed to facilitate reintegration of mentally ill offenders. Court-ordered participation in treatment programs, drug testing, electronic monitoring, restraining orders, and curfew limits are some suggested measures (California Board of Corrections [CBC], 2000). Comprehensive interagency transitional health-care programming may entail interagency agreements, interconnected information systems, and cross-training (CBC). Transitional health-care planning was not initiated until a few years ago and no studies have been published on the interdepartmental coordination and communication strategies that facilitate it.

Public Health Implications of Transitional Health-Care Planning

Correctional health-care providers have a prime opportunity to interact with vulnerable offender populations. If incarcerated offenders are viewed as part of the community, then a community-health perspective requires inclusion of offenders to ensure the well-being and health of all citizens. Transitional prevention, screening, and treatment activities that begin within the correctional setting are a first line of defence for public health. Those who provide prisoner health care can begin the "institutional phase" (Taxman, Byrne, & Young, 2002, p. 5) of transitional health-care planning. Managed offender health care can serve to decrease or control the spread of communicable diseases such as AIDS and TB.

Conceptual Framework

The theoretical context for this study was the Vulnerable Populations Conceptual Model (Flaskerud & Winslow, 1998). Vulnerable populations are groups that "have increased relative risk or susceptibility to adverse health outcomes" (p. 69). Ex-offenders are a vulnerable population due to their increased relative risk for adverse health outcomes as evidenced by the high incidence of HIV/AIDS, TB, mental illness, and substance abuse.

The Vulnerable Populations Conceptual Model describes the interactive relationship among resource availability, relative risk, and health status. The availability of socio-economic and environmental resources influences the risk of poor health and low health status. Ex-offender transitional health care is defined as measures taken prior to and following release to increase access to and ensure continuity of health care for inmates of correctional facilities. The model theorizes that increased resource availability may decrease the risks and improve health status. A study of measures to improve ex-offender resource availability may provide the information necessary to test the relationship between increased resource availability and health status for vulnerable ex-offenders.

This study was designed to further our understanding of current prison transitional health-care planning. The research questions were: (1) *What transitional health-care planning measures do prison systems provide for inmates with a diagnosis of substance abuse, mental illness, TB, or HIV/AIDS?* (2) *What administrative and organizational measures are associated with transitional health-care programs?* (3) *Is there a relationship between annual number of inmates released per state and individual state coordination of transitional health-care programs for supervised ex-offenders?*

Method

Design and Sample

The study was a national descriptive survey that assessed the organization and types of transitional health-care measures for male and female adult ex-offenders in prisons throughout the United States. The survey was mailed to the chief medical officer in each of the 50 state corrections departments in the United States. The chief medical officer oversees health care in all prisons within the state. The number of total prisons is dependent on the prison population and size of each state. Thirty-three chief medical officers returned the survey, for a 66% response rate. One third (*n* = 9) of the responding states had released fewer than 5,000 inmates in 2001, one third (*n* = 10) had released between 5,001 and 9,999, and one third (*n* = 9) had released between 10,000 and 133,782.

Measures

The survey contained a partially closed-ended checklist of 32 questions related to transitional health-care planning within the prison system. In order for the researcher to assess the variation in annual data collection and reporting, respondents were asked to indicate the time frame for annual reporting. Response selections included calendar year, fiscal year with beginning and end dates, and "other." The "other" category allowed respondents to describe alternative annual reporting methods. Respondents were also asked to indicate the number of inmates released during the most recent year who were HIV positive, under treatment for TB, or had a diagnosis of AIDS, hepatitis B, hepatitis C, mental illness, or substance abuse. Information on specific types of pre-release facilities and timing of transfer to these facilities was also collected.

General questions about types, coordination, and time of transitional health-care measures were included. Specific questions about measures for HIV-positive inmates and those diagnosed with AIDS, TB, mental illness, or substance abuse yielded information on transitional health-care planning for specific medical diagnoses. Administrative questions were included to identify persons responsible for program coordination of supervised and non-supervised ex-offenders, budget, presence of innovative transitional health-care planning measures, and legislative requirements for transitional health-care planning. An open-ended response section, marked "other, please describe," was included at the end of each question so that the respondent could provide information not included in the checklist for that question.

The instrument was pilot tested among the prison health-care staff and transitional care department in one state.

Procedures

After obtaining approvals regarding the participation of human subjects, the researcher telephoned chief medical officers to describe the survey, solicit participation, and verify names and addresses. In July 2000 a covering letter, the survey, and a self-addressed, stamped envelope were mailed to the medical officer in each of 50 state correctional departments. The covering letter, on official letterhead, described the study, its purpose, and its significance, and the costs and benefits of participation. Return of the survey indicated consent to participate. No surveys contained individual names or state identifiers. All were coded and a code identification sheet was kept separate from the surveys. Three weeks after the survey was mailed, chief medical officers who had not returned it were contacted by telephone to encourage participation and pose questions. A second mailing was sent to chief medical officers who had not previously returned the survey.

Data Analysis

Data were analyzed using the Statistical Package for the Social Sciences, Version 10. Descriptive statistics were used to answer the research questions related to the administration and types of transitional health-care planning measures. Pearson product moment correlation statistical analysis was used to answer the question: Is there a relationship between annual number of inmates released per state and individual state coordination of transitional health-care programs for supervised ex-offenders?

Results

Two of the 33 returned surveys were discarded because they lacked significant amounts of information. Therefore, the results are based on 31 surveys. The number of respondents who completed the item on specific diagnoses was variable. Sixteen reported the HIV status of released inmates, 15 reported the number of released inmates with TB, 10 the number with AIDS, 7 the number with hepatitis B, and 9 the number with hepatitis C; 10 included information on mental illness and 10 reported substance abuse rates. One respondent provided estimates of released offender diagnoses based on the inmate total; these were not included in the count of specific diagnoses. Among those who reported specific rates, the most frequently reported diagnoses were substance abuse (*median* = 4,007), mental illness (*median* = 495), and hepatitis C (*median* = 180). Fewer than half of prison systems (*n* = 14; 45%) transfer inmates to a pre-release facility, and of those that do, 33% or less of the total population are transferred to such a facility. Over 85% of inmates were transferred to a pre-release facility no more than 6 months prior to their release.

All participating states reported some type of transitional health-care planning in one or more of their facilities even though only five respondents reported a state statute requiring transitional health-care planning. There was no significant relationship between annual number of inmates released per state and coordination of transitional health-care planning in each state ($r = .064$, $p = .751$).

Respondents were provided five options regarding the initiation of pre-release planning: on admission, 1 year before release, 6 months before release, 3 months before release, or 1 month before release. The most frequent responses were 1 month (8/31 responses) or 6 months before release (7/31 responses). Six respondents completed the "other" category for this question: two reported that planning took place 45 days prior to release, one that it began 4 months before the expiration of the sentence or upon the granting of parole, and three that it took place 120 days prior to release. One respondent commented that planning took place within 10 days of receipt of an approved pre-parole plan. Another indicated that one prison in the state began planning 3 or 4 months before release and the other prisons did nothing (see Table 1).

In general, transitional health-care planning included referral to community agencies (*n* = 27; 87%), provision of post-release medication (*n* = 29; 94%), scheduling of post-release health-care appointments (*n* = 19; 61%), provision of printed instructions (n =16; 52%), and coordination of health-care case management (*n* = 14; 45%). Sixteen states (52%) assisted with Medicaid application before release and 15 (48%) made a referral to social service for Medicaid application after release. Five respondents reported that discharge planning was focused primarily on HIV-positive inmates.

Transitional health-care planning within prisons was coordinated by registered nurses (*n* = 17; 54.8%), social workers (*n* = 12; 39%), physicians (*n* = 4; 12.9%), nurse practitioners (*n* = 4; 12.9%), counsellors (*n* = 4; 12.9%), case managers (*n* = 2; 6%), and health services administrators (*n* = 2; 6%). States reported coordination of transitional health-care planning with community public health agencies (*n* = 22; 71%), state parole agencies (*n* = 17; 55%), community hospitals (*n* = 10; 32%), or faith-based community organizations (*n* = 5; 16%).

In general, transitional health-care planning applied only to inmates released under supervision, but seven states (22%) engaged in some plan-

Table 1 ***Initiation of Transitional Health-Care Planning in US State Prison Systems***

Time	**Number of Respondents (*n* = 31)**
Admission/reception	4
1 year before release	1
6 months before release	7
3 months before release	5
1 month before release	8
Other	6

ning for unsupervised ex-offenders upon request. Twenty-two respondents provided no information on the budget allocated for transitional health-care planning, the most common reason being inability to separate transitional health-care costs from the overall health-care budget.

Transitional health-care planning for HIV-positive inmates included referral to community health agencies (*n* = 29; 94%), instruction in prevention of transmission (*n* = 27; 87%), scheduling of community health-provider appointments (*n* = 21; 68%), referral to community counselling (*n* = 17; 55%), and provision of condoms (*n* = 5; 16%) (see Table 2). In the "other" category for this diagnosis, seven respondents (23%) indicated provision of antiretroviral therapy. One respondent reported a comprehensive continuity-of-care plan that included housing, financial assistance, and mental health referrals for HIV-positive inmates who volunteered to participate. Another reported an interdepartmental relationship between the department of corrections and the department of health; in this state, department of health physicians and registered nurses visited HIV-positive inmates before release and coordinated the transitional health-care plan. Two other respondents reported assistance with entitlement applications such as Medicaid, SSI, vocational rehabilitation, or free medication programs. One state also assisted with the transportation needs of HIV-positive releases.

Inmates with AIDS received transitional health care, including medications (*n* = 30; 97%), referral to community health (*n* = 25; 81%), instruction in prevention of transmission (*n* = 25; 81%), scheduling of appointments with community health agencies (*n* = 19; 61%), referral to community counselling (*n* =14; 45%), and provision of condoms (*n* = 4; 13%) (see Table 2). The state that had instituted a transitional program for HIV-positive inmates, coordinated with the department of health, offered the same program for inmates with AIDS. Three states referred inmates to community-based AIDS programs and one state provided assistance with applications for free medications. One state each provided assistance with entitlement applications, a comprehensive handbook of community resources, transportation to services, and a chest X ray if required for housing. Forty-one percent of states provided a 30-day supply of medications at release and 29% (9 states) did not indicate how many days were provided; the range of supply was 7 to 60 days, with most respondents indicating either 14 (*n* = 7) or 30 days (*n* = 13).

Twenty-seven states (87%) provided medications to offenders with TB at release but 11 (35%) provided less than 14 days of medication. Other transitional health-care measures for offenders with TB included referral to community health agencies (*n* = 25; 81%), instruction in prevention (*n* = 23; 74%), scheduling of appointments with community health agencies (*n* = 13; 42%), and TB skin testing prior to release (*n* = 9; 29%)

Table 2 ***Number of US State Prison Systems Reporting Specific Transitional Health-Care Planning Activities for Soon-to-Be-Released Offenders with Specified Medical Diagnoses***

Activity	**HIV+**	**AIDS**	**TB**	**Mental Illness**	**Substance Abuse**
Provision of medications after release	–	30	27	31	20
Medication supply (number of days)	–	23*	22*	22*	25*
Referral to community health agency	29	25	25	28	20
Scheduled appointment with community provider/agency	21	19	13	22	13
Instruction in prevention of transmission	27	25	23	–	–
Provision of condoms	5	4	–	–	–
Referral to community counselling	17	14	–	–	–
Chest X ray before release	–	–	8	–	–
TB skin test before release	–	–	9	–	–
Referral to community residence	–	–	–	19	–
Referral to state mental health agency	–	–	–	22	–
Referral to faith-based agency	–	–	–	–	–
Referral to state substance abuse agency	–	–	–	–	15
Other	12	9	7	5	0

– Option not available for this diagnosis based on common referral activities for the diagnosis.
* Mean number of days reported.

(see Table 2). In the "other" category, five respondents reported that they notified the state public health department about the inmate and one reported that the state did not release an inmate until the culture was negative. One also reported a regular schedule of testing at intake, during the inmate's birth month, and as needed when facility conditions indicated testing.

All of the respondents reported that medications were given to mentally ill inmates upon release. Thirteen states (43%) provided a supply of 2 weeks or less, 11 (36%) provided a 30-day supply, and one provided a 60-day supply. Six respondents (19%) did not indicate the amount of medication provided. Referral to community health agencies was reported by 28 respondents (90%). Transitional health-care planning for the mentally ill also included scheduling of appointments with community mental health agencies (n = 22; 71%), referral to a state mental health agency (n = 22; 71%), and referral to a community residence (n = 19; 61%). In the "other" category, it was reported that three states assisted with entitlement applications such as SSI or the state health insurance plan prior to release, one state committed mentally ill inmates to the hospital, and one state referred inmates to a department of health case manager for post-release follow-up.

For inmates with substance abuse problems, the most prevalent transitional health-care planning measures were referral to community substance abuse agencies (n = 20; 65%) and provision of medication (n = 20; 65%). One state provided 60 days of medication, six provided 30 days, one provided 15 days, five provided 2 weeks, and the remainder did not report the amount provided. Thirteen states (42%) scheduled appointments with community counsellors, 11 (36%) provided referrals to faith-based substance abuse programs, and 15 (48%) provided referrals to state substance abuse agencies (see Table 2).

Ten respondents (32%) reported innovative transitional health-care programs. These unique measures included housing and after-care treatment for released inmates with HIV/AIDS (n = 5; 50%). Two states had instituted a community-based program of volunteers to assist female offenders by providing HIV education and support. Another had in place a community transition/placement program initiated in the courts. One correctional services department had established a pilot program with the department of human resources that permitted the pre-release enrolment of 25 medically needy and mentally ill inmates into the state health plan. The goal of this program was to decrease delays for those in need of health care immediately upon release. One state had initiated a pilot transitional health-care project with a health-care vendor. Another state had initiated a unique program to ease the transition of mentally ill offenders to community-based care.

Discussion and Recommendations

Generalizability of these findings is limited to the state prison systems that responded to the survey. A response rate of 66% was achieved. There is no identified minimum acceptable response rate for survey research (Fowler, 1993), but unsolicited mail surveys commonly yield no more than a 20% response rate after the first mailing (Bourque & Fielder, 1995; Fink, 1995). Future studies may increase response rates by including follow-up mailings, monetary or gift incentives, or telephone calls (Dillman, 2000). There were two mailings of this survey, 3 weeks apart. The number of returned surveys increased by 38% after a follow-up telephone call and the second mailing. Therefore, it is strongly recommended that future mail surveys incorporate at least two mailings.

Half of the respondents reported that diagnostic data for released offenders were not available in their state department of correctional services. At least four respondents indicated that data on offender diagnoses were not collected at release. The lack of diagnostic information for soon-to-be-released offenders was a limitation of this study and is an issue for future correctional health-care research. Inmate screening and diagnosis at intake and throughout incarceration is essential for disease surveillance, health promotion, and disease prevention. Pre- and post-release diagnostic data must be collected in order to provide the basis for future correctional health-care studies, monitoring of diseases and disease-related recidivism trends, development of efficient budgets, and evaluation of program effectiveness. The ability to identify medical diagnoses is essential to the identification of offender health needs and the planning of appropriate care (Conklin et al., 1998). Studies that explore issues related to inadequate reporting and recording, identify problems, and suggest remedies are greatly needed in the area of correctional health-care research.

Prison medical data are collected at intake but frequently are either not tracked throughout the inmate's incarceration or not included in the inmate's release data. Each state prison system comprises numerous facilities, some of which may not provide the state medical administrative offices with specific diagnostic data on inmates scheduled for release. Respondents also commented on the difficulty of tracking data because of numerous inmate transfers within the system. Correctional facilities need to implement a uniform screening, reporting, and storage system so that accurate data are available for use in treatment planning, program development, and program evaluation or revision. Interdisciplinary collaboration will be facilitated by uniform reporting of easily accessible diagnostic information.

We need studies that investigate techniques for collecting medical data in correctional settings, such as screening, uniform reporting, and information storage/retrieval. Information on uniform reporting and storage/retrieval techniques could facilitate intra/interagency communication and ensure continuity of care among prison facilities; local, state, and federal governments; and public and private health-care agencies.

Only a few state prison systems responding to this survey transferred inmates to a pre-release facility, and those that did so sent only a third of their inmates to the facility. The literature recommends transfer of inmates to pre-release facilities near anticipated community return sites. Such transfer can facilitate community linkages with health-care services for follow-up and re-supply of medication (Hammett et al., 2001). We need studies of correctional programs that transfer inmates to facilities close to community support systems in order to investigate community resource networking and utilization by offenders before and after release. The relationship between recidivism and communicable disease rates in correctional facilities with this type of pre-release program in place might provide justification for further use of geographically placed transitional-care programs and pre-release facilities.

All participating chief medical officers reported some type of transitional health-care planning, which is consistent with the NCCHC (2002) recommendations for continuity of care. These recommendations were developed to facilitate continuation of support services and health care post-release. The large number of states reporting transitional health-care planning is consistent with the literature, which reports that 50% of state and federal prisons engage in some discharge planning (Hammett et al., 1999; Rich et al., 2001). Studies of model transitional health-care programs should be undertaken to provide evidenced-based practice data that other states can use in developing effective transitional health-care programs.

The programs for mentally ill inmates reported by the respondents correspond with the results of previous studies, which identify jail-to-community programming, links to not-for-profit agencies prior to release, medication monitoring, and post-release residential monitoring of mentally ill offenders (Aman, O'Keefe, & Kovacs, 1998; CBC, 2000; Morris, Steadman, & Veysey, 1997). The data are also consistent with the NCCHC (2002) report to Congress, which states that "a majority of State adult prisons provide screening, medication and medication monitoring, counseling or verbal therapy, and access to inpatient care" (Vol. 2, p. x). Post-release follow-up studies might provide information about the efficacy of pre-release planning for the mentally ill offender.

Participation by mentally ill offenders in post-release programs, incidence of emergent acute-care visits, and information about interaction with community corrections/service agencies should be collected in order to study the relationship of these data with pre-release transitional health-care planning.

In the present study, "community reintegration" measures for offenders with substance abuse problems included relapse-prevention programs facilitated by community support networks and volunteers. This finding is consistent with Byrne, Taxman, and Young's (2002) conclusion that community collaboration with the offender serves to maximize successful transition.

Lack of information about the cost of transitional health-care programs made it difficult for the respondents to assess the relationship between transitional health care and reduced costs. Community drug treatment programs for ex-offenders (Travis, 2000), intensive case management for HIV-positive ex-offenders in Rhode Island (Rich et al., 2001), and a prototype managed-care model in Massachusetts (Conklin et al., 1998) all utilized cost-benefit analyses to justify expenditures on transitional health-care planning. Data that specifically identify costs of transitional health-care programs should be collected in order to facilitate cost-reduction and cost-benefit studies as suggested in the NCCHC (2002) report to Congress. Transitional health-care planning budgets with specific line item costs should be developed in order to provide data for future program development and assessment.

The respondents most frequently reported registered nurses as the coordinators of transitional health-care planning measures. Studies that assess the role perceptions of correctional nurses are relevant to the planning and delivery of transitional health care, since most correctional departments rely on registered nurses to coordinate this care. Nurses are in a unique position to study, plan, administer, and evaluate transitional health-care programs for ex-offenders. Because of both the familiarity of the correctional nurse with the offender and the health-care needs of this population, nurses are uniquely equipped to develop programs for offenders; their education and experience in community health serve to enhance their ability to monitor and evaluate such programs. The nurse can provide insight based on an understanding of the unique needs of both ex-offenders and the communities into which they are to be released (Flanagan & Flanagan, 2002). The dual perspective of community and correctional health care affords nurses a unique opportunity to study transitional health-care programs that are efficacious for both the community and the ex-offender.

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Résumé

Mise en œuvre, utilisation effective et portée d'un programme provincial de soins dans le postpartum

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Cet article analyse, sur la base d'une enquête transversale, la mise en œuvre et la portée, dans cinq localités de la province canadienne de l'Ontario, d'un programme appelé Hospital Stay and Postpartum Home Visiting Program. Comparant les résultats de la présente enquête, entreprise après la mise en œuvre du programme, à ceux d'une enquête précédente, les auteurs étudient en outre les changements concomitants touchant la satisfaction à l'égard des services et les indicateurs de santé maternelle et infantile. Les deux enquêtes ont été menées, d'une part, au moyen d'un questionnaire à remplir soi-même, distribué à l'hôpital, et, d'autre part, d'une entrevue téléphonique structurée quatre semaines suivant le congé. On rapporte des différences statistiquement significatives entre les sites relativement à la possibilité de choisir un séjour hospitalier de 60 heures, le pourcentage des femmes s'étant vu offrir un séjour prolongé variant de 11,7 % à 81,2 %. On n'a toutefois observé aucune différence significative relativement au taux d'acceptation (21,1 %-39,4 %) chez les femmes à qui on a offert ce choix. Le constat est le même en ce qui concerne l'offre d'une visite à domicile par une infirmière de santé publique (91,5 %-96,6 %), alors que l'on a observé des différences significatives relativement à la mesure dans laquelle les femmes ont réclamé une visite; entre 21,1 % et 39,4 % des femmes à qui l'on a proposé une visite à domicile ont accepté l'offre. On a constaté peu de changements entre la première enquête et la deuxième sur le plan de la satisfaction à l'égard des services et des indicateurs de santé. Ces conclusions soulèvent certaines questions quant à l'utilité du programme dans sa forme actuelle et mettent en lumière la nécessité de poursuivre les recherches à ce sujet.

Mots clés : postpartum, indicateurs de santé, satisfaction à l'égard des services, enquête

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Implementation, Uptake, and Impact of a Provincial Postpartum Program

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This paper examines implementation and uptake of the Hospital Stay and Postpartum Home Visiting Program at 5 sites in the Canadian province of Ontario using a cross-sectional survey. It also examines concomitant changes in satisfaction with services and maternal and infant health indicators by comparing the findings of this survey, administered after policy implementation, with those of a previous survey. In both surveys, data were collected via a self-administered in-hospital questionnaire and a structured telephone interview at 4 weeks post-discharge. There were statistically significant differences in implementation of the 60-hour hospital-stay option across sites, with between 11.7% and 81.2% of women having been offered an extended stay. However, there were no significant differences in acceptance rates (21.1–39.4%) among those women given this option. There were no statistically significant differences in the offer of a home visit by a public health nurse (91.5–96.6%), but there were significant differences in uptake of a visit. Between 21.1% and 39.4% of those women who were offered a home visit accepted. When compared to the previous survey findings, there were few changes in client satisfaction with services and health indicators following program implementation. This study raises questions about the utility of the postpartum program as currently implemented and highlights the need for further research.

Keywords: postpartum, universal program, health indicators, satisfaction with services, survey

Background

In 1999 the Ontario Ministry of Health and Long-Term Care implemented the Hospital Stay and Postpartum Home Visiting Program. This policy change was intended to afford all women the option of a 60-hour stay in hospital following an uncomplicated vaginal delivery and a telephone call from a public health nurse within 48 hours of discharge, with the offer of a home visit (Ontario Ministry of Health and Long-Term Care, 2002). Introduction of the program was in keeping with the recommendations of the Canadian Paediatric Society and the Society of Obstetricians and Gynaecologists of Canada. A statement issued jointly by these groups recommended that women have the choice of staying in hospital for a minimum of 48 hours after a normal vaginal birth, and that discharge within 2 days of delivery be part of a program that includes community nursing follow-up in the home and appropriate ongoing assessment of the mother and baby (Canadian Paediatric Society, 1996a).

