

Résumé

**Les effets du roulement du personnel infirmier
sur la continuité des soins
dans les communautés autochtones isolées**

**Bruce Minore, Margaret Boone, Mae Katt, Peggy Kinch,
Stephen Birch et Christopher Mushquash**

Nombre de communautés autochtones du Nord canadien éprouvent des difficultés à recruter et à retenir un personnel infirmier compétent et doivent s'en remettre à des infirmières d'urgence pour des services à court terme. Ces dernières ne sont souvent pas préparées pour les tâches exigeantes inhérentes à ce type de pratique. Cette étude examine les conséquences du roulement du personnel infirmier sur la continuité des soins dispensés aux résidents de trois communautés objibways, situées dans le Nord de l'Ontario. Les résultats sont fondés sur l'examen de 135 dossiers de bénéficiaires atteints de cancer, du diabète et de troubles de santé mentale, ainsi que sur des entrevues réalisées auprès de 30 professionnelles et paraprofessionnelles soignantes oeuvrant dans les communautés. L'étude a démontré que le roulement du personnel infirmier influe sur la communication, la gestion des médicaments et la diversité des services offerts. Il entraîne également des problèmes à l'échelle des suivis, un désengagement de la part des clients, l'aggravement des maladies et un fardeau supplémentaire pour la famille et les membres de la communautés, obligés à dispenser des soins.

Mots clés : recrutement

The Effects of Nursing Turnover on Continuity of Care in Isolated First Nation Communities

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Many of Canada's northern First Nation communities experience difficulty recruiting and retaining appropriate nursing staff and must rely on relief nurses for short-term coverage. The latter often are not adequately prepared for the demanding nature of the practice. This study examined the consequences of nursing turnover on the continuity of care provided to residents of three Ojibway communities in northern Ontario. The findings are based on a review of 135 charts of oncology, diabetes, and mental health clients, and on interviews with 30 professional and paraprofessional health-care providers who served the communities. Nursing turnover is shown to detrimentally affect communications, medications management, and the range of services offered; it also results in compromised follow-up, client disengagement, illness exacerbation, and an added burden of care for family and community members.

Keywords: Aboriginal health, northern nursing practice, recruitment

Introduction

Despite being in constant recruitment mode for nurses, local Aboriginal health authorities and Health Canada's First Nations and Inuit Health Branch have a hard time filling the funded positions available in northern First Nation communities. The isolation of these communities makes it difficult to attract nurses willing to commit to spending reasonable periods of time working there. Moreover, the turnover rate is high among those nurses who do come (Lemchuck-Favel & Jock, 2004). As a result, recruiters are forced to rely on a rotation of agency nurses, who often lack northern nursing experience, to provide coverage for a few weeks at a time. In some instances this health workforce instability contributes to sporadic and inconsistent care for community members (Dignan, 1998). This paper reports results from a study conducted in three northern Ontario Ojibway communities, where nurse staffing deficits — shortages, turnover, and inadequate preparation — were found to seriously compromise the continuity of care provided to clients.

The three Shibogama First Nation communities involved in the study are small and remote, with 341, 411, and 507 residents respectively,

located between 350 and 450 kilometres from the region's health service centre, Sioux Lookout (population 5,336). They are accessible only by air. As is the case for similar communities across Canada, the principal primary-care providers are nurses. Each place has a nursing station, staffed by two or three nurses (when all positions are filled), who work with a rotation of physicians who fly in for 1 week each month, as well as local people trained to provide specific services, such as the Community Health Representatives and mental health workers. While striving towards an interdisciplinary-team model of care, the system remains heavily nurse-centred and nurse-dependent. Consequently, changes in the nursing complement affect client care quickly and significantly.