Several studies have examined length of stay in relation to health outcomes for women and their newborn infants following vaginal delivery, with a focus on the safety of shortened stays. With adequate follow-up in the community after discharge, a shorter hospital stay does not appear to have an adverse effect on maternal and infant health outcomes (Braveman, Egerter, Pearl, Marchi, & Miller, 1996; Grullon & Grimes, 1997). Commonly examined outcomes include readmission to hospital (Dalby, Williams, Hodnett, & Rush, 1996; Madden et al., 2002), which is a proxy measure of health status, and breastfeeding duration (Madden et al., 2003; Mandl, Brennan, Wise, Tronick, & Homer, 1998). The findings of studies that did not consider postpartum follow-up similarly suggest no association between a shorter stay and risk for most adverse outcomes, including postpartum depression (Thompson, Roberts, Currie, & Ellwood, 2000), maternal readmission (Liu et al., 2002; Yanicki, Hasselback, Sandilands, & Jensen-Ross, 2002), and termination of breastfeeding (Quinn, Koepsell, & Haller, 1997; Yanicki et al.). Although one study found a slight increased risk for early breastfeeding discontinuation among women with shorter hospital stays (Heck, Schoendorf, Chavez, & Braveman, 2003), other research has indicated that a longer stay is a risk factor for early discontinuation (Sheehan, Krueger, Watt, Sword, & Bridle, 2001). The findings of studies that examined the relationship between a shorter stay and infant readmission have been inconsistent (Edmonson, Stoddard, & Owens, 1997; Lee, Perlman, Ballantyne, Elliot, & To, 1995; Liu et al., 2000; Lock & Ray, 1999; Malkin, Border, & Keeler, 2000; Sword et al., 2001; Yanicki et al.).

There is a paucity of recent research on short-term, low-intensity nurse telephone contact and home visitation in the postpartum period. Four randomized trials have shown very few differences in clinical outcomes associated with various approaches to follow-up. Edwards and Sims-Jones (1997) found that a telephone contact increased use of parent-infant support groups but was no more effective in producing infant-care behaviour changes than a mailed information package with or without a clerk telephone call. In another study, women were randomized to receive either a nurse home visit or hospital clinic follow-up and group visit within 72 hours of discharge (Escobar et al., 2001; Lieu et al., 2000). There were no significant differences between groups in clinical outcomes measured at 2 weeks post-discharge (breastfeeding discontinuation, maternal depressive symptoms, maternal or infant rehospitalization, maternal or infant urgent clinic visits). The home visits were associated with higher maternal satisfaction but were more costly. Gagnon, Dougherty, Jimenez, and Leduc (2002) randomly assigned women to receive either community nurse or hospital nurse follow-up, which included telephone contact at 48 hours postpartum and a visit at 3 to 4 days postpartum either in the woman's home or in a hospital clinic. There were no significant differences between groups in any of the outcomes measured at 2 weeks postpartum (daily breastfeeding frequency and infant weight gain, maternal anxiety, and post-discharge satisfaction with services). A randomized trial by O'Connor et al. (2003) compared two public health nurse follow-up programs: a telephone screen on the first working day following the mother's discharge, and two home visits scheduled within 10 days of discharge. No differences were found between groups in maternal confidence at 2 weeks postpartum or in infant health problems or breastfeeding rates at 2 and 4 weeks postpartum. However, the total costs of health services were higher for the home-visit group.

The Hospital Stay and Postpartum Home Visiting Program introduced in Ontario is unique in that it is a provincial policy rather than an agency-initiated program. It is intended to provide the option of a longer than usual stay for all women and a continuum of care from the hospital to the community through collaborative planning between local hospitals and public health units (Ontario Ministry of Health and Long-Term Care, 1999). The goal of this universal program is to afford women and their infants the support they need to make a healthy transition during the first few weeks postpartum, and to provide all families with access to information and support (Ontario Ministry of Health and Long-Term Care, 1999).

Our research focused on implementation and uptake of the program as well as changes in satisfaction with services and maternal and newborn infant health indicators since its introduction. This study is unique in that it is the first to examine a government policy related to length of stay and universal postpartum follow-up in the community. The outcomes that we chose to examine are similar to those that have been included in previous studies and are amenable to change. The study adds to the limited body of research on satisfaction and health outcomes associated with short-term, low-intensity follow-up. The specific research questions were: *To what extent has the Hospital Stay and Postpartum Home Visiting Program been implemented? To what extent do women accept each of the program's components? Have there been concomitant changes in satisfaction with postpartum services in hospital and in the community since the policy change? Have there been concomitant changes in maternal and newborn infant health indicators since the policy change? How might variations in program implementation and other factors account for the findings?*

Methodology

The primary methodology was a cross-sectional survey. We carried out two postpartum surveys, separated in time by a province-wide intervention. We conducted The Ontario Mother and Infant Survey (TOMIS) from 1997 to 2000, with data collection being completed prior to the introduction of the Hospital Stay and Postpartum Home Visiting Program. This survey provided pre-policy implementation baseline data. The objectives of TOMIS II were to examine implementation and uptake of the universal program as well as changes in maternal and infant health outcomes, satisfaction with services, service use, and costs of care following its implementation. The quantitative survey methods for TOMIS II were the same as those for TOMIS (Sword et al., 2001), which allowed for an appropriate comparison of data at two points in time. The same study sites, sample size, eligibility criteria, recruitment strategy, and instruments were used for the two surveys. A qualitative component was added in TOMIS II to explore variations in program implementation and other factors that could help explain the findings. The ethics review committees of the university and the hospitals involved in the study granted ethics approval.

Setting

Five Ontario hospitals were purposefully selected for TOMIS to provide a cross-section of mothers and newborn infants with diverse characteristics and access to varying health and social services. The five study sites used in TOMIS participated in TOMIS II. These were: Site 1 – suburban teaching centre, metropolitan catchment area, 3,900 annual births; Site 2 – central east regional centre, urban and rural catchment areas, 1,500 annual births; Site 3 – central south regional centre, urban and rural catchment areas, 4,500 annual births; Site 4 – urban teaching hospital, metropolitan catchment area, 2,700 annual births; and Site 5 – central north regional centre, urban and rural catchment areas, 2,000 annual births.

Sample

Participants in TOMIS II included the first 250 eligible, consenting women from each site, for a total of 1,250 participants. This sample size was determined to be large enough to allow for the examination of many variables together and was in keeping with the generally accepted guideline of 30 subjects per variable (Burns & Groves, 1997). Women were eligible if they (a) had given birth vaginally to a single live infant, (b) were being discharged from hospital at the same time as their infant, (c) were assuming care of their infant at the time of discharge, and

(d) were competent to give consent to participate. Women were excluded if they (a) had an infant who required admission to a neonatal intensive-care or special-care nursery for more than 24 hours, or (b) were unable to communicate in one of the study languages: English, French, Chinese, and Spanish.

Recruitment

In order to minimize disruption and reduce the possibility of subject and data loss, a site research assistant was hired and trained to coordinate recruitment and data collection at each hospital. Participant recruitment for TOMIS II began in October 2001 and was staggered across sites. Data collection was completed in August 2002. Study information sheets were posted in outpatient and inpatient settings to alert patients that they might be approached to participate. All women delivering at each site during the recruitment period were assessed for eligibility. A study worksheet to guide eligibility assessment and a consent form were attached to patients' charts. Those women deemed eligible received an information letter and were later approached by the site research assistant or nursing staff for consent while in hospital. The site research assistant was responsible for tracking all deliveries during the recruitment period; coordinating recruitment; ensuring that consent forms were signed; and ensuring distribution, completion, and collection of self-administered questionnaires.

Data Collection

Quantitative. Women who consented to participate in the study completed a self-administered questionnaire before hospital discharge. This questionnaire focused primarily on socio-demographic information. At 4 weeks after discharge, trained interviewers administered a structured telephone interview. This interview included questions regarding length of hospital stay, satisfaction with length of stay, satisfaction with services, maternal and infant health, and infant feeding, taken primarily from the 1990 Ontario Health Survey (Ontario Ministry of Health, 1992). The interview schedule also incorporated previously developed instruments, including the Edinburgh Postnatal Depression Scale (EPDS) (Cox, Holden, & Sagovsky, 1987) and a modified Health and Social Service Utilization Questionnaire (Browne, Gafni, Roberts, Goldsmith, & Jamieson, 1995). The EPDS is a valid indicator of postpartum depression with the following psychometric properties: sensitivity 86%, specificity 78%, positive predictive value 73%, split-half reliability 0.88, and alpha coefficient 0.87 (Cox et al.). The Health and Social Service Utilization Questionnaire measures service use, as recalled by patients, which has been found to have adequate levels of agreement with clinic records; the observed agreement ranges between 0.72 and 0.99 and Kappa ranges from 0.48 to 0.89 (Browne, Arpin, Corey, Fitch, & Gafni, 1990).

The self-administered questionnaire and telephone interview schedule were developed specifically for the postpartum surveys. The instruments were deemed to have content validity when reviewed by a multidisciplinary team of health and social services professionals. The few items created for each instrument (e.g., satisfaction questions) were not tested for criterion validity, construct validity, or reliability. The necessity for clarification of some wording and item redundancy and the need to capture information regarding implementation and uptake of the new postpartum program led to minor modification of the instruments for TOMIS II. Professional interpreters translated the English version into the other study languages, and a person fluent in the language and familiar with medical terminology checked each translation.

Qualitative. In conjunction with presentations of site-specific study findings, focus groups were conducted with community-based and hospital-based service providers and administrators at each site to gather detailed descriptions of program implementation and related issues in specific locales. On average, 10 to 12 individuals participated in each focus group. A semi-structured interview guide was used to maintain a focus on the research objective. Follow-up questions and probes were used as necessary to encourage the provision of rich information. The focus-group interviews were audiotaped and later transcribed verbatim.

Data Analysis

Quantitative. All data from the self-administered questionnaires and the structured telephone interviews were entered into and analyzed using SPSS 11.5. Descriptive statistics were used to describe the characteristics of participants and implementation and uptake of the postpartum program. Frequency counts and percentages or means and standard deviations were calculated for categorical and continuous variables, respectively. For each site, characteristics of women who completed the telephone interview were compared with those who were lost to follow-up at 4 weeks post-discharge. Chi-square analyses (for categorical variables) and *t* tests (for continuous variables) were used to test for statistically significant differences between these two groups. Chi-square analyses and *t* tests/ANOVA were similarly used to determine whether there were any statistically significant differences in participant characteristics across study sites (TOMIS II), in the characteristics of participants in TOMIS and TOMIS II at each site, and in implementation and uptake of the postpartum program across sites. Chi-square tests also were used to test for statistically significant differences in satisfaction with services and maternal and infant health indicators obtained in TOMIS and TOMIS II, with these calculations being completed for each site.

Qualitative. The qualitative data were analyzed using an inductive approach. Initially, two research assistants independently coded the focus-group interview transcripts. The transcripts were read and reread, and phrases and sentences that described specific aspects of program implementation were given a descriptive code. The research assistants reached consensus on a preliminary coding scheme. Subsequently, they looked for similarities in the data and assigned the same code to data that had some common characteristic. The emergent themes, which captured the most significant features of program implementation structures and challenges, were reviewed and validated with the principal investigator.

Findings

Participants

A total of 1,250 women (250 per site) were recruited for TOMIS II and completed the in-hospital questionnaire, with 890 (61.2–82.8% per site) participating in the follow-up telephone interview at 4 weeks post-discharge. A profile of the women who took part in the survey and their infants is presented in Table 1. There were no statistically significant differences in any of these variables between women who completed the telephone interview and those who did not, suggesting that those lost to follow-up were similar to those who participated in the interview.

Statistically significant differences were found among sites for all of the variables except mean length of gestation and first live birth (which are less likely to vary by site given the inclusion criteria), thereby reflecting the diversity in the sample we had sought with the purposeful selection of sites (Table 1). Only a few statistically significant differences were found when TOMIS and TOMIS II participants were compared. At each site except Site 3, only one variable was found to be significantly different. At Site 1, TOMIS II participants had higher levels of education ($p = 0.05$), birth weights were lower at Site 2 ($p = 0.02$), incomes tended to be higher at Site 4 ($p = 0.05$), and more participants indicated their ethnicity as Canadian at Site 5 ($p = 0.02$). Site 3, on the other hand, had three statistically significant variables, namely marital status (less likely to be married, $p = 0.03$), language spoken at home (more likely to speak a language other than English or French, $p < 0.001$), and highest level of education (less likely to have completed college or university, $p = 0.02$). However, given the number of statistical tests performed, chance alone (at $p = 0.05$) may account for most of these differences.

Implementation and Uptake of the Postpartum Program

There were wide and statistically significant differences in implementation of the 60-hour-stay option across sites, with between 11.7% and

Table 1 ***Characteristics of TOMIS II Study Participants***

Characteristics	**Site 1 (*n* = 250)**	**Site 2 (*n* = 250)**	**Site 3 (*n* = 250)**	**Site 4 (*n* = 250)**	**Site 5 (*n* = 250)**
Maternal age in years (mean ± *SD*)★	31.7 ±4.9	28.8 ±5.1	29.3 ±5.2	29.7 ±5.7	27.0 ±5.1
Gestation in weeks (mean ± *SD*)	39.5 ±1.4	39.7 ±1.4	39.7 ±1.4	39.4 ±1.7	39.4 ±1.3
Birth weight in grams (mean ± *SD*)★	3344 ±452	3525 ±516	3564 ±485	3404 ±682	3517 ±557
	%	%	%	%	%
Marital status★★					
Married	88.8	71.3	79.9	78.3	59.3
Common law/ living with partner	6.0	21.9	14.5	12.3	27.8
Never married/separated/ widowed/divorced	5.2	6.9	5.6	9.4	12.9
Family income★★[a]					
< $20,000	12.1	14.7	7.4	28.5	23.8
$20,000 to $39,000	18.2	20.7	13.0	18.4	19.7
$40,000 to $59,000	17.3	29.7	23.4	16.7	18.8
$60,000 to $79,000	16.0	17.2	22.1	13.6	17.0
> $80,000	36.4	17.7	34.2	22.8	20.6
Born in Canada★★	37.6	93.6	81.1	34.1	96.8
Self-reported ethnicity★★					
Canadian	26.9	94.3	79.2	37.0	93.6
Other than Canadian	73.1[b]	5.7	20.8	63.0[c]	6.4
Language spoken at home★★					
English/French	55.2	99.6	86.0	63.9	99.6
Other than English/French	44.8[b]	0.4	14.0	36.1[c]	0.4
Highest level of education★★					
Less than high school	4.5	9.7	11.6	17.1	13.4
High school	9.7	13.3	14.1	20.8	10.2
Some community college/ technical school	5.3	14.5	10.4	8.6	13.4
Completed community college/ technical school	19.8	33.5	24.1	17.6	29.7
Some university	10.1	5.6	9.6	6.9	5.3
Completed university	50.6	23.4	30.1	29.0	28.0

★ ANOVA indicated a statistically significant difference across sites ($p < 0.05$).
★★ Chi-square test indicated a statistically significant difference across sites ($p < 0.05$).
[a] 8.4% of the total sample did not report family income.
[b] 26.9% of the total sample at Site 1 "Chinese"; 15.5% "Jewish"; 23.6% spoke Chinese at home.
[c] 11.9% of the total sample at Site 4 "South Asian"; no predominant language "Other than English/French."

Table 2 ***Implementation and Uptake of the Universal Postpartum Program***

	Site 1 (*n* = 171) %	Site 2 (*n* = 186) %	Site 3 (*n* = 207) %	Site 4 (*n* = 173) %	Site 5 (*n* = 153) %
Offered a 60-hour stay*	11.7	41.9	81.2	39.9	52.3
Accepted a 60-hour stay[a]	21.1	39.4	30.4	31.3	21.3
Received a phone call within 48 hrs of discharge*	74.0	75.0	64.2	71.7	80.0
Received a phone call at all*	88.8	97.8	87.8	81.4	94.7
Offered a home visit[b]	95.3	91.5	96.6	95.6	94.4
Accepted a home visit*[a]	76.2	44.7	40.8	72.1	65.9

* Chi-square test indicated a statistically significant difference across sites ($p < 0.05$).

[a] Acceptance is reported for those offered a 60-hour stay or a home visit.

[b] Offer is reported for those who received a phone call.

81.2% of women reportedly having been offered an extended hospital stay (Table 2). Policy implementation challenges identified by focus-group participants included limited capacity due to recent downsizing and reorganization of catchment areas for obstetrical units, which in some instances was compounded by a recent increase in the number of deliveries. At sites where physical capacity was an issue, care providers acknowledged that they did not routinely offer an extended stay but rather made clinical judgements in determining an appropriate length of stay for each woman admitted to their unit.

In spite of the variations in the offer of a 60-hour stay, there were no statistically significant differences in acceptance among women who were offered an extended stay (Table 2). Rates of acceptance ranged from 21.1% to 39.4%. Analysis of responses to an open-ended question about reasons for accepting or declining a longer stay revealed that 31.7% of study participants stayed longer for reasons related to their own health (e.g., high blood pressure, pain), whereas 39.8% cited infant health reasons (e.g., jaundice). Fewer participants (20.2%) reported accepting an extended stay due to breastfeeding difficulties. Women declined an extended stay because they "wanted to go home" (39.5%), felt ready to go home/did not need a longer stay (25.0%), were uncomfortable in hospital/dissatisfied with the care received (16.0%), had other children at home (10.2%), or for other reasons (9.3%).

Implementation and uptake rates for the postpartum home visiting component of the universal program were higher than those for the hospital stay option. Many of the study participants (64.2–80.0%) reported having received a telephone call from a public health nurse within 48 hours of discharge (Table 2). The differences across sites were statistically significant. Focus-group participants attributed this variation to the fact that not all health units had the resources to provide weekend service and at some sites there was not always timely transfer of information between the hospital and the health unit. The vast majority of women (81.4–97.8%) reported having received a public health telephone call at some time following their discharge but not necessarily within 48 hours (Table 2). Again, there were statistically significant differences by site in ever having received a telephone call. Between 81.1% and 85.3% of women who received a call stated that it was helpful. Responses to an open-ended question revealed that women perceived it to be helpful primarily because public health nurses provided reassurance, advice and/or support (47.8%) and answered questions (26.5%).

There were no statistically significant differences by site in the offer of a home visit to those women contacted by telephone, with between 91.5% and 96.6% of participants reportedly having received an offer (Table 2). However, there were statistically significant differences by site in acceptance of a home visit among those women who were offered a visit. As few as 40.8% and as many as 76.2% of women across sites accepted at least one public health nurse visit. Most women who accepted a visit received one visit (52.3–95.6%), with the rest of the sample receiving mostly two visits. Between 1.5% and 15.6% of women received more than two home visits. The mean age of the infant at the time of the first visit varied across sites and ranged from 5.1 to 14.2 days. Between 8.3% and 50.7% of those who accepted a home visit were not seen until the infant was 2 weeks of age or older. The majority of participants who received visits reported that they were helpful (90.3–95.7%). Similar to the telephone calls, the most commonly cited benefits of the home visits, identified through use of an open-ended question, were reassurance, advice and/or support (79.2%) and answering of questions (16.4%).

Satisfaction With Services

Overall, women were satisfied with their length of stay; between 83.0% and 91.8% reported that their stay in hospital was "probably" or "definitely" the right length for them. The fact that most women found the public health nurse follow-up to be helpful is an indicator of satisfaction with this service. However, when we compared mothers' satisfaction ratings of postpartum services in TOMIS and TOMIS II, there were no differences in ratings of services in the hospital. There was a statistically significant improvement in ratings of community-based services only at Site 5, where more women rated these services as good or excellent rather than fair or poor in TOMIS II (Table 3).

Table 3 *Satisfaction with Postpartum Services in Hospital and in the Community Pre- and Post-policy Implementation Across Study Sites*

	Site 1		Site 2		Site 3		Site 4		Site 5	
	TOMIS (*n* = 164) %	**TOMIS II (*n* = 171) %**	**TOMIS (*n* = 199) %**	**TOMIS II (*n* = 186) %**	**TOMIS (*n* = 209) %**	**TOMIS II (*n* = 207) %**	**TOMIS (*n* = 136) %**	**TOMIS II (*n* = 173) %**	**TOMIS (*n* = 165) %**	**TOMIS II (*n* = 153) %**
Rating of postpartum services in hospital										
Good/excellent	61.1	65.9	85.4	88.1	80.7	82.1	73.5	73.7	80.0	80.9
Rating of postpartum services in the community										
Good/excellent	84.7	90.3	89.9	95.5	91.1	93.1	91.5	90.3	79.5	90.5*

*Chi-square test indicated a statistically significant increase ($p < 0.05$).

Table 4 *Comparison of Health Indicators at 4 Weeks Post-discharge Pre- and Post-policy Implementation Across Study Sites*

	Site 1		Site 2		Site 3		Site 4		Site 5	
	TOMIS ($n = 164$) %	**TOMIS II ($n = 171$) %**	**TOMIS ($n = 199$) %**	**TOMIS II ($n = 186$) %**	**TOMIS ($n = 209$) %**	**TOMIS II ($n = 207$) %**	**TOMIS ($n = 136$) %**	**TOMIS II ($n = 173$) %**	**TOMIS ($n = 165$) %**	**TOMIS II ($n = 153$) %**
Maternal health status[a]										
Very good/excellent	58.6	45.9★	60.3	65.1	59.3	66.7	59.6	48.5	70.3	58.8★
Infant health status[b]										
Very good/excellent	82.3	82.4	86.4	88.7	85.2	89.3	79.4	76.0	86.7	87.5
Breastfeeding continuation[c]	86.6	85.3	82.4	88.1	83.9	85.3	77.1	90.0★★	75.7	74.6
EPDS score > 12[d]	15.2	13.1	9.0	4.8	4.3	5.8	9.6	15.2	12.7	10.5
Hospital readmission										
Mother	1.2	0	2.0	1.1	0	2.4★★	0	4.1★★	1.2	1.3
Infant	6.7	4.1	3.0	5.9	1.4	3.4	4.4	4.1	5.5	5.2

★ Chi-square test indicated a statistically significant decrease ($p < 0.05$).

★★ Chi-square test indicated a statistically significant increase ($p < 0.05$).

[a] Self-reported.

[b] As reported by mother.

[c] Continuation rates at 4 weeks post-discharge for women who initiated breastfeeding.

[d] A score of ≥ 12 is indicative of postpartum depression.

Health Indicators

There were few changes from TOMIS to TOMIS II noted in the following health indicators: maternal self-reported health status, health status of infant as reported by mother, breastfeeding continuation at 4 weeks post-discharge, postpartum depression, and maternal or infant readmission to hospital (Table 4). The only statistically significant differences in self-reported maternal health status were found at Sites 1 and 5 where, compared to TOMIS, a lower percentage of women in TOMIS II reported their health to be very good or excellent rather than good, fair, or poor at 4 weeks post-discharge. There were no significant changes in infant health status as reported by the mother. There was a statistically significant increase in breastfeeding continuation among those women who initiated breastfeeding at Site 4. Focus-group participants commented on the lack of adequate physician support for breastfeeding in many communities as a factor in explaining the finding. The incidence of postpartum depression did not change significantly at any site. There was a statistically significant increase in readmission of mothers during the first 4 weeks post-discharge at Sites 3 and 4 (0–2.4% and 4.1%, respectively) but no change in infant readmission at any of the sites. Maternal readmissions were primarily for reasons related to childbirth (e.g., retained placenta, uterine infection).

Discussion

The findings of this study clearly demonstrate that the 60-hour hospital stay option was not being offered universally. Implementation of the hospital stay component varied widely from site to site and, as reported by focus-group participants, was directly related to the physical capacity of postpartum units. Acceptance rates were less variable, with approximately 30% of the total sample accepting an extended stay. Women's decisions about length of stay were influenced by perceptions about their own and their infant's health, adequacy of breastfeeding, their level of desire or readiness to go home, and the extent to which they were uncomfortable or dissatisfied in hospital. The vast majority of women were satisfied with the length of time spent in hospital, and focus-group participants viewed maternal decisions about discharge timing as appropriate. These findings highlight the importance of allowing flexibility in length of stay whereby women's needs and preferences are the guiding factors.

There was less variation in implementation of the postpartum home visiting component, with relatively high rates overall for both the telephone call and the offer of a home visit. As such, this aspect of the postpartum program is reaching most women at some point after discharge from hospital, albeit not always in a timely manner. Well over 90% of women were offered a home visit, but acceptance of the visit varied from site to site. It may be that differences in participant characteristics across sites accounted in part for the variation in uptake. Focus-group participants commented that women who are first-time mothers or breastfeeding for the first time are more likely to accept a home visit. Uptake of the home visit was higher than that of a 60-hour hospital stay, with between 40.8% and 76.2% of women accepting a visit.

In spite of the flexibility in length of stay afforded some women and the enhanced postpartum follow-up in the community, there was no change in satisfaction with services except at one site, where more women rated community-based services higher in TOMIS II. Similar to the findings of van Teijlingen, Hundley, Rennie, Graham, and Fitzmaurice (2003), women in both TOMIS and TOMIS II were, for the most part, satisfied with the services they received. Van Teijlingen et al. argue that measures of patient satisfaction should be used with caution because they can reinforce the status quo rather than lead to new and possibly more desirable kinds of care. Measuring satisfaction between sites and over time, as we did, allows for meaningful comparative bases for interpretation (Larsen, Attkisson, Hargreaves, & Nguyen, 1979). It is important to note, however, that level of client satisfaction is influenced by aspects of the care received as well as by client expectations, psychosocial characteristics (including self-perceived health status), and demographic characteristics (Sitzia & Wood, 1997; Thi, Briancon, Empereur, & Guillemin, 2002).

Even though the public health follow-up enhanced access to nursing support post-discharge, there were few improvements in the health indicators measured. The only statistically significant improvement was breastfeeding continuation, at Site 4. This finding is inconsistent with the results of a Cochrane systematic review, which found clear evidence for the effectiveness of professional support in extending breastfeeding duration (Sikorski, Renfrew, Pindoria, & Wade, 2003). However, the comment by focus-group participants about the lack of physician support is in keeping with evidence suggesting that although physicians promote breastfeeding they do no always have the training in specific strategies to address breastfeeding problems (Freed, Clark, Curtis, & Sorenson, 1995). We cannot necessarily attribute lack of significant change in breastfeeding continuation to characteristics of the postpartum program, because continuation is influenced by multiple factors, including not only health-provider attitudes and support but also personal factors and social environment (Bick, MacArthur, & Lancashire, 1998; DiGirolamo, Grummer-Strawn, & Fein, 2003; Scott, Landers, Hughes, & Binns, 2001; Sheehan et al., 2001; Sikorski et al.; Williams, Innis, Vogel, & Stephen, 1999).

The contact by nurses provided an opportunity to assess maternal health and link women with appropriate resources, yet there were no statistically significant changes in rate of postpartum depression. The focus-group findings reveal lack of routine screening for postpartum depression, which is a barrier to identification and treatment (Gold, 2002). In addition, many communities lack adequate services for women who experience postpartum mood disorders. These issues most likely are reflected in the study findings. The poorer self-reported maternal health rating at two sites is unexplained, as are the higher maternal readmission rates at two other sites.

Implementation characteristics of the Hospital Stay and Home Visiting Program itself might account for the absence of improvements in satisfaction and health indicators. The program, particularly the hospital stay component, was not being offered to all women as intended. Further, the public health follow-up was not always implemented in a timely manner, with some women and infants not being visited by a nurse until the third week postpartum or later. In most cases, families received only one visit. Thus the home visits might have been too late or the intervention not sufficiently intensive to effect changes in health indicators. The results of a systematic review of the effectiveness of nurse home visiting suggest that the effects of home visiting are mediated by the intensity of the intervention, with greater treatment differences being associated with higher intensity (Ciliska et al., 1996). Poor timing of visits also can hamper their effectiveness (Ciliska et al.).

This study raises questions about the utility of a province-wide postpartum program as currently implemented. The strengths of this study are its large and diverse sample, its use of an established methodology that allowed comparison of research findings, its use of multiple methodologies, and its inclusion of women whose principal language was not English. However, it is not without its limitations, which suggest a need for caution in interpreting the findings.

One limitation of the study was its use of a volunteer sample of medically low-risk women and infants following vaginal delivery from five hospitals, which somewhat limits generalizability of the findings. It also included measurement of outcomes at a single point in time after hospital discharge, which might have been too early to expect change in some health indicators, such as postpartum depression. Furthermore, there may have been important changes in health outcomes for women, infants, and families not measured in this study. For instance, because the universal postpartum program is part of the Healthy Babies, Healthy Children Program, it provides the opportunity to link at-risk families with early childhood intervention services that have the potential to foster improved outcomes for children. Another limitation is the lack of psychometric testing of some components of the data-collection tools. Finally, there might have been other factors or baseline differences between TOMIS and TOMIS II participants, known and unknown, that impacted the findings regarding satisfaction with services and health indicators.

In spite of these limitations, the findings provide insight into implementation and uptake of the postpartum program, and highlight important gaps in the continuum of care from hospital to home. Issues raised by focus-group participants included the need for earlier transfer of information between hospitals and health units, as well as the need for adequate resources to provide public health follow-up 7 days a week. Its timing might be particularly important in areas that are under-serviced by family physicians, in which case the public health nurse could be the first person seeing the mother-infant dyad postnatally. It has been recommended that (a) newborn infants discharged within 48 hours after birth be evaluated by a physician or other qualified professional within 48 hours of discharge, and (b) all infants be seen by a physician within 1 week of discharge from hospital (Canadian Paediatric Society, 1996b). However, the mean age of the infant at the time of the initial home visit across all sites was 9 days. It is therefore important that public health units be provided sufficient resources to overcome barriers to the provision of home visits in a timely manner.

Early breastfeeding discontinuation is another issue requiring attention given that approximately 15% of women in TOMIS II had discontinued breastfeeding by 4 weeks post-discharge. Because many factors affect breastfeeding duration, efforts to extend length of breastfeeding need to be multifaceted as health professional support alone might not be sufficient. A peer support program is one strategy to consider given such programs have demonstrated effectiveness in extending breastfeeding duration (Dennis, 2002).

The study findings also suggest that women's mental health in the postpartum period warrants more attention. Symptoms of depression are often overlooked by women and their care providers for various reasons, including lack of specific inquiry about affective distress (Gold, 2002). Postpartum follow-up should include screening for depression using a tool such as the EPDS (Cox et al., 1987) or the Postpartum Depression Screening Scale (Beck, 2001). These instruments could easily be integrated into routine evaluation of women by public health nurses and clinicians in primary-care settings, and thereby facilitate identification of women who are in need of further evaluation and treatment (Gold).

Future analysis of TOMIS II data will include examination of maternal characteristics associated with acceptance of a longer stay and acceptance of a home visit, any changes in health outcomes and service use associated with uptake of each program component, and whether there are subgroups of women who benefit more from the postpartum program (e.g., low-income women, immigrant women). We also will determine which factors are associated with poorer health outcomes and identify the most important predictors of these outcomes. In addition, cost analyses will be carried out to determine costs of care pre- and post-policy implementation and to examine factors associated with higher costs of care.

This and other studies have considered a limited number of outcomes in the early postpartum period (Egerter, Braveman, & Marchi, 1998). Because postpartum health, in general, has been framed within a medical model, our understanding of health issues lacks the comprehensiveness required to identify a range of relevant health indicators. A study by Rogan, Shmied, Barclay, Everitt, and Wyllie (1997), for example, highlighted isolation as one of the problems experienced by new mothers, yet social and relationship issues are typically not addressed in postpartum studies. More research is required in this area. Qualitative approaches would be most appropriate for examining women's postpartum health experiences, perceptions of what health means, and their perceptions of the relative importance of various dimensions of health. The findings could be used to identify and develop research instruments that adequately capture postpartum health indicators.

Research also is needed to examine various approaches to postpartum follow-up and support in the community. There has been a significant body of research addressing interventions for high-risk groups, but there is little to inform the development of services at a population level. Studies to date have typically examined practices such as telephone visits/screening and nurse visits in the home or in a clinic. However, there may be other types of support that are appropriate and acceptable to women. The increasing number of health information sources and peer support groups available on the Internet suggests that alternative approaches to service delivery are worthy of examination. Use of health-related resources on the Internet has the potential to improve health status by enhancing knowledge and the quality of health-related decisions, access to health services, and emotional well-being (Cline & Haynes, 2001; Crandall, Zitzelberger, Rosenberg, Winner, & Holaday, 2001; Eng et al., 1998). Timing of postpartum follow-up is another area that warrants further research. For instance, women who have numerous informal supports in place in the early postpartum days might benefit more from a postponed or second assessment when these supports are less accessible and women are faced with caring for themselves and their newborn infant on their own.

Other researchers have questioned the benefits of a universal postpartum home visiting program and suggested that services should target the neediest families, which could be identified through careful telephone assessment (O'Connor et al., 2003; Olds et al., 1999). Studies could address whether particular subgroups of women and families benefit more from a specific type of follow-up intervention or support. Postnatal home visits, for example, might be especially beneficial to socio-economically disadvantaged and adolescent mothers and their children (Ciliska et al., 1996; Hodnett & Roberts, 2003; Koniak-Griffin et al., 2003). As noted by Egerter et al. (1998), because postpartum practices and outcomes are influenced by characteristics of mothers, infants, and providers, a randomized control trial may be the only approach that can adequately determine the independent effects of different follow-up practices. Longitudinal follow-up beyond the first 2 to 4 weeks postpartum is important to capture a range of appropriate outcomes. Only through rigorous research to determine what postpartum interventions are effective for which groups, implemented at which points in time, can evidence-based programs and policies be developed.

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Designer's Corner

Enhancing Continuity of Care Through Outcomes Measurement

Diane Doran

Outcomes research seeks to link the care that people receive to the outcomes they experience. It is considered the key to developing better ways to monitor and improve the quality of health care (Agency for Healthcare Research and Quality, 2000). Outcomes assessment is conducted largely through the use of administrative and clinical databases (Jefford, Stockler, & Tattersall, 2003). Because of the fragmentation of health-care services, there are significant challenges associated with the evaluation of outcomes across the continuum of care. Our ability to accurately and consistently track patients' outcomes as they transition through care is important for both outcomes research and care management.

The timely and accurate transfer of data on the patient's condition and on the management of the patient's health problems across the continuum of care is an important component of continuity of care (Canadian Council on Health Services Accreditation, 1997; Harrison, Browne, Roberts, Graham, & Gafni, 1999; Hennan, 1975; Lou, 2000; Reid, Haggerty, & McKendry, 2002; Rogers & Curtis, 1980). The patient's response to a health intervention is critical and should be communicated so that appropriateness of care can be evaluated and so that health professionals have information on which interventions have and have not been effective for the patient. To that purpose, the Ontario Ministry of Health and Long-Term Care initiated the Nursing and Health Outcomes Feasibility Project (NHOP) with the object of building a database that contains better information about nurses' contribution to health care than currently exists. A team of researchers received funding to evaluate the feasibility of instituting outcomes data collection by nurses at the point of care in four health-care sectors: acute care, home care, complex continuing care, and long-term care (Doran et al., 2004). This project represented an excellent opportunity for researchers to explore issues in assessing patient outcomes across the continuum of care. These issues and what we have learned about outcomes measurement across the continuum of care are described below.

The project began with the premise that having uniform outcomes data has the following advantages:

- It facilitates communication among nurses within and across sectors, resulting in continuity of care because of uniformity of outcomes tools.
- It makes the planning and evaluation of care more efficient.
- It allows for the aggregation of outcomes data to the group level, the result being information on nursing care at the unit, organization, network, province, and country levels (Keenan & Aquilino, 1998).
- It fosters the smooth transition of individual patients as they move across sectors, through the use of a common set of outcome tools across hospital care, home care, complex continuing care, and long-term care.

Several questions concerning the assessment of patient outcomes across the continuum of care have emerged as a result of our experience with outcomes measurement in this study. These are: (a) What instruments do we select to measure health outcomes across the continuum of care when such instruments must be sensitive to changes in health status in a range of patient populations? (b) What constitutes good outcomes for different clinical populations and practice settings? (c) When and how frequently should outcomes be assessed? (d) How does one control for case-mix differences across health-care sectors? Each of these questions is addressed below.

(a) What instruments do we select to measure changes in health outcomes across the continuum of care? "Outcome," in a health-care context, refers to the patient's response to treatment. Different types of instruments have been developed to measure changes in health outcomes. These include broad-spectrum, generic measures and measures specific to a disease or to a particular group — for example, women or children (McDowell & Newell, 1996). Specific instruments are generally designed for clinical application and therefore must be sensitive to change following treatment (McDowell & Newell). Generic instruments permit comparison across disease categories and are used in evaluating types of care or patient management (McDowell & Newell). In the NHOP study the researchers selected generic instruments to assess outcomes in the four health-care sectors, because the long-term aim is to build a database of nursing-sensitive outcomes that are applicable to a range of medical and surgical patients and health-care settings. There is a risk of loss of sensitivity to change with the generic instruments; their broad indicators may not sufficiently measure subtle or condition-specific changes in a patient's condition. Lack of sensitivity was not observed for the outcome instruments in the NHOP study, although the pattern of change varied for different patient populations. Changes in health status were observed over a period of 4 days or less for acute-care patients but over a much longer period, up to 6 months, for some individuals in home-care and long-term-care settings (Doran et al., 2004).

(b) What constitutes good outcomes for different clinical populations and practice settings? Improvements in health status constitute a good outcome for many patient populations, but not for the frail elderly or the terminally ill. In the case of inevitable decline, it may be reasonable to focus on slowing its rate. Moreover, while it may not be possible to affect all aspects of functioning, optimizing specific areas (e.g., cognition) and avoiding pain can have a profound effect on well-being (Hirdes & Carpenter, 1997). In the NHOP study, different patterns of health-status change were observed for patients in acute care, home care, and long-term care. On average, outcomes improved for patients in acute-care and home-care settings, whereas residents in long-term-care settings showed a decline in health over a period of 4 to 6 months (Doran et al., 2004). Therefore, what constituted a good outcome varied across the continuum of care.

(c) When and how frequently should outcomes be assessed? This issue follows directly from the previous one. If the pattern of change varies for different types of outcomes or clinical populations, then the frequency of health-outcome assessments needs to be tailored to the setting, population, and type of outcome. In the NHOP study, daily variation was observed in symptom outcomes, such as pain and fatigue. In contrast, variation in outcomes such as pressure ulcers and functional status occurred over longer periods, although, as noted above, this variation also differed for clinical populations and care settings (Doran et al., 2004). These findings suggest that outcomes such as symptom control need to be assessed more frequently in acute-care than in long-term-care settings and more frequently than other types of outcomes, such as functional health status.

(d) How does one control for case-mix differences across health-care sectors? Outcomes data can be aggregated to the group level to provide information on nursing care at the unit, organization, network, province, and country levels. However, when aggregating outcomes data for the purpose of inter-institutional and inter-sectoral comparison, one must control for case-mix differences in the patient populations. Otherwise, comparisons are not valid, because it is not known whether between-setting differences in outcomes achievement are related to care practices or to variation in the types of patients served. Case-mix adjustments are made on the basis of patient characteristics that are known to influence the outcome of interest. These characteristics typically include age, gender, and medical diagnoses, but may also include socio-demographic traits, cognitive status, and health status. In the NHOP study we accounted for case-mix characteristics through both chart abstraction and primary data collection. Primary data collection was necessary for patient variables that were not uniformly available in the medical record, such as cognitive status. Our health system databases are limited in the extent to which good data are available for case-mix adjustments across the continuum of care. This is an important area for future database development. The issue is already being rectified in some sectors in Ontario, such as home care and complex continuing care, through the use of the minimum data set (MDS).

In summary, the use and transfer of outcomes data across the continuum of care are an important component of continuity of care and are essential for studying questions about health care that transcend sector boundaries. Outcomes data collection across multiple health-care sectors requires careful thought about the selection of appropriate instruments, the timing of their use, the criteria for judging performance, and the description of the patient populations.

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Translating Research

Innovations in Knowledge Transfer and Continuity of Care

Ian D. Graham and Jo Logan

Continuity-of-care innovations are complex by their very nature, as they often involve the bridging of sectors (e.g., hospital, home, long-term care), settings (e.g., emergency, inpatient, or ambulatory care), agencies (hospitals, home-care authorities, nursing agencies), and provider groups (e.g., hospital or home nurses, primary-care physicians, consulting physicians from different specialties, other health-care-provider groups). The innovations can be fairly discrete, requiring minor changes in practice, or they can require major restructuring of health-service delivery.

Not surprisingly, transferring such innovations to practice and policy can be extremely challenging. While innovations for the purpose of improving continuity (such as introducing practice guidelines, changing aspects of case management, or improving communication among providers) are often grounded in conceptual and theoretical frameworks or empirical data, the same can seldom be said for efforts to implement them. One reason for this is that those interested in implementing continuity-of-care innovations (be they policy-makers, administrators, managers, or even researchers) may not have an appreciation for the field of knowledge transfer, which is also referred to as knowledge translation, knowledge exchange, knowledge mobilization, research use, diffusion, or implementation, to name just a few of the terms used. To avoid further confusion, we use the term knowledge transfer to mean the process by which knowledge or research findings are applied.

Given the complexity of continuity-of-care innovations, the use of knowledge transfer theories or models may serve to promote their uptake. In the next few pages we will briefly review some of the theories, models, and frameworks concerning knowledge transfer that could have relevance for implementing continuity-of-care innovations in both research and practice. This is a selective review intended as a broad sweep of the frameworks used in other disciplines and should not be considered a comprehensive review. We will highlight in greater detail one model we have used with some success in a number of studies and implementation projects.

The literature covers two broad categories of knowledge transfer theories and models: classical and planned action. The classical theories/models of change are sometimes referred to as descriptive or normative. These theories/models are passive; they explain or describe the naturalistic process of change or diffusion of innovations (Rogers, 2003). Diffusion of innovations theory is the most prominent example of a classical theory of change. Some of the better-known observations deriving from Rogers's work are the innovation-decision process, the influence of potential adopters' perceptions about the attributes or characteristics of an innovation on its diffusion, and the relationship between adopter types and diffusion. Potential adopters pass through five stages when deciding to adopt an innovation: knowledge (becoming aware of the innovation), persuasion (developing positive attitudes towards the innovation), decision (making a cognitive decision to adopt the innovation — developing an intention to adopt), implementation (using the innovation), and confirmation (continuing to use, adapting, or abandoning the innovation). Rogers identifies several attributes or characteristics of innovations related to their diffusion. Innovations are more quickly adopted if they are compatible with current values, beliefs, and practices; are seen as more advantageous than the current practice (relative advantage); are easy to use (low complexity); are observed by others to be in use (observability); and can be easily tested before being formally adopted (trialability). Similar observations have been made by other authors (Tornatzky & Klein, 1982). Studies of factors related to the adoption of practice guidelines in health care have found that guidelines are more likely to be adopted if they are of low complexity, trialable, clear (not vague or nonspecific), evidence-based, and not requiring change in existing practice (Burgers et al., 2003; Foy et al., 2002; Grilli & Lomas, 1994; Grol et al., 1998).

Another contribution of Rogers's (2003) work is the observation that potential adopters fall into one of a number of adopter types in terms of diffusion: innovators (venturesome, cosmopolitan, socially disconnected), early adopters (respected, locally well-connected, self-conscious experimenters and opinion leaders), early majority (deliberate, local in perspective, watchful of early adopters), late majority (sceptical, conservative), and laggards (traditional, socially isolated, slow to change).

Lomas's (1993, 1994) Coordinated Implementation Model is more descriptive and focuses explicitly on the medical context. For example, it posits that better knowledge transfer may be achieved by replacing passive continuing medical education with active implementation activities that considers coordination of a broad range of interacting factors that may promote or hinder adoption (e.g., economic, personal, administrative, and community-based incentives). While classical theories/models of change can be informative and helpful in identifying the determinants of change, they provide little direction on how to bring about the change.

Planned change theories/models differ greatly from classical change theories. They provide a set of logically interrelated concepts that systematically explain the means by which planned change occurs, predict how various forces in an environment will react in specified change situations, and help change agents control variables that increase or decrease the likelihood of the change occurring (Rimmer Tiffany & Johnson Lutjens, 1998; Tiffany, Cheatham, Doornbos, Loudermelt, & Momadi, 1994). Planned change refers to deliberately engineered change that occurs in groups of varying size and setting. Proponents of planned change theories/models may work with individuals but their objective is to alter social systems. Examples of planned change models/theories are Green's Precede-Proceed model (Green & Kreuter, 1999; Green, Kreuter, Deeds, & Partridge, 1980); Kotler's (1983) social marketing planning model; Berwick's (2003) rules for dissemination; Kitson and colleagues' Research into Practice Framework (Kitson, Harvey, & McCormack, 1998; Rycroft-Malone et al., 2002); and Logan and Graham's (1998) Ottawa Model of Research Use.

Precede-Proceed

Precede-Proceed specifies the steps that precede an intervention and suggests ways to proceed with it, including subsequent evaluation (Green et al., 1999). In the Precede stages, the implementer specifies the problem and identifies the factors that contribute to it. These factors are categorized theoretically as predisposing, enabling, or reinforcing and then rated in terms of importance and amenability to change. Predisposing factors are attitudes, beliefs, and perceptions. Enabling factors are resources, facilities, and skills. Reinforcing factors are rewards or incentives, such as positive feedback (Green et al., 1980). The key Proceed stages are implementation and evaluation of the intervention. The evaluation stage examines the degree to which the protocol was implemented and its effect on behaviour change and on predisposing, enabling, and reinforcing factors.

Social Marketing

The social marketing planning model (Kotler, 1983) consists of several stages: *planning and strategy,* during which research is conducted with the target group and resources available for the intervention are assessed;

selecting the relevant channels and materials for intervention, during which specifications for the program's structure and outcomes are made and the target group is segmented into homogeneous subgroups; *developing and piloting materials with the target audience* to determine their relevance, comprehensibility, and impact; and *implementation, evaluation, and feedback* to refine the intervention.