Research Questions

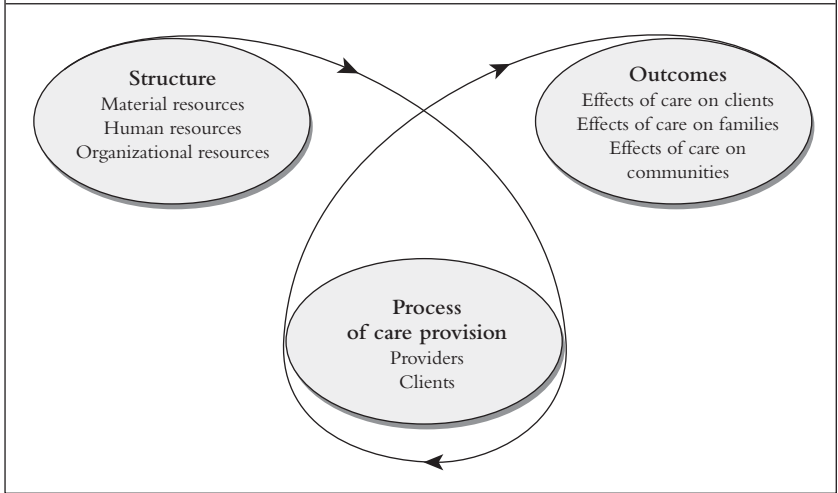
The nursing-workforce findings reported here come from a broader study of continuity of care in these communities. The definition of *continuity in the process of care* adopted for the study was "the likelihood that consumers will receive needed health services, in a proper sequence and within an appropriate interval of time" (Nutting, Shorr, & Burkhalter, 1981, p. 286). The objective was to provide the Shibogama First Nations Council and the First Nations and Inuit Health Branch with an evidentiary basis for program and human resource allocation decisions by addressing several interrelated questions: (1) *What, if any, disruptions occur in providing care, and why?* (2) *What effect does any lack of continuity have on client outcomes?* (3) *What are the impacts (human costs) of such a lack of continuity on patients, their families, and their communities?* (4) *How can the health system support communities and care providers in order to achieve better continuity of care?* In order to distinguish between disease-specific and systems issues affecting continuity of care, the study focused on three pathologies of critical concern: oncology, diabetes, and mental health.

An overall framework for quality care assessment, which is applicable to assessing continuity, is set out in Donabedian (1988). It classifies information into three categories: structure, process, and outcomes. *Structure* refers to the attributes of the care setting (material resources, human resources, and organizational structure). *Process* considers what is actually done in the delivery of care (by both providers and recipients). *Outcomes* are the effects of care on health status (individual and population). Figure 1 illustrates the interlinked nature of Donabedian's categories.

Literature Review

The nature of nursing in Aboriginal communities requires a complex array of clinical skills (MacLeod, Browne, & Leipert, 1998; Silverman, Goodine, Ladouceur, & Quinn, 2001), as well as cultural awareness

Figure 1 *Framework for Analyzing Continuity in the Process of Care (Donabedian's Framework)*



(Browne & Fiske, 2001). The nurse must establish and maintain responsive relationships with community members (Tarlier, Johnson, & Whyte, 2003), built on respect (Browne, 1995) and trust. Although this trust cannot be measured, it is essential for a nurse to function effectively in outpost settings (Vukic & Keddy, 2002). The imperatives of one's profession spill over into one's personal life (Canitz, 1991; Gregory, 1992; Scott, 1991) to a greater extent than would be the case in most other practice settings. Such high expectations and demands make it hard to retain nurses in the north and difficult to recruit replacements with the requisite experience.

There is longstanding evidence of problems associated with recruiting and retaining appropriate nursing resources for northern Ontario's First Nation communities (Lillington, 1997; Scott McKay Bain Health Panel, 1989), which continue to the present (Minore, Boone, & Hill, 2004). Little attention has been given to the effects of nursing turnover in the region on continuity of care, although it has been noted that reliance on an ever-changing stream of physicians who lack awareness of cross-cultural care adversely affects compliance, and thus client outcomes (Wilson, Krefting, Sutcliffe, & Van Bussel, 1994; Young, 1995).

Methodology

The study was initiated at the request of the Shibogama Health Program by the First Nations and Inuit Health Branch, Health Canada's depart-

ment responsible for the delivery of health services on reserve, and by researchers based at two Ontario universities. Permission to conduct the study was given by the Chiefs of the Shibogama First Nations Council, with an understanding that the findings would be shared with the communities prior to their general release (a meeting with community members took place in August 2003). The protocols were developed by the research team, which included two senior nurse administrators of Aboriginal heritage, in collaboration with members of the Health Program staff. Data collection involved two complementary methods: a systematic review of 135 client charts, and in-depth, semi-structured interviews with 30 health-care providers serving the three communities.