Social marketing is focused on effecting health behaviour change at the community level but has also been used as the basis for other quality-improvement strategies. For example, the principles of academic detailing proposed by Soumerai and Avorn (1990) are based upon social marketing approaches. In academic detailing, implementers conduct interviews to investigate baseline knowledge and motivations for current practice; focus programs on specific categories of physicians as well as opinion leaders; define clear educational and behavioural objectives; establish credibility through a respected organizational identity, reference authority, and unbiased sources of information, and present both sides of controversial issues; stimulate physician participation in educational interactions; use concise graphic educational materials; highlight and repeat essential messages; and provide reinforcement for improved practices during follow-up visits.

Rules for Dissemination

While not proposed as a model per se, Berwick's (2003) seven rules for transferring research to practice derive largely from the theoretical work of Rogers (1995) and Schroeder, Van de Ven, Scudder, and Rolley (1986). According to these rules, an implementer must: (1) find sound innovations, (2) find and support innovators, (3) invest in early adopters, (4) make early adopter activity observable, (5) trust and enable reinvention, (6) create slack for change, and (7) lead by example.

Research into Practice Framework

Kitson et al.'s (1998) planned change model for implementing evidence posits that three key elements must be assessed: the level and nature of the evidence, the context, and facilitation of the process. Evidence is defined as research, clinical experience, and patient preferences; context as culture, leadership, and measurement; and facilitation as characterization, role, and style. The elements are multidimensional and interactive and are considered equally important until evidence demonstrates otherwise. The authors outline a three-dimensional matrix of the three elements, which can be present on a continuum from high to low in any given implementation situation; successful implementation is a function of relations among these elements.

Ottawa Model of Research Use

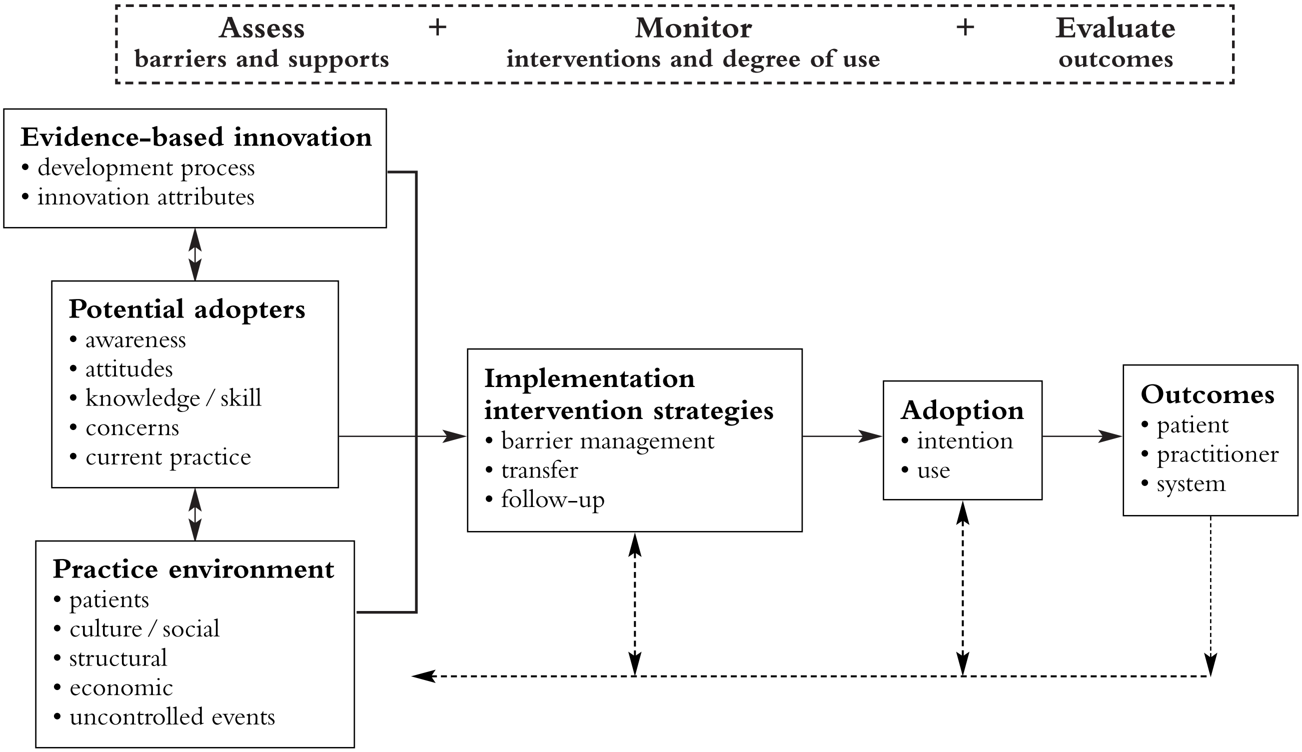
We have found the Ottawa Model of Research Use, or OMRU (Logan & Graham, 1998), to be a particularly useful conceptual framework for guiding the implementation of continuity-of-care innovations that are being evaluated in the context of research and that require major practice or organizational changes. We have also found it helpful in planning and guiding knowledge transfer activities (including the implementation of continuity-of-care innovations) in practice settings (Graham & Logan, 2004; Harrison, Logan, Joseph, & Graham, 1998; Logan, Harrison, Graham, Dunn, & Bissonnette, 1999; Lorimer, 2002).

The OMRU offers a comprehensive, interdisciplinary framework of elements that affect the process of health-care knowledge transfer, and is derived from theories of change, from the literature, and from a process of reflection. Although not explicitly linked to Donabedian's (1988) germinal work describing the production of health care in terms of structure, process, and outcomes, it captures these characteristics along with important social factors.

The elements considered central to knowledge transfer are evidence-based innovation (e.g., a continuity-of-care innovation); potential adopters (those whose behaviour or practice are targeted for change); the practice environment (the settings, including sectors involved); implementation of interventions to promote the transfer of the innovation to practice; the adoption of the innovation (its use); and outcomes resulting from implementation of the innovation (e.g., those related to patient health, practitioner issues, and economic and system implications). A particular advantage of this model is that it may be applied at any level in the delivery of care (e.g., individual professional, team, organization, health-care system).

A number of assumptions are implicit in the OMRU. The model is dynamic in that it considers research use to be an interactive synergistic process of interconnected decisions and actions by different individuals related to each of the model's elements; it is not a sequential stage model of change (Buxton & Hanney, 1996). The process takes place over time, its sequence depending on the specific state of each element in a given context. Although presented as a linear diagram (Figure 1), the process should not be interpreted as unidirectional; all the elements influence and are influenced by the others, thus reflecting the complexity of the knowledge transfer process (this is depicted in Figure 1 by double arrows that create multiple loops). As patients/clients and their health outcomes should be the primary focus of evidence-based practice, another assumption is that patients/clients play a key role in all aspects of the process. A third assumption is that both the societal and health-care external environments will affect all aspects of the process and must also be considered.

Figure 1 *The Revised Ottawa Model of Research Use*



The OMRU is classified as a planned action model because it provides direction as to the issues that should be addressed and the activities that change agents should undertake. When knowledge transfer is being planned, the model relies on a process of assessing, monitoring, and evaluating (AME) each element before, during, and after the decision is made to promote the innovation. In brief, the model directs change agents to conduct a barriers assessment of the innovation, the potential adopters, and the practice environment in order to identify factors that might hinder or support uptake. This information is used to select and tailor implementation interventions such that the barriers are overcome or supports enhanced. The introduction of the intervention is monitored to ensure that all potential adopters learn about the innovation and what is expected of them. Monitoring during the implementation phase can help determine whether the dose of intervention has been sufficient to bring about the desired change or whether a larger dose or a new intervention is required. Finally, the impact of the implementation process on outcomes is evaluated to determine whether the innovation is having the intended effect and whether it has any unintended consequences, and the iterative process begins again.

To demonstrate how the OMRU can be used as a guide in the implementation of continuity-of-care innovations, we have broken the process down into a number of steps.

Step 1: Getting Started

Those wishing to implement a continuity-of-care innovation must first identify the person(s) with the organizational authority to make the required changes. Other issues that must be considered relate to the jurisdiction and the scope of activities of those wishing to implement change. In the case of continuity-of-care innovations that cross sectors, settings, or agencies, this will entail the identification of individuals in each organization. If the change crosses the boundaries of professions or organizational units, strategic alliances must be either identified or cultivated. The availability of resources to implement the innovation must be determined, as successful knowledge transfer requires resources. Individuals who might serve as agents or facilitators of change must be identified and charged with responsibility for implementing the innovation, as successful change seldom occurs spontaneously.

Step 2: Clarifying the Innovation

The change agent should clarify exactly what the innovation is and what its implementation is likely to entail. For example, if the change is the adoption of a practice guideline, the change agent must determine exactly what clinical recommendations are to be implemented. If, for instance, the innovation involves restructuring of the referral process, the change agent must develop a thorough understanding of what this will entail.

Step 3: Assessing the Innovation, Potential Adopters, and the Practice Environment for Barriers and Supports

The change agent should undertake a barriers assessment of the innovation, potential adopters, and practice environment in order to identify issues that could negatively impact adoption and can be targeted and overcome or diminished. The assessment should also include identification of possible supports or facilitators. Unfortunately, there are few validated instruments for assessing barriers and supports. We have carried out assessment in a number of ways, including interviewing key informants and conducting focus groups, surveying potential adopters, and conducting environmental scans, which could include chart audits and analysis of administrative databases.

The change agent must also identify all potential adopters or target audiences of the innovation. These may include policy-makers at the macro and meso level, managers and administrators, health-care professionals from numerous disciplines, educators, patients/clients, consumers, and even the public. The change agent should then assess potential adopters' perceptions of the characteristics of the innovation. This assessment should include their views on how the innovation was developed (e.g., Are the developers credible? Was the innovation process objective and rigorous? Was it explicit, transparent, and free from conflict of interest?). It should also include their perceptions of the characteristics of the innovation (its relative advantages, complexity, compatibility, trialability, clarity, user-friendliness). By determining potential adopters' view of the innovation, the change agent can respond proactively with interventions to clarify misperceptions, address negative perceptions, and promote attributes viewed as positive.

The barriers assessment of the potential adopters should include data collection regarding their awareness of the innovation, attitudes towards the change generally as well as specific to the innovation, any skills and experiences they might have that could be required in the implementation of the innovation, their concerns about the proposed change, and their intentions to adopt or use the innovation. Their current practices or habits should also be determined, as these could indicate the gap between current practice and that which will be required if the innovation is adopted. We have found that the barriers assessments of the innovation and potential adopters can be done simultaneously since they involve the same individuals.

Assessment of the practice environment for possible barriers and supports is essential, especially if the potential adopters are nurses (Estabrooks, 2003). As we have described elsewhere (Logan & Graham, 1998), the environment exerts a powerful set of influences on practitioners, policy-makers, and even researchers. Factors that should be considered include those of a structural nature such as the decision-making structure; rules, regulations, and policies; the physical structure of the setting; and workload. Cultural and social factors can also affect the success or failure of an innovation. These include the cultural and belief systems in place in the setting, local politics and personalities, leadership, peer influences, and endorsement of the change by local champions. Other factors such as economic considerations like availability of resources, equipment, and supplies; the remuneration system; medico-legal concerns; and specific organizational/system factors can all promote or inhibit adoption of the innovation.

Step 4: Selecting and Monitoring the Implementation Interventions

Having assessed the innovation, potential adopters, and practice environment for barriers and supports, the change agent is now ready to begin planning the implementation interventions and tailoring them accordingly. We have begun to classify the interventions in three ways, to reflect what we believe are quite different types of barriers. Barrier management includes interventions to address barriers at the organizational or system level. This might involve such actions as changing the remuneration process or staffing levels, purchasing special equipment, or modifying the documentation process. Transfer strategies are those strategies that are required to ensure that each potential adopter is aware of the innovation, understands how their behaviour must change, and has the skills or training to exhibit the required behaviour. Rogers's (2003) stages of the innovation decision process may be helpful, in terms of potential adopters, in the selection of interventions that are appropriate for each stage in the process. Follow-up interventions can be thought of as booster shots needed to augment the initial transfer activities. Follow-up activities may be particularly useful if the innovation entails a long learning curve or if the potential adopters are a very large or diverse group of individuals. The larger the group the longer it may take for the innovation to diffuse through it and the greater the need for follow-up interventions.

In addition to coordinating the implementation interventions, the change agent should monitor their introduction, via process evaluations, to ensure that they are being delivered as expected and are addressing the identified barriers, as well as to identify and address any unexpected barriers that may have emerged.

The evidence for the effectiveness of interventions in improving practice is limited but growing. The Cochrane Effective Practice and Organization of Care Group (EPOC) is a good source of such evidence (http://www.epoc.uottawa.ca/reviews.htm). Syntheses of the literature to date suggest that educational materials and didactic educational meetings have little or no influence on professional behaviour change. Audit and feedback, local opinion leaders, local consensus processes, and patient-mediated interventions are sometimes effective. Educational outreach visits, reminders, interactive educational meetings, multifaceted interventions including two or more of audit and feedback, reminders, local consensus processes, and social marketing are generally effective in producing professional behaviour change (Bero et al., 1998; Grimshaw et al., 2001). A recent review of interventions to improve the uptake of practice guidelines shows that simple dissemination of educational materials may be as effective as the more costly audit and feedback process, but more research is needed (Grimshaw et al., 2004). Synthesis of the evidence for changing nursing practice is even more limited, although one EPOC review included studies published prior to 1997 (Thomas et al., 2004); this review is currently being updated.

The general conclusions that can be drawn from the literature are that there are no magic bullets and that most implementation interventions are effective under some circumstances but none are effective under all circumstances. For many interventions the evidence is sparse. Generalization from trials and systematic reviews of interventions is hindered by poor understanding of the determinants of professional behaviour change and barriers to research uptake. Given the different contexts in which health professionals work, we should not automatically expect that findings for interventions that successfully change physician behaviour can be applied to nurses or others. Therefore it is reasonable to suggest that when attempting to tailor an intervention to identified barriers, the change agent first consider interventions for which there is evidence of effectiveness but also be prepared to be flexible and to experiment.

Step 5: Monitoring the Adoption

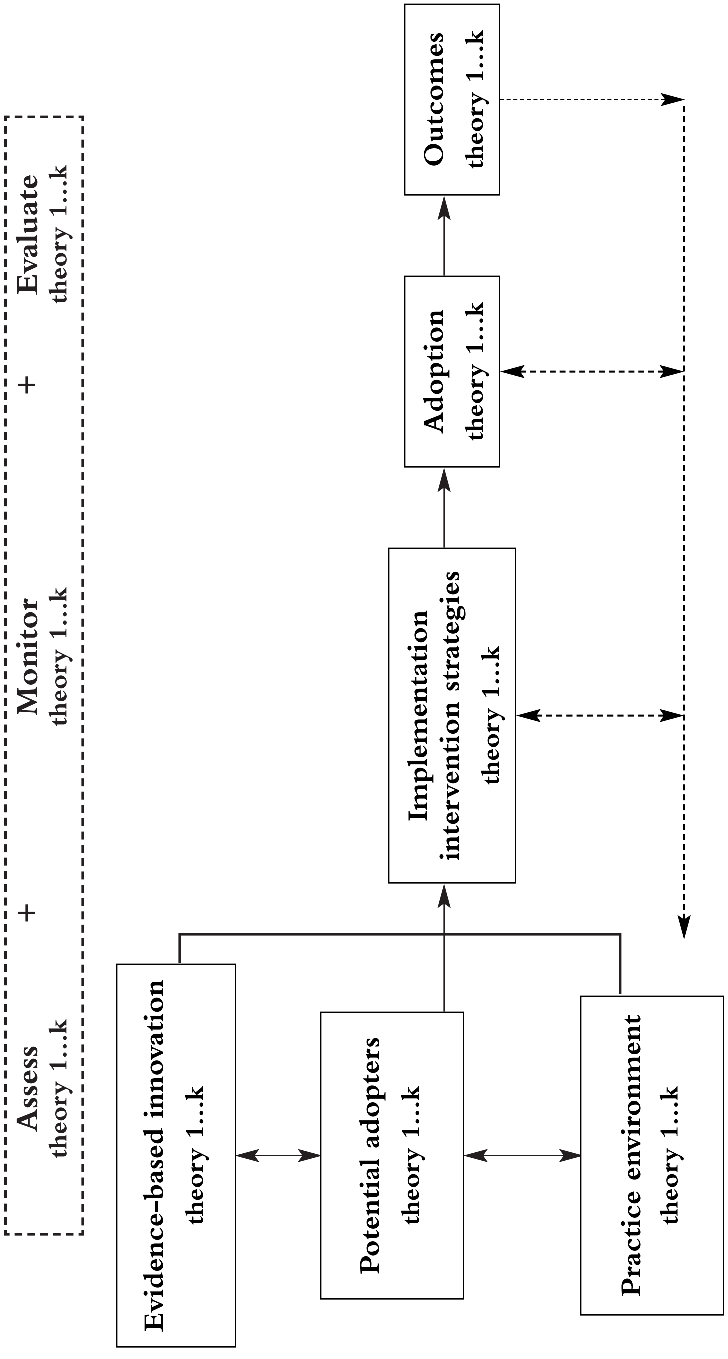
Decisions must be made about what constitutes adoption of the innovation, how adoption is to be measured, the method for collecting the data, the time frame for monitoring the adoption, and who will be responsible for monitoring it. Monitoring is necessary to determine the extent to which the innovation has diffused throughout the potential adopter group and affected the process of care. It can also be used to determine whether the intervention has been sufficient to bring about the desired change or whether more of the same or a new intervention is required. If the degree of adoption is less than expected, it may be useful at this stage to assess the potential adopters' intentions, to determine whether the absence of change is related to a lack of interest on their part or is related to other barriers that may be beyond their control.

Step 6: Evaluating the Outcomes

In this step, decisions must be made about what outcomes will be used to determine the impact of the innovation on the health, practitioner, and system outcomes of interest, how they will be measured, how the data will be collected, the time frame for evaluation, and who will be responsible for it. Evaluating the impact of the innovation is the only way to determine whether the efforts to promote its adoption were worth it.

The OMRU provides a broad, comprehensive framework for planning the implementation of complex continuity-of-care innovations. The model does not yet provide detailed information on which implementation interventions should be used under various circumstances, either because there are insufficient theories for each element or because potentially relevant theories have not yet been validated for health-care professional or organizational change. However, the model is an ideal overarching framework that can be used with specific theories relevant to the field of knowledge transfer. This type of theoretical pluralism is particularly suited to the conduct and use of continuity-of-care research. Because continuity-of-care research addresses complex issues in multiple complex environments, there may be a need for additional theories to help guide both the original research and the knowledge transfer process. In this case, the OMRU can be used as a broad-based model to organize the required activities. Theoretical pluralism can be applied by embedding appropriate micro-range theories specific to some or all of the OMRU broad elements. Specific, well-tested theories from other fields of learning that are appropriate for the enterprise may be encompassed within the OMRU generic constructs. For example, specific theories for developing or adapting innovations would fit under the OMRU construct of the innovation. Theories such as those on organizational or individual behaviour would fit within the practice environment and potential adopter constructs, respectively. Theories on learning or marketing could be situated within the intervention construct to inform transfer strategies. Concurrently, when the focus is on the AME portion of the model, theories related to assessment and evaluation could provide additional guidance. Figure 2 illustrates how additional theories might be embedded within the OMRU.

Figure 2 *Ottawa Model of Research With Additional Theories Embedded*



Summary

In summary, the transfer of continuity-of-care innovations to practice is a complex process. Knowledge transfer is complex in and of itself, and in the case of continuity-of-care innovations this complexity is compounded by the need to simultaneously target multiple sectors, settings, agencies, and providers. Although there are a number of knowledge transfer theories/models, their use in guiding implementation activities is not yet commonplace. If the health-care system and patients/clients are to benefit from continuity-of-care research, researchers and implementers will need to become better versed in the knowledge transfer literature, experiment with these frameworks when implementing innovations, and test their usefulness with different innovations in different contexts.

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Happenings

Continuity Through Best Practice: Design and Implementation of a Nurse-Led Community Leg-Ulcer Service

Karen Lorimer

The community care of chronic wounds places a high demand on limited home-care resources. Leg-ulcer care in particular requires a disproportionate amount of both nursing time and dressing materials because of the tendency towards a slow healing process and high recurrence rates (Friedberg, Harrison, & Graham, 2002). Reports from England estimate that 30% to 50% of home-care resources are used for leg-ulcer care (Lees & Lambert, 1992). Inappropriate and ineffective leg-ulcer management adds to the cost of care (Flanagan, 1996). In one particular region of the Canadian province of Ontario, the majority of leg-ulcer care is delivered in the community.

Faced with increased demand for community care generally, escalating costs, and nursing shortages, the Community Care Access Centre, a regional home-care authority in Ontario, began to focus on ways to provide more effective and efficient care. There was a sense at both the provider and decision-maker levels that care was fragmented and gaps in continuity needed to be assessed and addressed. Planning studies were conducted to better understand the population with leg ulcers, current practices, and the current organization of care, prior to embarking on a restructuring of the service delivery system. The needs-assessment process included a regional prevalence survey and population profile, an environmental scan, a survey of providers (physicians and registered nurses), and an appraisal of current practices (Graham & Harrison, 2002; Graham, Harrison, Moffat, & Franks, 2001; Harrison, Graham, Freidberg, Lorimer, & Vandervelde-Coke, 2001; Lorimer, Harrison, Graham, Friedberg, & Davies, 2003a, 2003b).

The planning studies were underpinned with a conceptual framework for intersectoral continuity (Harrison, Brown, Roberts, Graham, & Gafni, 1999) and involved an iterative approach of producing and using evidence to restructure community health-care services purposefully in order to improve the continuity of care.

The Population and the Problem: Leg Ulcers

Based on the number of cases identified in March 1999 from all sources (home care, long-term care, physicians, and self-report) in the region, we estimated the number of individuals with lower-limb ulceration to be 836, for a prevalence rate of 1.8 per 1,000 population over the age of 25 (Harrison et al., 2001).

During the 1-month study period, 192 of 217 individuals receiving home care were clinically assessed for living circumstances and socio-demographic factors. From this information we were able to provide the local home-care authority with a profile of the population with lower-limb ulceration. This population was a mainly elderly, complex group with multiple health problems. The majority were over the age of 65. Sixty percent had four or more comorbid conditions in addition to the ulcer. Most (60%) had had the ulcer for more than 6 months, with one third having it for more than 1 year and 45% dealing with a recurrent ulcer (64% in the venous group). The long duration of the ulcers and the frequent episodes of recurrence confirmed this population as having high resource requirements for community care. The studies resulted in the first group of data that described the population in a way that was meaningful in terms of designing a new approach. Community clinic care, for instance, was shown to be a viable option, as the majority (94%) were able to travel outside their home. However, the reliance on others for transportation and differences among the older, less mobile female population suggested that transportation issues needed to be resolved and that home care needed to be continued as an option.

The State of Practice Prior to the Restructuring of Services

Prior to the restructuring of services, the local home-care authority brokered leg-ulcer care in the community with three different nursing agencies. Seventy-eight percent of leg-ulcer care, however, was delivered by one nursing agency. A practice variation study (Lorimer et al., 2003) revealed large gaps in care in terms of key recommendations from clinical practice guidelines (Clinical Resource Efficiency Support Team, 1998; Royal College of Nurses, 1998; Scottish Intercollegiate Guidelines Network, 1998). Half of the clients did not have an identified etiology of their ulcer, despite the fact that treatment for venous leg ulcers differs greatly from that for ulcers with a non-venous etiology. A key assessment, the ankle brachial pressure index (ABPI), was not always carried out to screen for the presence of arterial disease. Compression bandaging, the "gold standard" treatment for venous ulcers, is contraindicated in the presence of severe arterial disease. Despite the strong evidence supporting compression bandaging for venous disease (Cullum, Nelson, Fletcher, & Sheldon, 2000), less than half (42%) of those with venous disease were receiving compression treatment. The average referral time of 6 months was higher than the guideline recommendation of 3 months. The majority of records contained no documentation on the assessment or management of pain, nor on education aimed at preventing ulcer recurrence.

In addition, a number of organizational and clinical factors were identified as affecting continuity. The *average* number of nurses visiting each client during the 9-month appraisal period was 19 (Lorimer et al., 2003). It appeared that no one individual nurse had responsibility for the planning of care. Information flow indicated that there was little documentation on ulcer assessments (20% of records) and no documentation on evaluations or revisions to the client's plan of care. The family physician was the main medical provider for clients with venous leg ulcers. However, in our survey of family physicians to determine their knowledge, attitudes, and practices, the minority (16%) reported being confident in their ability to manage leg ulcers, with 50% being aware that the standard four- and two-layer compression bandages are an effective treatment for venous leg ulcers (Graham & Harrison, 2002). The 226 individuals with leg ulcers were receiving care from one of 107 physicians who reported clients with leg ulcers; thus few family physicians in the region were caring for a large number of leg-ulcer patients at any one time.

The results from the planning studies provided population information, identified inefficiencies and ineffectiveness in care that contributed to discontinuity, and revealed potential barriers to the implementation of an evidence-based leg-ulcer service. The next step was to design a new model for the delivery of health services to the population with leg ulcers, drawing on the findings from the various planning studies.

Design of the Nurse-Led Community Leg-Ulcer Service

The new service was to include home-based care as well as a nurse-led clinic, but the core elements of the new service were the same regardless of the location of care: an evidence-based clinical leg-ulcer protocol, primary nursing, a dedicated nursing team educated in leg-ulcer care, and continuous quality improvement measures (CQI). Each of these elements is integral to our aim of enhancing continuity by coordinating evidence-based care among and across health-care sectors, fostering therapeutic nurse-client relationships, and ensuring the flow of information between the client and the interdisciplinary health-care team. The old and new models of care are compared in Table 1.

Table 1 ***Comparison of Care Pre- and Post-implementation of New Service***

Pre-implementation	Post-implementation
• No standard assessment or follow-up • Wide variation in physician orders • Care provided by RNs and RPNs • Geographical assignment of cases • Nurses reporting to a manager responsible for a geographical region • Lengthy delays for specialist referral	• Standard assessment and follow-up • Evidenced-based protocol for venous leg-ulcer care • All-RN service • Designated nurse team • Primary nurse service model • Specially trained RNs • Led by clinical leader who is an APN • Streamlined links to specialist physicians for consultation and referral

The Evidence-Based Plan of Care

Information continuity was enhanced through the use of a standardized approach to care guided by a rigorously developed evidence-based leg-ulcer protocol (Graham, Lorimer, Harrision, & Pierscianowski, 2000). The protocol provided health professionals with up-to-date information on the most effective methods for assessing and managing venous leg ulcers so as to improve the healing of the ulcers and the quality of community care in the region. A comprehensive assessment tool mirroring the evidence-based recommendations was developed, along with a timeline for regular reassessments. The tool guided the collection of client information to identify risk factors and signs and symptoms associated with venous and non-venous disease. A standard reassessment criterion at 3 months was streamlining the referral system, so that any client with an ulcer that has worsened or failed to improve is referred to a specialist.

Primary Nursing

To support relational continuity, the restructuring process had to be considered from the perspective of the current district-based, centrally organized system. In the new service, a primary nursing delivery model based on Manthey's (1980) concept was selected. Manthey presents three tenets of primary nursing: allocation and acceptance of individual responsibility for decision-making; direct person-to-person communication; and one person operationally responsible for the quality of care to patients 24 hours a day, 7 days a week. To foster therapeutic relationships in the new service, the elements of primary nursing deemed essential were accountability, advocacy, assertiveness, authority, autonomy, collaboration, communication, commitment, continuity, and coordination (Pontin, 1999).

Dedicated Nurse Leg-Ulcer Team

Management continuity was facilitated through implementation of a service model comprising an all-RN dedicated leg-ulcer team. Nurses, empowered with decision-making authority, assumed responsibility for implementing the protocol. Therefore, nurse education was key to the success of the new service. Prior to implementing the new service, eight agency nurses completed a baccalaureate distance-education course in leg-ulcer care taught by two key researchers and clinicians in the field of leg-ulcer care.

To enhance continuity of nursing care, the region was divided into geographical quadrants, with a primary nurse specially trained in leg-ulcer care serving as leader of each quadrant and two or three secondary nurses assisting with day-to-day client assessment and care.

The Leg-Ulcer Service CQI Measures

CQI measures were implemented to ensure adherence to each category of continuity of care. The risks associated with enhanced nurse decision-making were minimized through stringent education and training criteria for those nurses serving in the role of primary nurse. In addition, all nurses working in the leg-ulcer service received extensive hands-on training in compression bandaging. Initial and ongoing education in a number of topics related to leg-ulcer care was provided during orientation and at weekly team meetings, in the form of formal and informal presentations, case studies, and discussions on complex issues. Adherence to the evidence-based protocol was monitored by an advance practice nurse (APN) serving as the clinical leader. Care was appraised using a chart audit tool that reflected the protocol recommendations. Client satisfaction was monitored every 3 months until the client was discharged.

Summary and Conclusion

The design of the new service was intended to facilitate continuity. The results after the first year of the new service revealed that care was both more effective and more efficient for all types of leg ulcers (Harrison, Graham, Friedberg, & Lorimer, 2003). Healing rates had dramatically improved, the frequency of nursing visits decreased, and supply costs declined.

With the new service, comprehensive standardized assessments are made at baseline on all new admissions for home leg-ulcer care, and reassessments are regularly scheduled if the condition does not improve. With the evidence-based protocol, all providers and sectors of care are "working from the same script." Specific information is obtained on the client's health history, leg-ulcer history, preferences, and social context. Continuity is further facilitated through implementation of the primary nurse model, whereby one provider is responsible for developing the care plan and for subsequent evaluation and revision. Management continuity is advanced through health-care reorganization, with the development of an expert, dedicated nursing team, a consistent approach to training and skill development, improved coordination, an interdisciplinary approach for referral and consultation, and continuous quality improvement measures for education and practice audit.

A number of strategies tailored to the new service have been highly effective. Strategic alliances among the researchers, home-care authority, nursing agency, nurses, and physicians are essential to the success of both design and implementation. Ongoing interdisciplinary and intersectoral communication expedites the referral process and helps to resolve issues as they develop. The majority of physicians have been very supportive of the use of the protocol and the evidence-based service. Surveys of care recipients have been mostly positive. Nurses who have been surveyed concerning the supports to implementation of the evidence-based service have indicated the following supports: ongoing education, nursing knowledge, a supportive clinical leader, support from two specialist physicians (a dermatologist and a vascular surgeon), a dedicated nursing team, positive outcomes (improved healing rates), and regional home care and agency support.

The greatest challenge has been establishing and maintaining the dedicated nursing team. Continuity is served when nurses are assigned exclusively to the leg-ulcer team, where they can continue to build expertise and skills. The nursing agency was initially reluctant to embrace the concept of a dedicated team, as it viewed wound care as a general function of all nurses. Many of the nurses trained in leg-ulcer care fulfilled a number of other specialized nursing functions. This had resource implications for the nursing agency, as other nurses needed training in various other specialized skills. There should be a balance between the size of the population being served and the size of the team, in order to maintain efficiency and sufficient exposure to skilful assessment and management of leg-ulcer care. During the first year of the leg-ulcer service a number of nurses were lost from the team for various reasons, including: outside opportunities for career advancement, the physical demands of this type of care, retirement, moving from the area, and lack of job security. In addition, the volume of nursing visits was decreased because of Ontario government cutbacks in the area of home-care services. New staff members on the team were laid off in the context of a unionized environment. The lack of long-term security and the reality of lower wages in the community sector have played havoc with recruitment and retention.

A recently formed committee at the nursing agency on continuity of care, with representation from nursing, management, and administration, has identified a number of further barriers to continuity. These include fluctuating caseloads, difficulty attracting nurses to the community sector, and a unionized environment in which senior nurses displace junior nurses on low-caseload days. Strategies aimed at overcoming the barriers to continuity have been identified and are being implemented.

Our experience confirms the need for evidence-based planning in order to understand the needs of the population with leg ulcers, current practices, and the organization of care prior to the restructuring of service delivery. The extensive needs assessment indicated the need for broad system changes in addition to adjustments in clinical care in order to meet best-practice guidelines. Despite ongoing barriers, the service model has improved continuity and dramatically increased the effectiveness and efficiency of leg-ulcer care in one community.

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Résumé

L'interprétation que font les infirmières des situations cliniques: compte-rendu d'une étude menée dans un cadre de soins actifs en Norvège

Bodil Ellefsen et Hesook Suzie Kim

Cette étude avait pour but de décrire la nature des interprétations cliniques élaborées par les infirmières dans le cadre de leur pratique. Fondée sur un modèle qualitatif et descriptif, elle a été menée en Norvège dans un cadre de soins actifs. On a sélectionné un échantillon de commodité constitué de six infirmières autorisées procurant des soins directs, que l'on a jugées représentatives des infirmières travaillant dans ce contexte. Les données ont été recueillies par observation pendant trois quarts de travail complets et à l'aide d'entrevues en profondeur auprès de chacune des participantes; on a également consulté les dossiers établis par les infirmières sur les patients. On a procédé à une analyse qualitative des données à l'aide d'une méthode permettant d'unir l'analyse des parties et celle du tout. Les conclusions révèlent qu'au fur et à mesure des contacts avec les patients et des soins qu'elles leur donnent, les infirmières composent un tableau fondé sur une façon particulière d'« envisager » chaque situation clinique, que les auteures désignent ici par le concept de « vue d'ensemble des soins infirmiers ». C'est sur la base de cette dernière que les infirmières fondent leur interprétation des cas cliniques. Il sera nécessaire d'entreprendre d'autres recherches pour étudier comment les infirmières jugent de la portée des renseignements à leur disposition dans la formulation de cette interprétation et pour analyser les caractéristiques de cette vue d'ensemble selon différents cadres cliniques.

Mots clés : vue d'ensemble des soins infirmiers, interprétation clinique

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Nurses' Construction of Clinical Situations: A Study Conducted in an Acute-Care Setting in Norway

Bodil Ellefsen and Hesook Suzie Kim

The purpose of this study was to describe the nature of clinical constructions that nurses make in their practice. The study was based on a qualitative descriptive design in an acute-care setting in Norway with a convenience sample of 6 registered nurses providing direct patient care. These nurses were considered typical staff nurses working in acute-care settings. Data were collected through observation of and in-depth interviews with participants during 3 full shifts for each nurse and also from nursing documents regarding the patients. Qualitative data analyses were carried out using a method that coalesces analyses of the parts with analysis of the whole. The findings revealed that nurses encounter patients and provide direct care by formulating pictures of encountered clinical situations with a specific way of "seeing," which the authors conceptualize as a comprehensive nursing gaze. This nursing gaze was the basis upon which the nurses arrived at clinical constructions. There is a need for further research to investigate how nurses differentiate the significance of information in arriving at clinical constructions, and to investigate aspects of the nursing gaze in various clinical settings.

Keywords: nursing gaze, clinical construction, nursing practice

Nursing practice involves the engagement of nurses in clinical fields as agents of deliberation and action. In such engagement, nurses observe, assess, recognize, form ideas about, take clinical decisions on, and then act on a particular situation. As cultural agents, nurses are partly socialized into ways of confronting clinical situations and assume, through experiences and interactions with other professionals, specific ways of seeing, knowing, telling, and describing in practice, as suggested for other clinical professionals (Atkinson, 1995; Lave & Wenger, 1991).

The present study investigated the nature of nurses' clinical practice in terms of how they form clinical constructions in acute-care settings in Norway. Our aim was to add to the empirical and theoretical knowledge concerning nursing practice. A prerequisite for developing and changing nursing practice is determining what is actually occurring. Much of the nursing literature focuses on what nurses "should do" or on self-reports or extraordinary cases. Little research has been done on routine nursing care. Our use of participant observation and in-depth interviews allowed us to take a closer look at what the nurses were actually thinking and doing in their practice.

Background

Nursing practice is a form of praxis (human action) aimed at solving the patient's (or client's) health problems and providing "care" or "help" to that person with his or her living. Practice is understood here as the professional work of nurses in a health-care setting. It involves organized or intentional activities coordinated through nurses' deliberations on the client's situation and the clinical field in which both the nurse and the client are located. Deliberation by the nurse involves arriving at assessments and meanings of a clinical encounter, making decisions about the situation, and developing a program of action (Kim, 1994).

Freidson (1970) believes that clinicians' modes of engagement in clinical situations are guided by a clinical mentality. Foucault (1973) suggests the clinical "gaze" as a special way of perceiving the patient. Atkinson (1995) refers to this as the "clinical eye" and as "rhetoric." While such terms as clinical mentality, clinical gaze, and clinical eye are not similarly defined, they all point to an interesting aspect of clinical practice, namely a special, professional way of assessing the clinical situation. Foucault suggests that the institutionalization of sick care involved a specific medical gaze that became the basis for the disciplinary power developed in the late 19th century. Atkinson (1995), in his study with hematologists, concludes that doctors vacillate within several different frames of reference that constitute the culture of medicine in "reading" patients, constructing clinical cases, and engaging in clinical discourse. His view is that "the production and reproduction of clinical knowledge or opinion are grounded in characteristic modes of perception and legitimization" (p. 47). Atkinson further suggests that medical practitioners engage in a complex interplay between "personal, traditional, and scientific" knowledge that interpenetrates clinical discourse (p. 48). He also reports that physicians use several different "voices" in medical discourse to construct cases.

Ellefsen (2004) found the practice of experienced hospital nurses to be framed by normality, health, need, illness trajectory, and action orientation. In that study, nurses used their ideas regarding normality as a comparative framework for judging deviations, and used health as the basis for identifying disease. Patients' needs determined what patients required, the illness trajectory was used to evaluate patients' progress, and actions were specified as expectations in clinical situations.

Given these frames of practice, the next logical step is to focus on what guides nurses' construction of practice. Nurses seem to have particular ways of observing clinical situations. The concept of "knowing the patient" has been advanced as the pivotal focus in nursing assessment and decision-making (Radwin, 1998). A characteristic of the nursing experience is to focus on the patient when constructing the clinical situation.

The present study set out to reveal the character of the lens through which nurses view patients and arrive at definitions about clinical situations. Although the focus of a clinical situation is the patient, the nurse's clinical construction includes the situation as a whole, encompassing not only the patient but other elements. What orients nurses in the clinical situation? What do they focus on, and what are their areas of interest when they come to an understanding about the patient's situation? What are nurses' specific ways of reading, seeing, hearing, telling, and describing clinical encounters and situations? Because nursing entails a great deal of coordination with different nurses, such processes are important in determining how nursing practice is played out, in terms of not only specific, individual processes, but also collective processes involving many players (i.e., other nurses, nursing assistants, other health-care professionals) with different cultural and role orientations. The present study set out to investigate the nature of nurses' clinical practice in terms of how clinical constructions are made and the meanings of such constructions in nursing practice.

The research question was: *What is the nature of nurses' constructions of clinical situations and how are such constructions made?* Our focus was on the first step in the process of deliberation, the initial view of the clinical situation, which shapes ensuing clinical engagements. Deliberation and engagement point to what nurses are thinking and doing in practice. Clinical construction might be understood as how nurses perceive the clinical situation — what they notice, recognize, and describe — the assumption being that what nurses do in practice is guided by clinical constructions, as these are the initial points in the cascade of clinical decisions and actions that occur during the course of a patient's care.

Study Design and Data Analysis

The present study was part of a larger study of the nature of nursing practice — nurses' clinical engagement, nurses' construction of clinical situations, and frames that guide nurses' clinical constructions — for which data were collected in 1999 and 2000. This article reports only the results regarding the nature of nurses' construction of clinical situations. Clinical engagement is understood as the nurse's means of addressing patients' needs and requests; frames is understood as the philosophy or ideas that guide the nurse's practice.

As we wished to obtain data on first-hand observation in naturally occurring situations, we chose a clinical fieldwork approach (Brink & Wood, 1994). The result is a qualitative descriptive study conducted in an acute-care setting. The clinical fieldwork approach is a qualitative, naturalistic method carried out in a practice setting in which the emphasis is on description, understanding, and/or explanation of ordinary occurrences as experienced by "usual" actors in a clinical field (Schatzman & Strauss, 1973). The qualitative approach allows the researchers to obtain in-depth, detailed data. When describing field research, Schatzman and Strauss stress the need to get close to the participants: "Their actions are best comprehended when observed on the spot — in the natural environment where they live and work" (p. 5). In our investigation, the aim was to determine what nurses actually experience in their practice.

We chose a convenience sample of nurses working in medical and surgical units in a large acute-care hospital in Norway. The inclusion criterion was 2 years' experience in an acute-care unit as a registered nurse, as we wished to include experienced nurses who were used to providing care and were well acquainted with procedures on the unit. Our sample is thought to be representative of the typical staff nurse, whose main responsibility is direct patient care.

The sample consisted of six registered nurses, all female, three from medical units and three from surgical units. Table 1 gives an overview of the participants in terms of age, years of experience as a registered nurse, and years of experience on the unit.

The senior nursing officer of the hospital informed the nursing officer of each unit about the study. These officers in turn invited experienced nurses to participate. Several nurses on each unit met the inclusion criterion, and the researcher approached these nurses and asked them to participate. The final participants were from five different units, one each from four units and two from another unit.

Table 1 *Particulars of Sample*

	Age *Mean (Range)*	**Years of Experience as RN** *Mean (Range)*	**Years of Experience on Unit** *Mean (Range)*
Total	34.3 (28–42)	7.3 (4–13)	6.1 (4–8)
Medical unit	35.0	6.0	5.7
Surgical unit	33.7	8.7	6.7

Setting

The investigation took place in a 250-bed urban university hospital with an affiliated medical school and nursing school.

Three of the participants were from medical units, two from a unit dedicated to lung diseases and one from a unit for gastrointestinal disorders. The lung unit (26 beds) had 20 nurses and 8 nurse's aides working full time. The gastrointestinal unit (24 beds) had 20 nurses and 7 nurse's aides working full time.

Three of the participants were from surgical units, one each from the urological, gastroenterological, and cardiovascular units. The urological unit (24 beds) had 20 nurses and 8 nurse's aides working full time. The gastroenterological unit (24 beds) had 25 nurses and 4 nurse's aides working full time. The cardiovascular unit (25 beds, five of which were dedicated to orthopedics) had 27 nurses and 5 nurse's aides working full time. For reasons of anonymity the quotations are attributed to either medical or surgical nurses only.

Ethical Considerations

The regional ethics board assessed the participants as not at risk and verbally approved the study. The hospital's director of nursing services granted the researchers permission to carry out the investigation. Nurses who met the inclusion criterion were asked to participate on a voluntary basis after the research process and procedures had been described to them. Written informed consent was obtained once they agreed to participate. The participants were informed that they would be "shadowed" by the researcher during three shifts of their usual duties in providing patient care and would be interviewed at the end of each shift. Data for patients receiving care from the participants were recorded using pseudonyms, in order to ensure their confidentiality and privacy.

Data Collection

The data were collected through participant observation; in-depth interviews with the participants; and review of participants' written reports regarding patients, such as discharge planning notes, other notes, and referrals.

We used the participant observation method described by Schatzman and Strauss (1973), whose fieldwork recording approach includes observational, methodological, and theoretical notes — that is, differences in the written text between "pure" observational notes, and notes on methodological and theoretically issues. Nurses' verbal and non-verbal actions and behaviour were noted and recorded, along with full information about the particular context or situation. The participants were observed not only when they were in direct contact with patients and families but also as they interacted with nursing assistants, other nurses, and other health-care professionals including physicians. The observer was introduced to patients in the unit as a nurse researcher. When participants were in direct contact with patients, as when providing hands-on nursing, the patient was asked if he or she was comfortable with the nurse researcher present. The researcher spent one shift with each participant prior to data collection (participant observation period) in order to become oriented in the work pattern of the participant and to become acquainted with the participant and the unit. The observation period lasted three full 8-hour shifts for each participant. All shifts were day shifts as this was the one in which most patient-oriented activities took place and because not all of the nurses worked all types of shifts.

Data were collected sequentially — that is, the researcher observed and interviewed each participant for three shifts before moving on to the next participant. The in-depth interview was carried out at the end of each participant observation period (that is, after each shift); thus, each participant was interviewed three times (see Figure 1).

Each interview was audiotaped with the participant's permission. The questions focused on the nurse's perceptions and descriptions of the patients during that particular shift. The purpose of the questions was to get a picture of how the nurse perceived the clinical situation of each patient: what, in the nurse's view, was specific about the patient; what the point of interest was; and how the nurse perceived the situation — what specific things she noticed and the meaning of these. The participants were asked what they would write if asked to produce a detailed nursing note on the patient at the end of the shift. Points of interest from the observation were also discussed. Altogether, the data were based on 144 hours of observation and 18 interviews. The field notes and audiotaped interviews were transcribed verbatim. The transcripts and documentation

Figure 1 ***Observation and Interview Process for Each Participant***

Day 1	**Day 2**	**Day 3**	**Day 4**
Day shift	Day shift	Day shift	Day shift
07:30–16:00 Orienting participant observation	07:30–16:00 Participant observation	07:30–16:00 Participant observation	07:30–16:00 Participant observation
	16:00–17:00/17:30 Interview	16:00–17:00/17:30 Interview	16:00–17:00/17:30 Interview

obtained from the participants' practice constituted the empirical material for the qualitative analysis. Having estimated, based on previous research using similar methods, that data from five or six participants would be sufficient (Dick, 1998; Esposito, 1998), the researcher concluded that saturation had been reached after data had been collected from six participants.

Data Analysis

Data analysis was continuous, beginning with the initial set of participant observations. First, the participant's interaction with each patient was examined in terms of the research question. Then, each participant's practice with all patients throughout the three shifts was examined in relation to the research question, in order to identify patterns and differences. Finally, the data from all six nurses were compared and contrasted to identify patterns and differences across the sample. Two modes of reading were used. The first was based on fragmentation of the text into categories and instances. The second was intended to capture the flow of the narratives and the order, as described by Atkinson (1992). Confirmation and re-questioning, both during observation and during the interviews, served to enhance the accuracy of the notes. At the same time, the data were checked for representativeness of reality by ensuring that no data were omitted during analysis. The investigators checked the research effects on data collection and data interpretation by reflecting on the processes involved and by asking the participants to elaborate. The findings were validated by means of weighing the evidence and by means of contrasting and comparing (Miles & Huberman, 1984). Nurses' notes and patient documentation were not analyzed in depth but used as background material and as a means of clarifying the nurses' clinical constructions.