Clients' charts are a key source of information on the process of care. Pathology-specific tools, designed to give a holistic assessment of the health system's response to clients, were developed by the research team to capture information along several dimensions: time sequence; actions taken by provider category in assessing, diagnosing, developing, and implementing treatment plans; and evaluation. The clinical guidelines for First Nations and Inuit Health Branch personnel were used to benchmark ideal care, supplemented by information from the Northwestern Ontario Regional Cancer Centre and the Shibogama Health Program, which helped to clarify actual practice and hence tailor the tools to fit the situation. For example, although medical diagnoses could be used in the case of oncology and diabetes patients, those experiencing mental health deviations are seldom assessed or diagnosed by a psychiatrist. Consequently, the mental health diagnostic component was based on the North American Nursing Diagnoses Taxonomy (McFarland & McFarland, 1997), which best reflected the nature of most clinical assessments but did not exclude from the sample cases where a DSM-IV (*Diagnostic and Statistical Manual of Mental Disorders, 4th Edition*) diagnosis had been made by a physician. To determine the face validity of the instruments, the Shibogama Nursing Program Supervisor tested them on several non-subject cases in Kingfisher Lake First Nation. This process identified a number of areas requiring improvement. Substantially revised, the tools were re-tested on non-subject cases from Wunnumin Lake First Nation and found to be acceptable.

A name blind screening of client charts held at the nursing stations flagged 208 diabetes, oncology, or mental health cases. A random sample of 135 charts, stratified by principal diagnoses, was drawn. It included 38 oncology, 47 diabetes, and 50 mental health clients. The chart review was conducted by a nurse familiar with the charting procedures used in nursing stations as a result of her long experience practising in various northern First Nation communities. Before any information was given to her, nursing station staff contacted the individuals whose records had

been selected, informed them of the purpose of the study, and obtained their signed permission to release the information. Client names were masked before the charts were submitted for review. The retrospective review tracked each client's pathology-related interactions with the health-care system over the previous 5 years.

The second source of data was in-depth individual interviews with members of the interdisciplinary health-care teams serving the communities, both resident and visiting professionals and local paraprofessionals. All those providing services during the period of data collection were invited to participate; as a result, the respondents included short- and long-term members of the teams and every discipline present. Thirty people were interviewed, a number sufficient to achieve information saturation (Jackson, 2002; Leininger, 1985). Since it was recognized that some paraprofessionals would be more comfortable speaking their native language, a bilingual (Oji-Cree/English) person with a background in mental health sciences was hired and specifically trained to carry out the interviews. The interviews conducted in Oji-Cree were translated prior to transcription. The five questions selected for use in the in-depth interviews were linked to the research questions but informed and made more specific by issues raised in the chart review. Each was framed in an open-ended format accompanied by probes, and interviewees were encouraged to respond at length. For example, they were asked: *What, if any, disruptions occur in cancer, diabetes, and mental health care?* This type of key informant interviewing provides what Geertz (1973) describes as a "thick description" (p. 3) of social phenomena.

The two data sources complement one another. For example, while charts show that information does follow clients home after they receive care in Sioux Lookout, the timeliness of the flow can be problematic. The interviews helped to explain why, and to describe the consequences. Liberal use is made of direct quotes from key informant interviews in this paper. There are two reasons for using the respondents' own words: first, this method best captures the tone of their comments, and second, it ensures that their views are reflected accurately.

Donabedian's (1988) categories (depicted in Figure 1) were used for what Patton (1990) refers to as *sensitizing concepts* to organize the chart review and interview data. "The inductive application of sensitizing concepts is to examine how the concept is manifest in a particular setting or among a particular group of people" (Patton, p. 391). The analysis followed inductive procedures whereby the volume of information collected was reduced by focusing on recurring concepts and their interrelationships (Morse & Field, 1995). To enhance reliability, the chart data were coded by the nurse members of the researcher team, independently of one another; their coding was then compared and consensually vali-

dated. The data were sorted by pathology and each client's case identified by community of residence, age, and gender. Through tracking of the stages in the process of care on a case-by-case basis, disruptions and the resulting effects on client outcomes were noted under emergent themes and later compiled with all cases in the specific pathology, then grouped according to Donabedian's categories. Similarly, both nurse and non-nurse members of the team analyzed the interview transcripts separately and then collectively to achieve consensus. The nature, cause, and effects of discontinuities in care explored in the interviews were then ordered according to Donabedian's domains of structure, process, and outcome.

Responses from paraprofessionals who were also community residents underscore a limitation of the study. Specifically, they spoke about their experiences as both providers and *recipients* of care. Generally, however, the clients' voices were not heard directly; adhering to the principles of participatory action research, client interviews were not incorporated into the research design because of locally identified concerns and the preferences of the community partners.

Findings

When pathology-specific comparisons were made, distinct differences in the continuity of care became apparent. Oncology patients and those with diabetes received appropriate care in a timely manner to a far greater extent than did those experiencing mental health deviations. Care for the latter group was poor. The differences are largely attributable to the nature and quality of the referral and support programs for the three conditions that are available outside the communities. Staffing problems at the local level did not affect one client group more than the others; they bedevil the delivery of all care.