Results

We will first describe the sources through which the nurses obtained material for their construction, then present and discuss the elements of their construction.

The Importance of Routines

The daily routines of the nurses are outlined in Table 2. The five types of routines that structured each nurse's day on the unit were important vehicles that met different aims and fulfilled different functions, not only for the nurses' practice but also for the unit as a social organization. Each routine featured not only a main aim that was manifestly understood but also aims that were latent and hidden and understood to be supportive of all aspects of nursing. For example, while the main aim of shift reports

Table 2 ***Daily Routines***

Type	**Aims**	**Supporting Aim**
Nursing rounds	General surveillance of patient status, hygiene, cleanliness, well-being	Information gathering and exchange, guidance
Meal rounds	Assessing nourishment, maintenance, well-being	Information gathering and exchange
Medication rounds	Recovery, maintenance	Information gathering and exchange
Shift reports	Information and transmission	Probing, support, reminders
Physicians' rounds	Validation of medical care and process, assessment of patient status	Safety, security

was the transmission of information, these reports also served as a means for the nurses to go into more detail about patients or gain support for a special procedure, or as reminders about things to be done; and while the main aim of meal rounds was to ensure that patients were well nourished, they also played a part in the gathering and exchange of information.

Construction of Clinical Situations

Nurses' clinical constructions are formed and revised through a complex, evolving process of gaining information, adding its meanings to what exists, and formulating and reformulating ideas about patients' clinical situations occurring simultaneously and circularly, rather than simply and linearly. The nurse engages in a back-and-forth movement among the different sources and between the sources and the picture that is evoked. For each "dip" into the sources, the nurse draws new lines on the clinical picture and erases certain features from it. As information comes in from various sources, the nurse re-adjusts her mental image of the patient and his or her situation.

The picture evocation was on the "surface" in the participants' descriptions of clinical situations. The construction of the clinical situation came through *appraisals of patients* by different *sources,* and the signals from these evoked a picture of the patient and his or her situation processed through aspects of the nursing gaze (Table 3). The nursing gaze is a lens through which the nurses viewed, interpreted, and received

Table 3 ***Construction of Clinical Situations***

Construction of Clinical Situations	Picture Evoked
Sources of appraisal of patients and clinical situations	Written material: admission papers, test results, reports, nursing plans Admission discourse Daily routines: nurses' rounds, physicians' rounds, meal rounds, medication rounds, shift reports Encounters: hands-on nursing, meetings in patient's room and in corridor Patient's body language Patient's verbal statements
Aspects of nursing gaze	Seriousness of disease Patient's illness experience Patient's managing or handling of clinical situation Functioning

meanings of clinical situations. It is what pre-existed in the nurses' minds even before they encountered specific clinical situations. The nurses held a nursing gaze to be used in processing information about clinical situations and in arriving at clinical constructions (i.e., clinical pictures) about them.

Sources of appraisal. Sources of appraisal were *written material, admission discourse, daily routines, encounters,* and *patient's body language and verbal statements.* Written material such as admission papers and the admission discourse gave the nurse the first impression regarding the patient. This impression tended to be overwhelmingly medically oriented, based mostly on the admission diagnosis (which was always a medical diagnosis), physical examination, and physiological test results, and only occasionally on psychological or social information. Nursing care information was sometimes available if the patient had been living in a nursing home or had been attended by the district nursing service prior to admission. Nursing notes and reports became part of the daily impression material after the first shift report.

Daily rounds of various sorts and oral and written shift reports were the main sources of nurses' impressions about patients and their clinical situations. These were used to observe, probe, investigate, and amass information about the patients (Table 2).

The sources became explicit in the daily reports. For instance, the nurse would mention that when she gave patient N medication she noticed xyz, or would allude to something she observed when the patient was walking in the corridor or when she was serving dinner to the patient.

In addition, encounters with patients in their rooms or in the corridors and during hands-on nursing were occasions for gaining information through observation. During such encounters the nurse was not just "passing by" the patient, but observing, noticing, and making mental notes about changes in the patient's condition or the condition itself. Patients' body language and verbal statements provided the nurses with supplemental information. Body language included physical signs and symptoms. These were observed through cross-points with patients during routines and encounters. Verbal statements were found in the discourse or in the words and phrases used during encounters and cross-points. Information gained from these sources was subjected to interpretation through the nursing gaze.

Aspects of the nursing gaze. Daily routines, encounters with the patient, the patient's body language and verbal language, and written material were the cumulative and sometimes revisional bases by which the nurse constructed or evoked a picture of the clinical situation. Such constructions or picture evocations are processed through the nursing gaze, which provides nurses with a specific mind-set and focus to draw meaning from clinical encounters. The clinical construction has four essential elements: *seriousness of the disease,* the patient's *illness experience,* the patient's *ways of managing* the situation, and the patient's *functioning* (Table 3). These elements were evident in the nurses' comments about the patients, the nurses' descriptions, and what the nurses noticed.

The nurses focused on the seriousness of the disease based not only on the medical diagnosis and test results but also on the patient's signs and symptoms. Closely connected to this focus was the nurse's appraisal of the progress of the disease. The participants questioned whether a specific patient was in a normal recovery process or on a declining trajectory and whether the medical treatment was effective in putting the patient on the road to recovery. For example, one participant from a medical unit was concerned about a patient, diagnosed with osteoporosis and possible pyelonephritis or pneumonia, in severe pain: "The physician has not ordered CT of collumna and we know that we get very limited information from X rays [which had been taken]. This woman has been unable to stand for 14 days and it is important for us to know how much we can do when trying to mobilize her."

The patient's illness experience of the disease was another element — disease being the medical diagnosis and definition, illness being the patient's experience of the disease. Regardless of the diagnosis, the nurses took the patient's experience and views into consideration. They wondered about the impact of the disease on the patient and the patient's experience of it. The above nurse, for example, had this to say about the woman with osteoporosis: "This patient is a real, suffering human being, and I do not know how to help her. She has pain the whole time except when she is asleep." During an admission interview with a patient who had possible prostate enlargement and arrhythmia, another nurse observed uncertainty: the patient did not know what was going to take place in the hospital or the exact nature of his ailment.

An additional element in the evoked picture was the patient's handling of the illness experience, the medical treatment, and the disease trajectory. The questions raised by the nurses in this regard had to do with how the patient was facing the reality of the disease and its treatment. During an interview one nurse was asked to describe a young patient with a urostomy: "Positive and…what word should I use?…positive and motivated, that is how I would describe her. She has a go-ahead spirit."

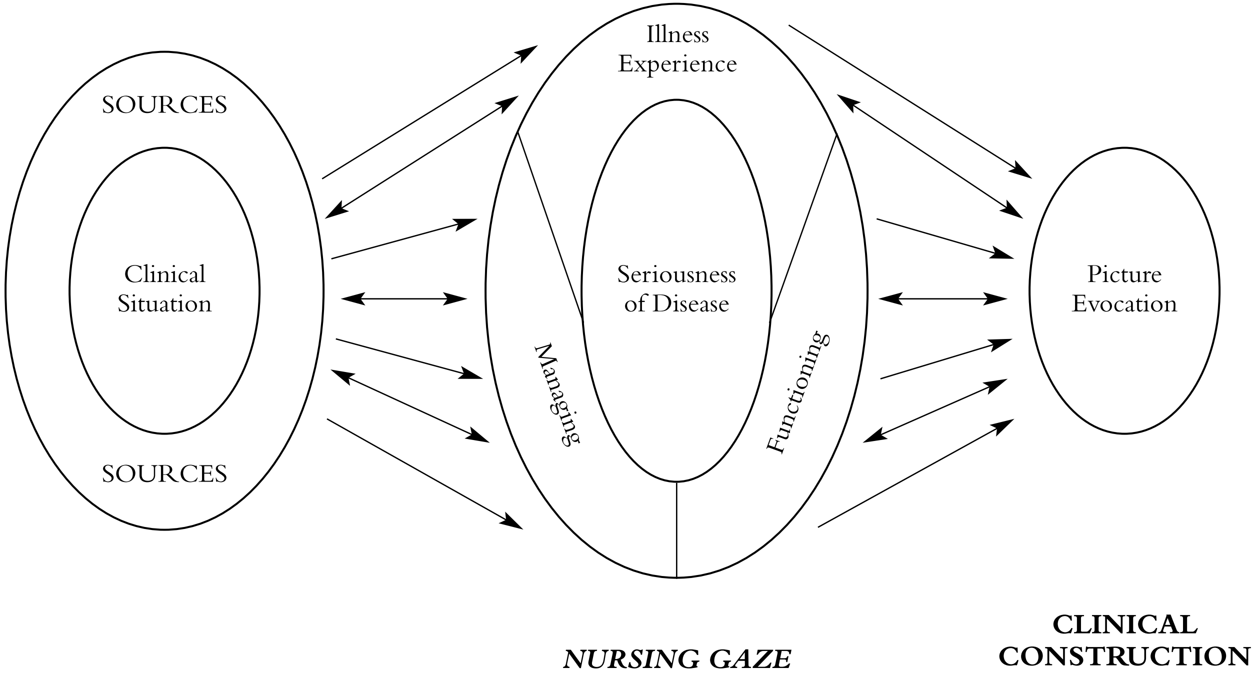
Functioning was the fourth aspect of the clinical construction. The nurses focused on the degree to which their patients needed assistance and support for the activities of daily living with the disease. "Physically she is fit and usually manages her morning toilet herself," said the nurse of the patient with a urostomy. "She has advanced so much that she can do most of the urostomy procedure herself."

All four elements made up the picture of the patient and the construction of the situation, providing material for clinical engagement and action. In the following examples of picture evocation from the data, two participants describe their patients:

> *Mr. B…was admitted to hospital because of hematuria and poor general condition [disease]. He has been partly disoriented [illness]. He needs help with his self-care [functioning]. Today he has eaten well and eaten by himself. I think he is better because he is much stronger, partly manages to get out of bed by himself, and is more oriented [managing].*
>
> *Mr. K is a 60-year-old man with prostate cancer and metastases to bone structures [disease]. He is listless and worn out [illness]. He frequently urinates, has hematuria and diarrhea [disease and illness]. He is mostly bedridden and needs complete hands-on nursing for his self-care [functioning]. He has had four blood transfusions and there is no sign of improvement. He does not like being here. He and his wife hope he can get a little bit better so he can go home for a few days [managing].*

Analysis reveals that these two nurses have a comprehensive clinical gaze as manifested in the construction of the clinical situation. Their clin-

Figure 2 ***Clinical Construction Through a Patient-Focused Comprehensive Nursing Gaze***



ical gaze is comprehensive in that it comprises the four elements listed in Table 3. It focuses not only on the patients' medical condition but also on their illness and their responses to the condition, the treatments, and hospitalization. While oriented towards medical treatment, the nurses also attended to specifically nursing aspects of care such as the patients' experiences, situational management, and daily functioning. Patients were "gazed" at with this comprehensive "eye," which caused the nurses to be concerned not only with the patients' recovery from disease but also with their illness and hospitalization. The comprehensive gaze encompasses both short-term and long-term perspectives, according to the disease's development and the patient's experiences and ways of managing. The comprehensive nursing gaze is specific to acute-care situations, as depicted in Figure 2, the disease being its starting point.

Discussion

This study demonstrates the importance of daily routines as sources of information. The findings of Ekman and Segesten (1995) support this conclusion. These researchers found that oral reporting was not enough; to be fully initiated, the nurses in their study had to "know" their patients. They point out that cutting down on routines would reduce nurses' access to information.

The findings of the present study indicate that nurses "see" the patient through the seriousness of the disease, the patient's experience of illness, the patient's handling of the illness and the situation, and the patient's self-care abilities. The seriousness of the patient's condition is based on the medical diagnosis and treatment. Liaschenko and Fisher (1999) identify medical knowledge as the case knowledge necessary to carry out nursing duties. They describe case knowledge as biomedical knowledge of physiopathology, disease processes, pharmacology, and other therapeutic protocols. The seriousness of the condition — that is, whether the patient improves or worsens — as the main priority comes through in nurses' reports.

While the objective side of disease is manifested in the diagnosis, physical examinations, test results, and medical treatment, its subjective side is manifested in the clinical process as played out in hospital and other acute-care settings. Patients' experience of illness and their responses to the clinical condition, as well as the disease itself, are critical aspects of the gaze with which nurses "see" and "read" their patients.

Thus, nurses' constructions of clinical situations suggest a comprehensive gaze. The nursing gaze is not a medical gaze as described by Foucault (1973) but is comprehensive in that it transcends the usual distinction between the medical and care orientations in nursing. It takes into consideration the patient's personality and perception of illness and treatment (Peerson, 1995). While Mattingly (1989) describes occupational therapists as moving back and forth between two perspectives — biomedical and social — in constructing their work in relation to clients, nursing encompasses several perspectives as it is a profession oriented to supporting people's health. The nursing gaze also takes into consideration the patient's managing and functional level.

Medical diagnosis and treatment are not simply a part of the environment but are the main forces around a patient in an acute-care setting; they make a difference to the patient's stay in hospital. Nursing has been described as "sub-oriented" to biomedicine, with professional narratives presented in such a way that nursing might be constructed as different from medicine (May & Fleming, 1997). A focus on medical diagnoses and treatments is often seen as an obstacle to the practice of nursing as a profession (Ekman & Segesten, 1995).

There may be a certain blindness in the eagerness to describe and verify the uniqueness of nursing practice. The results of the present analysis of nurses' practice support the construction of nursing as different from medicine in that it exceeds the medical orientation. The disease orientation is only a starting point for the nursing gaze within an acute-care practice, as the nursing gaze comprises three other aspects that are critical to the nursing perspective. This goes beyond Reed and Watson's (1994) argument that the medical model can enhance and support nursing care in some settings but has little to offer and may even have a negative effect in other settings.

The present findings indicate that the medical approach is inherent in nursing care and that nursing also focuses on patients as human beings with disease, as human beings experiencing disease, and as independent social beings. The participants in this study were not oriented towards medical diagnoses and treatments alone but used these as part of the basis for a comprehensive nursing gaze.

The nursing gaze may be organized differently in other clinical settings, such as in community health nursing, where health maintenance, health promotion, and chronic health care are the focus.

Limitations

This study has a number of limitations. Because a small convenience sample was used, the results cannot be statistically generalized to other areas of practice. However, the participants were typical nurses working in acute-care hospitals. Participant-distorted behaviour, and the influence of the researcher on the collection, interpretation, and analysis of data, are known biases in the observation and interview methods. However, data analysis and interpretation were discussed extensively between the two researchers in order to ensure internal validity.

The validity of the data can be supported on several counts. As statistical representativeness was not sought, the sample was selected on the basis of the study's theme and research question. The inclusion criterion secured a typical sample. The participants and the researcher became acquainted before data collection was begun by spending a day together during an orienting participant observation. Also, the researcher observed for a whole shift rather than just part of a shift and therefore was less intrusive. The nurses were used to the presence of observers, such as students and newly appointed personnel. Also, the observation took place during various facets of work, such as patient-nurse interaction, colleague interaction, and report sessions at which the researcher became one of those present. The researcher reflected on possible biases, such as emotions, prejudices, and attitudes, on data collection and analysis. The opportunity to pose questions during observation, and to follow these up during the interview sessions, helped to make the nurses' thoughts and intentions clear to the researcher.

Conclusion

The results of this study show that as nurses encounter patients and provide direct patient care they formulate pictures of clinical situations using a specific way of "seeing." We call this the *nursing gaze*. In acute-care settings the nursing gaze is comprehensive, as it has four interrelated aspects: seriousness of the disease, the illness experience, the patient's managing, and functioning. Although this study is based on data from six nurses, the richness of the data leads us to a theoretical insight for a descriptive model of nursing practice, in which the complex interplay among clinical data and information, nurses' clinical constructions, and engagement in delivering care seems apparent. This theoretical insight provides a basis for debate and further inquiry in order to advance our understanding of nursing practice. It points to further questions regarding the nature of nursing practice such as: How do nurses come to have a nursing gaze of a certain character, and what are the consequences of such a nursing gaze for nurses' work and patient outcomes?

There is a need for further research on how nurses differentiate the significance and importance of the various sources of appraisal (i.e., information) in arriving at clinical constructions. There is also a need for research on aspects of the nursing gaze that differ in various clinical nursing settings such as community health, nursing homes, or primary health care. The nursing gaze and the process of clinical construction are important components of nursing practice and the frontline structure shaping nursing practice.

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Résumé

Le niveau d'éducation des infirmières autorisées : son impact sur la collaboration et le lien entre celle-ci et l'identité professionnelle

Jean L. Miller

Ce projet comportait deux objectifs : (1) déterminer si le niveau d'éducation (diplôme/baccalauréat, maîtrise/doctorat) exerce une influence sur l'attitude des infirmières à l'égard de la collaboration interprofessionnelle et (2) établir s'il existe un lien entre collaboration et identité professionnelle. Des infirmières sélectionnées par échantillon aléatoire stratifié ont répondu à une enquête par correspondance, dans le but d'évaluer 4 dimensions de la collaboration (respect des préoccupations collectives, pouvoir/mainmise, clarté des objectifs de prise en charge des patients et sphères de pratique) et de l'identité professionnelle. On a constaté qu'un niveau élevé d'éducation avait une influence positive sur les trois premières dimensions. Le faible rapport établi entre identité et collaboration indique que le niveau d'éducation a une influence négative sur le degré de collaboration. Les résultats suggèrent que les milieux qui dépendent de la coopération interprofessionnelle auraient avantage à intégrer des infirmières ayant un diplôme d'études supérieures au sein de leurs équipes et que les infirmières travaillant dans un contexte de ce type pourraient envisager la possibilité d'intégrer une formation aux cycles supérieurs à leur plan de carrière. Les conclusions de l'étude réaffirment en outre la nécessité d'offrir une formation relative à la collaboration interprofessionnelle, particulièrement aux cycles supérieurs.

Mots clés : collaboration, éducation, identité professionnelle

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Level of RN Educational Preparation: Its Impact on Collaboration and the Relationship Between Collaboration and Professional Identity

Jean L. Miller

This study had a dual purpose: to determine (1) whether level of education (diploma/baccalaureate, master's/doctoral) affects nurses' perceptions of their interprofessional collaboration, and (2) whether there is a relationship between collaboration and professional identity. A stratified random sample of nurses completed a mailed survey assessing 4 dimensions of collaboration (mutual safeguarding of concerns, power/control, clarity of patient-care goals, and practice spheres) and professional identity. Higher level of education was found to impact positively on the first 3 dimensions. Weak relationships between identity and collaboration suggest that higher education levels negatively affect collaboration. Based on these findings, settings relying on interprofessional cooperation would do well to include graduate-prepared nurses in their staff mix, and nurses working in such areas might consider graduate preparation in their career plans. The findings reinforce the need for interprofessional education, particularly at the graduate level.

Keywords: collaboration, education, professional identity

Registered nurses are acutely aware of the importance of collaboration. Because their focus is holistic, they know that if they are to meet the complex needs of their patients/clients they must continually engage in cooperative efforts with other health professionals. However, little is known about the factors that contribute to effective collaboration, such as personality, setting, or role-related factors. The focus of this study was one role-related factor, educational preparation. It has been proposed that if nurses' education is in line with that of other professions, collaborative rather than hierarchical relationships will prevail. However, research to date does not inform us whether this is so. Although some studies on collaboration have considered educational preparation, in no study has this been the primary variable of interest. Additionally, most studies on collaboration have been highly contextualized, focusing on a particular interprofessional relationship (most often nurse/physician) or context, thus limiting the generalizability of the findings.

The purpose of this study was to determine whether level of education (initial as opposed to graduate) impacts on nurses' perception of their collaboration with other health professionals. It was anticipated that the results would assist nurses engaged in practice, education, and administration in making decisions about the appropriate education level for various nursing roles. This is a crucial factor because professional education is both costly and time-consuming, particularly in times of nursing shortages.

A descriptive, comparative study was carried out with registered nurses in one Canadian province to determine whether (a) level of RN education affects nurses' perceptions of their collaboration with other health professionals, and (b) there is a relationship between perceptions of collaboration and professional role identity. The study was guided by three research questions: (1) *How do two groups of nurses (diploma/baccalaureate-prepared and master's/doctoral-prepared) perform on four instruments assessing specified dimensions of collaboration and one instrument assessing professional role identity?* (2) *Do the groups differ significantly on these measures?* (3) *Is there a relationship between each group's professional identity scores and those on the instruments assessing collaboration?* This study was grounded in role theory. It was assumed that each health profession has a particular perspective and that its members have particular role attributes. It was also assumed that there is a degree of stability in these attributes, regardless of context.

Theoretical Considerations

An analysis of descriptions and dimensions of collaboration in the literature revealed considerable overlap in dimensions, suggesting reasonable congruence of thought on this complex concept. The conceptualization of collaboration chosen for the study was based on the American Nurses Association (1980) definition: "Collaboration is a true partnership, in which power on both sides is valued by both, with recognition and acceptance of separate and combined spheres of activity and responsibility, mutual safeguarding of the legitimate interests of each party, and a commonality of goals that is recognized by both parties" (p. 7). This definition captures the dimensions of collaboration, is commonly shared and communicated, and has been used in previous research.

Both the functionalist and the symbolic interactionist approaches to role theory are pertinent to studying collaboration. Role clarity and predictability of action can best be understood from the functionalist perspective, and equality of status and role flexibility from the interactionist perspective. Although these two perspectives are often seen as competing, Conway (1988) indicates that theorists are attempting to develop conceptual frameworks that include elements of both, as neither fully accounts for "the wide variety of human responses possible in the numerous and ambiguous situations where human actors confront each other" (p. 72). Both approaches are also likely at play throughout a nurse's education. In Reutter, Field, Campbell, and Day's (1997) longitudinal study with baccalaureate nursing students, the functionalist perspective predominated early in the program and the interactionist perspective in later years. In studies with nurses pursuing a second credential, the interactionist perspective (Lynn, McCain, & Boss, 1989) and perspective transformation (Maltby & Andrusyszyn, 1997) were the preferred views of socialization. The intended result of the socialization process is professionals who are clear about their role and as a result have a sense of power and control — foundational elements for interaction with other professionals (Loxley, 1997). This clarity develops during the professional socialization process, which is established upon entry to practice and evolves over the course of one's professional life (Lum, 1988).

Literature Review

The literature indicates that in order to collaborate effectively, professionals must have a thorough understanding of their own role (Benson & Ducanis, 1995; Jones, 1991; Mariano, 1989). Those who understand their role are able to relate their disciplinary strengths, limitations, and contributions to the work of the team as a whole (Mariano). Mariano contends that "security in one's own discipline allows each member the freedom to be truly interdisciplinary" (p. 286). Professionals also need a good understanding of others' roles (Jones) and, in addition to recognizing their own boundaries and those of others, must be able to accept areas of role overlap (American Nurses Association, 1980; Jones). It is thought that those who are confident in their own role and are comfortable with role overlap will be less defensive when others appear to be encroaching on their territory.

In collaboration studies that have included education as a factor, the findings pertaining to education level are inconsistent. Baggs and Ryan (1990) investigated the importance of collaboration to nurse satisfaction and the relationship of collaboration and satisfaction to education and other factors; this descriptive study with 68 medical intensive-care nurses found that education level was not related to collaboration. In a random sample study with 95 nurses and 94 physicians conducted to establish the reliability and validity of Weiss and Davis's (1985) Collaborative Practice Scales, nurses with a baccalaureate degree or higher had significantly higher collaboration scores than those with a diploma or associate degree. In a cross-sectional survey of staff from six medical units, Hansen, Bull, and Gross (1998) examined the extent to which nurse, physician, and social worker characteristics and views on collaboration predicted perceptions of discharge-planning communication for older adults; for the 97 RN participants, education level was the only characteristic associated with discharge planning, and nursing was the only group for which education was included in the final predictive model. Jones (1991) sought to determine whether nurses and physicians differ in their perceptions of four collaboration indicators and whether any of the indicators are related to each other and a number of demographic characteristics; in the random sample of 59 nurses and 67 physicians, the only significant education differences were for the physicians — those with post-medical degrees were more likely to consider goals to be RN goals rather than jointly shared goals. All but one of these studies focused on nurse/physician collaboration, and while the findings are informative for that particular relationship, they may not be a true indication of nurses' collaboration in the broader health-care arena.

Method

A stratified random sample of nurses whose highest level of nursing preparation was a diploma or baccalaureate degree and a stratified random sample of nurses whose highest level was a master's or doctoral degree completed a self-administered paper-and-pencil survey comprising demographic questions and instruments measuring collaboration and professional identity. The sample for each stratum was drawn from the membership of a provincial nursing association. Prior to drawing the samples, the researcher removed association members who were unlikely to interact with professionals in other disciplines on matters of patient care. These included nursing education administrators, those not in the labour market, those employed in another field, and those employed by associations or government bodies. In determining sample size, consideration was given to power, membership size (study population), and return rates for mailed surveys. A small effect size was assumed (.20), for two reasons: there were no published studies in which effect size had been calculated, and it was impossible to calculate effect size from the reported data; and the possibility of extraneous variables increased score variability. Based on non-parametric analysis, with a significance level of .05, four degrees of freedom, a power of .80, and effect of .20, along with an anticipated survey return rate, the sample size for each stratum was set at 400.

The four dimensions of collaboration that have evolved from the above definition (patient-care goals, mutual safeguarding of concerns, clarity concerning practice spheres, and a sense of power/control) were studied. Reliable and valid research instruments for each dimension were used. As this was not a study of nurse-physician collaboration or of a particular setting, a number of the items in Jones's (1991) instrument were revised. Also, because of the holistic interests of all health professions, the "nursing" and "another profession" categories were relabelled as "primarily nursing" and "primarily another profession." For example, physicians are not uninterested in the diet of a diabetic person even though this is mainly the concern of the nutritionist. Content validity of the adapted goals instrument was established using Lynn's (1986) judgement-quantification process. Instrument items were based on Gordon's (1994) Functional Health Care Patterns. For each of 48 items, participants indicated whether they thought the goal was "primarily in the domain of nursing," "shared with other professionals," or "primarily in the domain another profession." The more goals judged to be nursing goals, the greater the clarity about patient-care goals. As this was not a study of nurse/physician collaboration, Jones's safeguarding of mutual concerns instrument was modified by replacing "physicians" with "other health professionals." This instrument had 19 Likert items: 9 measuring assertiveness and 10 measuring cooperativeness. The scores for each were plotted on a two-dimensional grid resulting in a mutual concerns score of 0 (avoidance), 1 or 2 (competitiveness, compromise, or accommodation), or 3 or 4 (collaboration). Practice spheres was measured using Ducanis and Golin's (1979) Interprofessional Perception Scale. This instrument had 15 true/false items to which participants responded twice (how they viewed nurses and how they thought others viewed nurses), resulting in two sets of answers. For each item, a score of 1 was assigned to the answer (true or false) that would contribute positively to collaboration, and a score of 0 was assigned to the answer (true or false) that would not contribute positively. This resulted in two sets of scores, each between 0 and 15: one for how they viewed nurses and the other for how they thought others viewed nurses. The higher the score, the more positive their view of collaboration. Consistency between these sets of answers was considered indicative of recognizing, accepting, and respecting both separate and combined practice spheres. Power was measured using Guilbert's (1972) Health Care Work Powerlessness Scale (Revised). This instrument has 14 items, each a paired forced-choice, dichotomous statement: one statement representing a sense of power and control over workplace events or decisions (scored as 0), the other representing a sense of powerlessness and no control (scored as 1). Individual scores were totalled, resulting in a score ranging from 0 to 14, with 0 representing no powerlessness and 14 representing powerlessness. Scores were also categorized into three levels of powerlessness: low, moderate, and high.

Professional Identity was assessed using Lawler's (1988) modification of Stone's Health Care Professional Attitude Inventory, an instrument based on Dumont's conceptualization of new professions (as cited in Lawler) as having six components: being consumer orientated and having a growing concern with credentialling, a sense of super ordinate purpose, an attitude of criticism, impatience with the rate of change, and being motivated by compassion for people's needs. Stone's instrument consists of 38 Likert-scaled items (1 = strongly agree; 5 = strongly disagree). Items were totalled, with the minimum score being 38 and the maximum 190. The higher the score, the more professional the nurse's attitude. Content and construct validity of the tool were established by Lawler. Reliability, based on Cronbach's alpha, is reported as .73 (Lawler).

To maximize survey returns, Dillman's (1978) technique for attaining high response rates to mailed surveys was used. Of the 800 surveys mailed, 395 (49%) were returned. Sixteen of these were unusable. In the remaining 379 surveys, 174 were from nurses prepared at the diploma/baccalaureate level and 205 from nurses prepared at the master's/doctoral level. Prior to data analysis, reliability of the five instruments was assessed using Cronbach's alpha coefficients, with the following results: mutual concerns .93, patient-care goals .87, practice spheres .79, power/control .87, and professional identity .64. Descriptive and inferential statistical tests (parametric and non-parametric) in SPSS were used to analyze the data.

As close to 75% of the undergraduate group were diploma-prepared and over 90% of the graduate group master's-prepared, within-group comparisons were carried out to determine whether the predominance of diploma- or master's-prepared nurses influenced the results for each respective group. It was found that this disproportion did not account for the significant differences between the groups. The master's/doctoral group had more years of experience, worked in more diverse settings, and had held a broader range of positions than the diploma/baccalaureate group. The diploma/baccalaureate nurses had been in their place of employment longer, which was likely to be a care facility where they held the position of staff nurse. Although the diploma/baccalaureate group worked with a somewhat wider range of health professionals, the groups were similar with respect to the disciplines with which they worked.

Results

The findings for three of the four dimensions of collaboration suggest that both groups were likely to collaborate effectively with other health professionals. Both groups were concerned about meeting others' needs as well as their own, brought a sense of power/control to their interprofessional relationships, and recognized, accepted, and respected both separate and overlapping practice spheres. The findings for the dimension of patient-care goals were less definitive. Even though this set of goals was developed by nurses for nurses, both groups were likely to consider it as shared with other health professions rather than primarily nurses. Although the professional identity scores for both groups were compressed at the high end of the scale — diploma/baccalaureate mean 135.65; master's/doctoral mean 140.33 — the latter scored significantly higher ($p < .001$). This finding of professional identity being stronger for those with higher education levels is congruent with the findings of other studies (Corwin, 1961; Kramer, 1968).

The results of this study give some credence to the idea that level of educational preparation impacts on nurses' interprofessional collaboration. Level of preparation had a notable impact on the two dimensions of mutual safeguarding of concerns and power/control, a less pronounced impact on patient-care goals, and little if any impact on practice spheres.

Mutual Safeguarding of Concerns

Even though the scores for both groups were concentrated at the collaborative end of the five-point grid, the master's/doctoral group scored significantly higher (mean ranks: diploma/baccalaureate 154.63; master's/doctoral 193.90, $p < .001$). This finding is similar to that of Weiss and Davis (1985). However, neither Baggs and Ryan (1990) nor Jones (1991) found any significant differences based on education level.

Power/Control

Although the scores for both groups spanned the full range, the mean scores revealed both groups to be relatively low in their perceptions of being powerless (diploma/baccalaureate *M* 4.41, *SD* 3.75; master's/doctoral *M* 2.42, *SD* 3.08). Nevertheless, the diploma/baccalaureate group had significantly higher powerlessness scores ($p < .001$). The only other study to examine this dimension of collaboration, Jones (1991), found that education level did not impact on power/control.

Patient-Care Goals

While there were no significant differences in the number of goals considered to be "primarily nursing" or "shared," the diploma/baccalaureate group did consider more goals to be in the domain of another profession (diploma/baccalaureate *M* 1.97, *SD* 2.83; master's/doctoral *M* 0.97, *SD* 1.72, $p < .0001$). At the level of individual goals, there were no appreciable differences between the groups for 14 goals (skin integrity, elimination, nutrition, grieving, mobility, cardiac/respiratory, recreation/leisure, pain, emotional disturbance, verbal communication, injury/risk, education, body image, and fluid balance) but there *were* significant differences for another 14 (see Table 1). Significantly more of the master's/doctoral group considered seven of these goals to be in the domain of nursing, while the diploma/baccalaureate group considered only one goal to be in the domain of nursing. Significantly more of the diploma/baccalaureate group considered six goals to be either shared or in the domain of another profession. As noted above, Jones (1991) found that the education level of physicians, but not nurses, impacted on this aspect of collaboration.

Table 1 ***The 14 Patient-Care Goals (With Significant Differences in the Proportions of the Groups Choosing Each Type of Goal — Nursing, Shared, and Others' — Using the z Test)***

	Diploma / baccalaureate *n* (%)	**Master's / doctorale *n* (%)**	**z Value**	***p***
Nursing Goals				
Infection	64 (37.6)	52 (25.9)	-2.435	.015★
Health management	8 (4.8)	39 (19.4)	-4.195	.000★★★
Self-care	47 (27.8)	86 (42.4)	-2.912	.004★★
Sleep	66 (39.6)	105 (51.7)	-2.340	.019★
Home maintenance	10 (5.9)	41 (20.4)	-4.040	.000★★★
Sensory deficit/overload	50 (30.3)	87 (43.7)	-2.626	.009★★
Role performance	15 (9.0)	32 (15.8)	-1.947	.052★
Family relationships	23 (13.8)	50 (24.8)	-2.632	.008★★
Sexual functioning	10 (6.3)	21 (10.4)	-1.377	.168
Spiritual well-being	5 (3.0)	14 (6.9)	-1.726	.084
Cognitive abilities	14 (8.3)	27 (13.4)	-1.570	.117
Health decision-making	43 (25.7)	63 (31.0)	-1.118	.264
Social interaction	21 (13.3)	38 (18.7)	-1.580	.114
Coping mechanisms	21 (12.4)	39 (19.2)	-1.793	.073
Shared Goals				
Infection	106 (62.4)	149 (71.1)	-2.435	.015★
Health management	160 (95.3)	162 (80.6)	-4.195	.000★★★
Self-care	119 (70.5)	115 (56.7)	-2.733	.006★★
Sleep	100 (59.9)	95 (46.8)	-2.505	.012★
Home maintenance	128 (75.3)	140 (69.7)	-1.208	.227
Sensory deficit/overload	107 (64.8)	110 (55.3)	-1.850	.064
Role performance	124 (74.3)	160 (78.8)	-1.033	.301
Family relationships	128 (76.6)	150 (74.3)	–.529	.597
Sexual functioning	108 (68.4)	167 (83.1)	-3.268	.001★★
Spiritual well-being	128 (75.7)	171 (84.7)	-2.159	.031★
Cognitive abilities	123 (72.8)	153 (76.1)	–.734	.463
Health decision-making	119 (71.3)	140 (69.0)	–.478	.633
Social interaction	128 (77.1)	156 (76.8)	–.059	.953
Coping mechanisms	133 (78.2)	158 (77.8)	–.093	.926

Others' Goals				
Infection	0 (0.0)	0 (0.0)	.000	1.000
Health management	0 (0.0)	0 (0.0)	.000	1.000
Self-care	3 (1.8)	2 (1.0)	–.658	.511
Sleep	1 (0.6)	3 (1.5)	–.813	.416
Home maintenance	32 (18.8)	20 (10.0)	-2.450	.014*
Sensory deficit/overload	8 (4.8)	2 (1.0)	-2.230	.026*
Role performance	28 (16.8)	11 (5.4)	-3.533	.000***
Family relationships	16 (9.6)	2 (1.0)	-3.808	.000***
Sexual functioning	40 (25.3)	13 (6.5)	-4.991	.000***
Spiritual well-being	36 (21.3)	17 (8.4)	-3.528	.000***
Cognitive abilities	32 (18.9)	21 (10.4)	-2.318	.020*
Health decision-making	5 (3.0)	0 (0.0)	-2.479	.013*
Social interaction	17 (10.2)	9 (4.4)	-2.166	.030*
Coping mechanisms	16 (9.4)	6 (3.0)	-2.632	.008**

Note: Differences in the percentages for items with the same *n* are due to missing data.
* *p* <.05 ** *p* <.01 *** *p* <.001

Practice Spheres

Both groups held relatively positive views of their profession and thought that others did as well: for the diploma/baccalaureate group, the "own view" mean was 12.29 (*SD* 1.75) and "others' view" mean 10.66 (*SD* 2.54); for the master's/doctoral group, the "own view" mean was 12.02 (*SD* 2.15) and "other's view" mean 10.32 (*SD* 2.65). The average number of consistently scored items was close to 10 out of 15 for both groups, and both groups held consistent views on 10 of these items. It was therefore concluded that the two groups were equally consistent in their views of nurses and their perception of others' views of nurses. Other researchers (Benson & Ducanis, 1995; Ducanis & Golin, 1979) report similar findings. This result suggests that the two groups recognize, accept, and respect both separate and overlapping practice spheres.

Professional Identity and Collaboration

There were weak but unexpected relationships between professional identity and two dimensions of collaboration: practice spheres and power/control (see Table 2). These findings indicate that for nurses prepared at the master's/doctoral level, the stronger their professional identity the weaker the consistency between their own view of nursing and the views of others, the less their likelihood of viewing their profession positively or thinking others would do the same, and the greater their likelihood of feeling powerless. The only collaboration study to refer to professional identity is that of Weiss and Remen (1983), who concluded that because their participants considered nursing a job rather than a profession, their collaboration with physicians would be impeded.

Table 2 ***Relationship of Each Group's Professional Identity Scores to the Four Dimensions of Collaboration Using Correlation Coefficients***

	Correlation Coefficients[a] by Group	
Dimension	**Diploma/ baccalaureate**	**Master's/ doctorale**
Mutual concern scores	.051	-.054
Patient-care goals		
Number of nursing goals	.092	.085
Clinical nurse specialist	-.076	-.089
Number of others' goals	-.011	.041
Practice spheres		
Number of consistently scored items	-.136	-.223★★
Own view score	-.129	-.259★★
Others' view score	-.087	-.259★★
Power/control score	.182	.202★★

[a] Spearman's correlation coefficient used for mutual concerns and number of consistently scored items in practice spheres. Pearson's correlation coefficient used for patient-care goals (nursing, shared, other), own view, and others' view scores in practice spheres, and power/control.

★★$p < .01$

Discussion

The finding that education level may have a positive impact on collaboration has implications for nurses engaged in practice, education, and administration. Nurses employed or seeking employment in areas that rely heavily on interprofessional cooperation (e.g., intensive care, geriatrics, rehabilitation) may wish to consider graduate preparation in their career plans. Administrators in these areas may well be advised to consider the place of graduate-prepared nurses in their staffing patterns. The results of this study also reinforce the need for the integration of interprofessional learning experiences into health-care education. In particular, graduate nursing programs should perhaps include interprofessional learning and research experiences, along with specialized and advanced nursing courses.

The impact of education level on collaboration, along with the imbalance between diploma- and baccalaureate-prepared participants, lends some support to the baccalaureate degree as an entry requirement for nursing practice. If a larger portion of the diploma/baccalaureate group had been prepared at this level, the gap between the two educational groups may have been narrower.

As the items in the patient-care goals instrument were based on Gordon's (1994) nursing diagnosis — a taxonomy intended to clarify nursing's contribution to, and accountability for, patient care — it is somewhat surprising that more items were not considered to be primarily nursing. It may be that this taxonomy falls short of depicting nursing's role identity, or perhaps the items are too broad to reflect the complexity of nursing. However, it may also be that the lack of role clarity among nurses evident in other collaboration studies (Bournazos, 1993; Waters & Luker, 1996; Weiss, 1983) is at play here. Although reluctance to differentiate between disciplinary and overlapping roles is not unusual (Kane, 1975) — and is unwise, some would advocate (Alberta Association of Registered Nurses, 1993; American Nurses Association, 1980) — it should be noted that many of the difficulties experienced in collaboration have been attributed to role ambiguity, role overlap, and misconceptions (Benson & Ducanis, 1995; Mariano, 1989; Weiss, 1983). Lack of role clarity can increase the likelihood of territorial disputes and role conflict, resulting in ineffective collaboration. Role ambiguity can also affect a nurse's sense of power/control. According to Loxley (1997), without goal clarity nursing is unlikely to achieve the power needed for effective collaboration. Weiss (1984) states that until nursing is clear about its role, its activities will continue to be defined by others. This lack of clarity can also impede nurses' ability to develop a strong knowledge base (Orlando & Dugan, 1989) as well as the interventions needed to make meaningful contributions within multidisciplinary teams (O'Connor, 1993).

The finding that nurses prepared at higher education levels bring a greater sense of power/control to their collaborative relationships may not be as straightforward as it appears. Baggs, Ryan, Phelps, Richeson, and Johnson (1992) and Baggs and Schmitt (1995) found a positive relationship between collaboration and nurses' satisfaction with decision-making. However, the same did not hold true for physicians. Baggs et al. suggest that the nurses saw collaboration as a way to influence decision-making while physicians saw it was less important because of their ultimate authority. In Temkin-Greener's (1983) case study of interdisciplinary teamwork, similarly, the nurses viewed the teams as a way to achieve autonomy and status while the physicians saw them as a nursing invention constructed to diminish medicine's traditional authority. It is unknown whether nurses' perceptions of their ability to influence decisions would be the same in relationships that have less authority differential than that in the nurse/physician studies.

The negative relationship between professional identity and practice spheres for the master's/doctoral group in the present study suggests that while those with graduate nursing degrees are better collaborators on some fronts, their strong professional identity can serve to hamper some aspects of collaboration. Petrie (1976) contends that because graduate education tends to be disciplinary focused, graduate students lack the time and interest necessary for interdisciplinary commitment and therefore are less inclined to participate in interdisciplinary activities. It has also been suggested that specialized education contributes to the belief among professionals that one's own discipline is sovereign (Mariano, 1989). As effective collaboration requires cooperative planning and decision-making (Henneman, Lee, & Cohen, 1995) and approximate equality of influence (Pehl, 1988), this separateness and superiority can hamper interprofessional work. This negative relationship also suggests that the graduate-prepared nurses in the present study were not experiencing the anticipated status benefits of higher education levels such as greater interprofessional equality and less domination by others.

Conclusions

While these findings shed considerable light on the impact of education level on interprofessional collaboration, they should be interpreted in the context of the complexities of collaboration. As collaboration is affected by personal, professional, and contextual factors, it is reasonable to expect that position and years of experience, for example, will have an impact on the results. Although the number of participants in each group was likely large enough to render the findings valid, the small sample size limits their predictive power. Also, while the groups formed for this study no doubt maximized the effect of education level, and while within-group comparison produced no significant differences, the over-representation of diploma-prepared and master's-prepared nurses may have affected the validity of the results. For example, the diploma-prepared participants had been in their place of employment longer, most likely in a staff nurse position, and the master's-prepared participants had more years of experience and had held a broader range of positions.

The findings of this study suggest that higher education levels have a positive impact on some aspects of nurses' interprofessional collaboration. There is evidence to suggest that those with higher education are more concerned about meeting others' needs as well as their own and bring a stronger sense of power/control to their interprofessional relationships. They may also see a stronger role for nurses in meeting patient-care goals, which could further enhance their collaborative abilities. Although this study found little evidence of a relationship between professional identity and collaboration, the possibility that professional identity has a negative impact on collaboration should not be discounted.

There is still much research to be done in the area of nurses' interprofessional collaboration. Further collaboration studies using educational preparation as the primary variable should be conducted to determine whether these findings hold up under other circumstances. It may be worth including one or more of the four collaboration dimensions in future studies, with a view to enhancing our understanding of this complex construct. In that regard, consideration should be given to the appropriateness of Gordon's (1994) nursing diagnoses for assessing patient-care goals. It could be that studies carried out in an environment of post-health-care reform would be better served by an alternative conceptualization of collaboration. More research is needed on the relationship between professional identity and collaboration, with consideration given to the use of an alternative instrument. The reliability of Lawler's (1988) instrument was low, and it may be that the components of Dumont's conceptualization of profession (as cited in Lawler) are no longer valid. Finally, we need studies that take into account the complex nature of collaboration — for example, studies addressing the perspectives of the broader range of health disciplines.

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Résumé

À la recherche d'une relève temporaire : stratégie de recrutement de personnel infirmier dans les communautés nordiques autochtones

Bruce Minore, Margaret Boone et Mary Ellen Hill

Dans le but de trouver une solution à la pénurie actuelle d'infirmières dans les communautés autochtones du Nord-Ouest de l'Ontario, la Direction générale de la protection de la santé des Premières nations et des Inuits à Santé Canada a commandé une étude sur la pertinence d'établir une équipe de relève constituée d'infirmières provenant des petites villes minières des environs. On a présenté un questionnaire à questions libres et à questions fermées à un échantillon aléatoire de 237 infirmières en vue d'analyser leur degré de sensibilisation, leur disposition et leur niveau de préparation à la pratique des soins infirmiers en région nordique et de déterminer quels sont les facteurs favorables et défavorables au recrutement. Les conclusions révèlent une connaissance du recoupement des dimensions professionnelles et personnelles qui caractérise cette pratique; elles justifient le bien-fondé d'un système de rotation qui chevaucheraient les compétences fédérale, provinciale et locale. Malgré sa complexité, avec du temps et de la volonté, ce type de structure de relève régionale semble viable.

Mots clés : santé des Premières nations, pratique des soins infirmiers en région nordique, recrutement

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Finding Temporary Relief: Strategy for Nursing Recruitment in Northern Aboriginal Communities

Bruce Minore, Margaret Boone, and Mary Ellen Hill

To address a recurring shortage of nurses in the aboriginal communities of Northwestern Ontario, the First Nations and Inuit Health Branch, Health Canada, commissioned a study to explore the viability of establishing a relief pool among nurses from nearby small industrial towns. An open/close-ended survey completed by a random sample of 237 nurses from the target population documented levels of awareness, willingness, and preparedness for northern practice, as well as recruitment incentives and disincentives. Findings demonstrate an awareness of the overlap between the professional and personal dimensions characteristic of such practices, and suggest support for innovative rotations that would cut across federal/provincial/community jurisdictions. Although complex, given time and willingness, a regional relief system seems viable.

Key words: aboriginal health, northern nursing practice, recruitment

Introduction

For the past several years, aboriginal communities in Canada's North have experienced exceptionally high rates of turnover among nurses (Need acute, 2001). In remote parts of Northern Ontario, for example, it is not uncommon for one third of the funded positions to be unfilled at any given time. As a result, if they cannot attract full-time staff, local health authorities and the First Nations and Inuit Health Branch (FNIHB), the department of Health Canada responsible for the health of aboriginal people on reserves, are forced to rely on agency nurses to provide vital services, each for a few weeks at a time. One small community in the region had 42 different nurses during a recent 1-year period. This situation has serious implications in a system where nurses are the principal primary-care providers. Of necessity their focus is on maintaining acute-care coverage; chronic care and public health programs do not receive the attention they warrant. Continuity of care suffers in various ways, too. For instance, patients tire of having to repeatedly recount their symptoms and history every time there is a new person and, frustrated, sometimes simply stop going to the nursing stations for follow-up (Minore, Boone, Katt, Kinch, & Birch, in press). Lack of knowledge about procedures can affect patients as well. Temporary nurses may administer medications but not order refills because they are unfamiliar with the system for pharmacy orders; this causes disruptions in the course of treatment.

The health human resources situation in the Sioux Lookout Zone, FNIHB's administrative division for the northernmost part of Ontario, mirrors that found throughout Canada's provincial and territorial North. There are 28 communities, accessible only by air, scattered across the Zone, a vast area of subarctic boreal forest equal in size to Germany. Some 16,231 Cree and Ojibway live there, in places of fewer than 100 to as many as 1,600 people. The larger communities have a nursing station, staffed by two or three nurses and paraprofessionals (Community Health Representatives and Mental Health Workers) hired from the community; the smaller ones have satellite stations that nurses from nearby communities visit on a routine basis. These people are also served by physicians and other health professionals who fly in regularly from the town of Sioux Lookout (population 3,465). Most of the time, however, the nurses are the only health professionals available.

While the system often struggles along with "make do" staffing measures, alternative arrangements are being sought. Prior to the current study, Health Canada surveyed nurses whom it employed in the Zone to identify strategies that might lower the rate of attrition there. Among the remedial actions proposed was the rotation of nurses into Zone communities — ideally the same individuals to the same communities — on a routine basis to provide short-term relief; the nurses would be drawn from small industrial towns in the region.

To explore the feasibility of this option, Health Canada commissioned the authors to conduct a survey of non-FNIHB nurses in Northwestern Ontario to determine their level of awareness, willingness, and preparedness with regard to northern practice. It also sought their thoughts about elements essential to the success of such a strategy. Exploring the idea does not mean that a formal policy will ensue, of course. As the present paper shows, development of a rotation-based relief recruitment program, although possible, will require considerable shifts in personal perspectives and institutional policies.

Literature Review

In terms of formulating a health human resources recruitment policy for rural and remote areas, the respondent population was somewhat unusual. Such studies tend to sample from among those already attracted to working in an under-serviced area, who are able to provide information based on their experiences (Lillington, 1997). In contrast, as Wilmore (1997) did with respect to recruitment of specialty nursing in Australia, the present study focused on generic factors — identified by a general population of nurses — that might influence decisions about entering a particular type of practice. The larger objective, following Meyer, Mannix, and Costello (1991), was to inform the development of a strategy that would tap an alternative nursing resource for a rural area.

Studies on recruitment into rural nursing focus mostly on organizational factors within hospital settings (Fosbinder, 1994; Fuszard, Green, Kujala, & Talley, 1994; Stratton, Dunkin, Szigeti, & Muus, 1998). Less attention has been paid to individuals' adjustment to their surroundings (e.g., Didham, 1993). In comparison, the literature on the location choices of rural physicians takes into account both professional and personal dimensions (Alexander, 1998; Kazanjian & Pagliccia, 1996; Pathman, Williams, & Konrad, 1996). To be effective, recruitment strategies must consider nurses' awareness of the range of nursing and non-nursing realities in rural and remote settings, as identified by Hegney (1996).

A defining characteristic of nursing in Canada's remote aboriginal communities is the interplay between one's professional and personal lives (Canitz, 1991; Gregory, 1992; Scott, 1991). Nurses employed in most settings are able to maintain a high degree of separation between the two. Even those working in rural communities can set limits, although there is some erosion of boundaries since nurses' clients are also neighbours (Lee, 1998; MacLeod, Browne, & Leipert, 1998). For those employed in an isolated northern aboriginal community, however, efforts to keep a professional distance have been shown to negatively affect the community's acceptance of the services offered (Boone, Minore, Katt, & Kinch, 1994; O'Neil, 1989).

O'Brien-Pallas and Baumann (1992) note, with reference to recruitment programs generally, that "policies which take into account individual nurses' needs must be explored" (p. 15). This observation is made in the context of setting a broad research agenda on quality of nursing worklife issues. In that regard, they propose a conceptual framework of interdependent factors to be studied, considered alternately as *internal* or *external* in character. The latter, as the term suggests, are external to nurses and agencies: client demands on the system, health-care policies, or labour-market conditions. More relevant to the present discussion are the internal dimensions, those that pertain to nurses themselves and the environments in which they work, including, in this case, overlapping professional/personal lives while they are in a community.

Research Questions

The purpose of this study was to elicit the opinions of nurses from the region representative of those who might be recruited for a relief pool. As well, it was deemed important to determine any gaps in their understanding of nursing practice in aboriginal communities and how these might be addressed by the Branch. This led to the following questions: (1) *What type of orientation would help individuals reach a decision about northern nursing practice?* (2) *What recruitment strategies would be most effective in attracting nurses to the North?* (3) *What factors might deter nurses from working in the North?* (4) *What strategies would be most effective in informing nurses about northern nursing opportunities?*

Methodology

The survey instrument contained 22 questions: one open-ended; three closed-ended; and 18 multiple-response closed-ended, 11 of which incorporated open-ended components to accommodate respondents' perspectives. For purposes of content validity, the instrument was developed in consultation with three FNIHB-based experts on nursing recruitment and northern nursing practice, then reviewed by the Regional Nurse Educator and Acting Regional Nursing Officer for the Ontario Region. The questions were also informed by previous studies commissioned by the Branch on the learning needs of nurses working in First Nations communities (Silverman, Baumann, & Boblin-Cummings, 1994) and on recruitment and retention (Lillington, 1997). In formulating questions the researchers were able to draw on a decade of experience as members of a transdisciplinary research team — which also included two nurses of aboriginal heritage — that had undertaken several projects on the delivery of health services in collaboration with First Nations communities and organizations in Northern Ontario. Face validity was assessed by pre-testing the survey tool with 10 nurses from a variety of practice settings across the region, including individuals with recent experience working in First Nations communities.

The survey explored respondents' views on working conditions for nurses in northern aboriginal communities with regard to workload, the types of clients and acuity of care, in-service education, and cross-cultural issues. It also inquired about the levels of preparation required, resources, staffing, and supports. Other items canvassed their opinions on contract conditions in the North including length of contract, pay levels, overtime remuneration, and benefits. Respondents were asked to specify which types of orientation and recruitment strategies would cause an individual to choose a northern nursing position. As well, they were asked to provide information about their own nursing background, recent nursing experience, employment history, nursing responsibilities, and, specifically, their cross-cultural nursing experience with aboriginal clients. For the purpose of analyzing the responses, they were also asked to provide some personal demographic information.

Questions seeking factual information used standardized response categories. For example, for the question *While employed as a nurse, what have been your primary areas of responsibility?* respondents were provided an exhaustive 23-item list based on the categories used for registration purposes by the College of Nurses of Ontario. Other items asked respondents to put themselves in the position of a nurse planning to go north. For example: *Considering the perspective of someone accepting a northern nursing position, what type of supports would be essential to make working in an isolated First Nations community easier for someone like yourself?*

The survey was administered to a stratified random sample of 622 registered nurses drawn from 1,126 registrants of the College of Nurses of Ontario living in the northwestern part of the province. Those employed at the time by FNIHB were excluded from the sampling frame; however, this criterion did not rule out nurses with previous experience working in northern aboriginal communities. Nursing preparation was a key variable of interest; proportionate sampling meant that the 170 BScN and 452 diploma RNs included in the sample reflected the levels of preparation found among the region's nurses. The survey was completed by 237 individuals, an overall response rate of 38.1%, which is in line with the 34% return rate expected for population surveys with a mailed follow-up (Dillman, 1978). Rates of return were somewhat higher for RNs who had completed a BScN ($N = 74$) than for those with diplomas ($N = 163$): 43.5% and 36.1%, respectively. In terms of academic preparation, BScN-prepared nurses are over-represented but the variance is slight (3.9%); therefore, with respect to preparation the results were generalizable to all RNs in the region, other than those working in the Sioux Lookout Zone. The demographic characteristics and employment experience of the sample are highlighted in Table 1.

Although the survey yielded both quantitative and qualitative data, this paper is based on the qualitative part of the data set because it focuses on *perception*s that might inform the human resources policy being contemplated. A few descriptive statistics are used where appropriate only to indicate the extent of support for various ideas. Due to the preponderance of multiple response categorical variables, usual measures of independence were not appropriate because of within-subject dependence among responses.

The internal dimensions of the O'Brien-Pallas and Baumann (1992) framework for studying quality of nursing worklife issues were adapted as a heuristic device, to organize and identify relationships within the

Table 1 ***Characteristics of Sample (N =237)***

Variables	***Mean***	***SD***	
Age	43 years	9.51	
Number of children	2	1.11	
Total number of years since qualifying	19	10.53	
	Number of Responses	**%**	
Language	226	100.0	English
Martial status	232	84.1	Married or equivalent
Current employment status	226	51.3	Full-time employment
Primary area of practice	203	85.7	Direct care
Primary setting	231	82.3	General hospital
Experience nursing aboriginal clients	203	83.7	Acute care
Experience in First Nations community	224	86.2	No experience

data. This framework classifies these internal factors into four categories: *individual*, *social/environmental/contextual, operational,* and *administrative.* For purposes of the analysis, these constituted an initial list of what Patton (1990) refers to as "sensitizing concepts," used to organize qualitative data. Additional categories arose from the data; *indigenous concepts* are usual in such an approach. The content analysis followed inductive procedures whereby the volume of information collected was reduced by focusing on recurring concepts and their interrelationships (Morse & Field, 1995). Interrater reliability was achieved by having each of the researchers code the data independently, then compare and consensually agree on the categorization.

Findings

To frame a recruitment strategy that might make a short-term relief plan workable, it is necessary to understand nurses' expectations regarding various aspects of work in northern aboriginal communities. A number of these fit the categories generally characteristic of nursing worklife as identified by O'Brien-Pallas and Baumann (1992). This paper discusses the study-specific worklife issues that fall within each of the "internal" domains of their paradigm under the rubrics *individual*, *social/environmental/contextual*, *operational*, and *administrative*. The paper then introduces the indigenous concepts emerging from the data that are outside of such a generic model but must be considered in formulating a successful nursing recruitment strategy for the North. Dealt with under the heading *personal/professional interface,* these provisions are essential to sustain individuals' commitment to work in a northern setting on a basis sufficient to meet local needs. The key findings are summarized in Table 2.

Table 2 ***Factors Affecting Northern Nursing Recruitment***

Individual
- Adventure and cultural awareness
- Requires flexibility for job sharing and short-term contracts

Social / Environmental
- Opportunity for independent practice
- Concern for personal safety

Operations
- Vast distances
- Scarce human resources
- Cross-jurisdictional collaboration

Administration
- Wages, including isolation pay
- Transfer of services to communities

Personal / Professional Interface (Indigenous Concepts)
- 24/7 schedules
- Accommodations
- Essential services
- Informal social contact with community members

Individual

Within this category, O'Brien-Pallas and Baumann (1992) cluster several factors in two subcategories, home/work interplay and individuals' needs. The first subsumes various conditions of employment (i.e., job sharing, flexible scheduling) that accommodate nurses' personal lives. In this instance, work away from their home community would add to the complexity for employees attempting to balance the competing demands of work and home.

Most respondents (76.4%) thought that rotating work schedules — part-time for an employer in their home community and part-time in a First Nations community — would attract more nurses to northern practice. In their comments, they said that "short-term contracts would fit with present work schedules." They also thought that "experienced nurses [might] take a three-month leave from their current job on a rotational basis." They noted, however, that these types of rotations would work only if nurses were assured that they could "go north without penalties." They did not want to risk "loss of job position" or "continuing seniority" in terms of their current employment. A parallel suggestion was a "job share" approach, whereby nurses would alternate between their current position and a position in a northern community.

While these two ideas are intriguing and not to be dismissed, there is a significant obstacle to their implementation. Both depend on securing the agreement of the hometown employer. This obviously will depend on labour-market conditions at the time. Currently the small industrial towns of the mid-North are experiencing nursing shortages, but the supply/demand balance fluctuates. One thing that does not change, however, is the issue of jurisdiction. Provision of health services to aboriginal people on reserves is the responsibility of the federal government, whereas the main employers of nurses in Northwestern Ontario towns are funded, directly or indirectly, by the provincial government. For either the *job security* or *job share* provisions to function on a useful scale, the FNIHB would have to establish protocols with multiple employers that cut across the jurisdictional boundary. This is a significant hurdle, but it might well be cleared. The Ontario Ministry of Health and Long-Term Care recognizes that the province has obligations to all aboriginal residents, and certainly administrators at health facilities in regional centres are aware of the staffing difficulties faced in neighbouring First Nations communities.

Under individual needs, O'Brien-Pallas and Baumann (1992) list a number of factors that reflect personal beliefs, including autonomy, career goals, attitudes, and life values. Some survey respondents saw these notions as integral to the promotion of a new recruitment policy. About one in five (19.8%) suggested reasons why nursing in First Nations communities could be considered attractive. Their responses, while varied, emphasize the fact that northern practice represents a "challenge," "change," and "adventure." For some, the challenge was the "autonomy" and "independence" associated with practice in a remote setting. They noted that northern nursing would give one the opportunity to use "clinical skills in all areas of nursing." For nurses who wanted a change, the North could offer a "sabbatical" with "new experiences" not available in their current employment setting. Those who had been in their current position for a number of years saw this as a decided advantage. The adventure associated with northern nursing was rooted in the opportunity to experience a different lifestyle. For a number of respondents, the communities offered a type of "outdoor" life that was otherwise not available, even in the region's smaller centres.

Eight out of 10 (85.8%) thought that the opportunity to practise in a different cultural setting could be attractive. They expressed the belief that nurses might go north because of the opportunity to "make a difference" and satisfy their "desire to help people." Respondents who previously had been to northern aboriginal communities generally characterized their experience as positive. A nurse who had been employed in the Northwest Territories wrote: "My six-month contract gave me exposure to a unique culture within Canada and yes, I would do it again if my situation permitted." In sum, various individual factors could make a rotation nursing resource strategy attractive and useful for promotion purposes.

Social/Environmental/Contextual

Some contradictions are inherent in the nurses' role in the North. For example, despite having considerable decision-making responsibility locally, they function within FNIHB's widely distributed health-care system, which makes them accountable to supervisors located hundreds of kilometres away. Also, although they collaborate with physicians and other health-care professionals, the physical distance that separates them from these colleagues gives First Nations–based nurses relative independence within the health-care team.

Survey respondents saw the social/environmental/contextual differences as creating both incentives and disincentives that must be addressed in the formulation of a new nursing recruitment strategy. The opportunity for independent practice was a significant attraction (73.3%). Some respondents commented that nursing in remote communities could be a valuable "job experience." However, some of these appeared not to understand the advanced level of knowledge, skills, and judgement required, by suggesting that the experience might appeal to "new graduates who are keen." Nonetheless, independence clearly emerged as a job feature that might be exploited — in the best sense of the word — in promoting relief rotation work.

Weighing against this positive are some significant negative beliefs about the practice environment itself. Violent incidents at nursing stations in some places have been widely reported by the region's press. It is not surprising, then, that respondents had some serious concerns about personal safety and security issues in isolated First Nations communities. "Bad experiences" for nurses, their colleagues, and others were identified as a recruitment barrier by about one half of those surveyed. Although only 16 respondents had actually nursed in an outpost, some of their comments graphically capture the broader concerns. Speaking of her brief experience, one nurse stated: "I only lasted two weeks on a northern reserve...no policing available, guns were easily available...took shots at the nursing station." A few individuals acknowledged that the nature of nurses' experiences depended on the stability of the particular community. An individual who had nursed in several communities observed that the "dry reserves" tended to be more stable. Another commented that nurses "either loved it or hated it," depending on the community. To be effective, any recruitment strategy must acknowledge and address such concerns. Our respondents suggested that the only way to change negative perceptions, when promoting a new strategy, is to ensure the inclusion of "positive representation from nurses that have worked in the north." There was also a feeling that involving the leadership from aboriginal communities would signal their commitment to ensuring nurses' safety.

Operations

The combination of large distances and small populations makes for a regional health-care system that lacks both human and physical resources. The geographic and demographic realities tend to overwhelm the sustained efforts and heavy investments made to improve operations. This is reflected in the fact that nearly all respondents believed that lack of "backup" was a major reason why nurses were reluctant to accept northern positions (92.7%). Most respondents were reasonably accurate in their estimation of the health human resources that would be available on site (at least one other nurse, translators, and paraprofessionals), although a surprising number (68.2%) expected a full-time physician. They also believed that multidisciplinary support was required "on call" but were not confident that needed consultants would be available.

The interaction between factors identified by O'Brien-Pallas and Baumann (1992) are evident in the overlap between suggestions regarding the personal need for flexibility and the system's care-delivery needs. As a case in point, although focusing on aboriginal communities, the respondents also included the industrial towns and rural areas of Northwestern Ontario in their responses. Since these places are widely scattered they, too, lack resources. Perhaps, some reasoned, health human resources issues should be viewed more holistically across the entire region. Emphasizing that the nurses who possess the necessary skills and experience were probably already working in acute-care settings, a number of respondents suggested a need for special arrangements with community hospitals. They envisioned a situation wherein nurses employed in a hospital would combine their regular responsibilities with scheduled rotations in First Nations communities. Such workplace initiatives would have a number of benefits, they believed. The aboriginal communities would have access to "excellent, experienced staff" and "well-networked" professionals for primary care and relief rotations.

Nurses based full-time at the nursing stations would not have "to be expert at four or five areas." And the community hospitals, whose clients include many aboriginal people, would have staff with enhanced transcultural nursing expertise. Further, the variety afforded by such employment options might make hospital positions a more "attractive package" to potential recruits.

Administration

Administrative factors affecting nurses' work lives are diverse; most relevant are wages, benefits, management philosophy, institutional policies, and recruitment programs. The last mentioned, of course, incorporates elements of the preceding four. So, when respondents were asked what would make the relief strategy work, their responses were dominated by one factor: money (91.6%). In their comments, they said that "higher wages," "bonuses," "isolation pay," or "tax-free salary" would draw nurses to work in remote communities. Moreover, partial underwriting of the high cost of food and housing was seen as a necessity.

Some nurses were concerned that a shift in management philosophy might negatively affect working conditions. Health Canada and aboriginal communities across the country have a shared commitment to a process in which responsibility for the delivery of community-based programs is transferred to the local leadership. Under this model FNIHB plays a supportive role in the development of delivery mechanisms at the request of the community leadership. A number of respondents perceived that the transfer process had resulted in a "lack of accountability" on the part of local authorities and that an equitable relationship between nurses and community leaders should be encouraged. One said that nurses need to have "a reasonable degree of autonomy, i.e., to be able to perform duties, make decisions, be effective working with community and band council and not be…told to leave or stop doing a certain thing at the drop of a hat with no explanation or evaluation." There was also concern that the leadership might not appreciate the fact that nurses are accountable for their practice or have to function within boundaries set by their profession.

Respondents stressed the importance of involving members of host First Nations communities in the recruitment process, as well as ensuring adequate representation from "the nursing stations and hospitals" serving First Nations clients. They pointed out that successful recruitment depends on nurses having accurate and complete information, and that "the nursing roles and conditions that one would encounter" should be depicted honestly in advertising and other publicity. First-hand information would be particularly useful, such as "discussions with nurses who have already…worked in the north" or "cooperative placements" for nursing students. Those contemplating the rotation pool should be offered "trial" periods of "at least three months to feel comfortable and learn the role." Nurses considering short-term placements could be provided with a video "showing where you would be working, the area, what [the communities] have to offer."

Professional/Personal Interface

Because of their geography, most northern aboriginal communities are places where nurses are immersed in their jobs. The traumas that occur frequently — snowmobile accidents, poisonings, suicide attempts — must be tended without regard for work schedules or personal time. This adds to the usual heavy caseloads that result from a high incidence of acute and chronic conditions. So nurses function in a high degree of isolation, professional and social, with little separation between the two aspects of their lives. Recognizing this reality, the respondents identified several provisions necessary to sustain nurses in a worklife where their professional and personal lives intertwine. The indigenous concepts emerging from the data are comprised of *accommodations, essential services,* and *informal social contacts.*

Respondents saw nursing on reserves as "a 24-hour-a-day job" and expressed the need to offset personal isolation through contact with family (69.1%). Since separation from family was seen as an impediment to any relief rotation plan (83.8%), it was suggested that benefits be extended to support family visits, which would mean suitable "accommodation for family and spouse." This expectation is at odds with current arrangements; nurses' housing is usually proximate to the nursing station, with individual bedrooms but shared living space. Moreover, respondents saw a need for financial support for housing, in the form of either "rent subsidies" or "free housing." Access to potable water, hydroelectricity, and local transportation were considered essential. These are generally available to nurses, although they are costly services and not always available to community members. Other amenities cited — churches and informal social activities with community members — would allow nurses to participate in community life in a non-working role. It is noteworthy that the respondents identified these latter needs as vital to the success of any proposed recruitment strategy.

Conclusion

The current shortage of nurses ready and willing to work in the North is likely to continue into the foreseeable future. Inevitably, stop-gap remedies will still be required as those responsible scramble to fill positions. At the same time, there is a need for measures that offer greater stability and predictability — in other words *short-term relief* — in recruiting nurses to northern aboriginal communities.

The present findings highlight the essential ingredients of any successful proximity-based relief pool strategy. The professional/personal overlap in the worklives of nurses practising in the North is reflected in the data: in the need for personal support, flexible work schedules, and links to community leaders, and, most tellingly, in the fears expressed. On balance, orienting nurses to northern practice must consider not only the clinical demands but also other realities, some the source of fear but many the cause of joy. To sum up, the consensus was: "sell the benefits [of the communities]…learning about a different culture…the possibility of different recreational endeavours…canoeing, fly fishing…the joy of being able to make decisions and work with real people."

However, because the potential employees would have to move across jurisdictional lines — from provincially funded to federally funded institutions, and from institutions controlled by local agency boards to those answerable either to chiefs and council or the FNIHB — close and respectful working relationships must be established among all parties. Only after this groundwork has been done can a move be made to institute a viable recruitment program premised on short-term rotations.

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