Structure

Collectively the core elements of a health system's *structure* — material resources, human resources, and organization — create amenities of care that influence variable degrees of access and variable degrees in the quality of care received. Human resources are of principal interest for the present paper. Attracting health professionals to work in the Shibogama communities is a chronic problem that, at the time of the study, had turned acute, despite the health authority's reputation as a good employer (Hiebert, Angees, Young, & O'Neil, 2001). One community had 42 nurses in and out over a 1-year period. Another reported having 12 nurses arrive during the summer months for "10 days each, 7 days each," with predictable results. They "start something, leave it, nobody else picks it up, so there's awful continuity." The turnover also affects

Table 1 *Effects of Staffing Turnover*

Structure (nursing human resources) Recruitment Turnover Orientation Preparation Communication
Process Focus on acute care Compromised follow-up Medication management Client trust Holistic assessments Cultural awareness
Outcomes Client disengagement Illness exacerbation Family stress Community coping

others in the system. For example, support staff must continually orient new nurses to various procedures, such as arranging for an emergency medical evacuation. Compounding the nursing shortfall, the communities relied on locums for physician coverage; frequently, a different doctor arrived each month.

Ideally, because of the independent nature of northern practice, the nurses should be prepared in primary care and community nursing, preferably with several years' experience. Finding such individuals is not always possible, however. So, "although they are good nurses," one long-time practitioner said, the agency nurses who came were often ill prepared because they "had never been in the north, had never been trained to be in the north, had never been oriented on how to work in the north...so it certainly does have an impact." It takes time to become familiar with the system of care, the clientele, and the community. "A lot of relief nurses just come up here and do the [nursing station] drop-ins. That's such a minimal part of the job, and yet it takes up their time because they don't know how to do the job." Immunization, chronic care, health promotion, and prevention programs all "get put on the shelf."

One organizational element of the structure that combines with nursing turnover to affect continuity of care is the management of client information within the communities. At issue is the number of files that are maintained. One nurse summarized the problem: "We have charts, we have med files, we have referral files, we have physician's files, nursing notes...how in the world do you keep track of what's going on?" If, for example, a patient needs to return for a follow-up visit in a week, it is not sufficient to add a note to the nursing chart and tell the patient. "The chances of you getting that person to return in 1 week are very, very low." Not only is the client likely to forget, but the note may be overlooked in a chart that is already several inches thick. "The follow-up stuff leaves in the head of the person who [saw the patient] in the first place, and if it isn't clearly communicated to the next nurse, then it just sort of falls by the wayside." Moreover, the system of keeping multiple records itself was seen as inherently flawed because new nurses have to know where and how to look for information.

Process

As defined by Donabedian (1988), *process* considers what is actually done in the delivery of care by both providers and recipients. In the present case, decisions by both are often influenced by the health human resource reality with which they must contend.

Nursing shortages place pressure on the range of services offered, for example. The chart review showed that the oncology clients in the sample (all female) were identified through routine Pap screening at the well-women clinics held in the communities. However, these clinics are cancelled when the nursing station is especially understaffed. Similarly, in a community functioning without a mental health worker, the nurses were called upon to provide counselling, leading one to comment, "Sometimes there's time for that and sometimes there isn't." The focus is on maintaining acute-care coverage; chronic care and public health programs do not receive the attention they warrant. "They look after the sore ear and the sore throat...but the person with diabetes or whatever, their follow-ups get kind of shoved aside." A full-time nurse would be more inclined to find the person who is being followed once a month for their diabetes, to remind them that they need to come to the clinic if they happen to miss an appointment. That is not likely to happen when nurses do not know the individuals involved or where they might be found.

Reliance on short-term relief nurses adversely affects continuity, in several ways. Nurses may miss critical signs, particularly among mental health clients: "A relief nurse...never has a total handle on the high-risk people...who should be questioned further on their mental health status,

[so] some things go out the door.” Lack of knowledge about procedures can also undermine patient care. Temporary nurses will administer medications, but may not order refills because they are unfamiliar with the system for pharmacy orders. One nurse reported returning from vacation to find 68 people whose medications had been used up and not replaced (which normally takes 2 weeks). Moreover, relief nurses are not in the communities long enough to establish rapport with their clients. Both males and females resist submitting to examinations that would require them to expose intimate parts of their bodies to strangers. For example, respondents noted a reluctance on the part of women to have Pap smears done by nurses they did not know: “They’re not keen on being exposed to a new face every time.” Browne and Fiske (2001) made a similar observation in a British Columbia setting. A Community Health Representative emphasized the point of familiarity: “I find actually what determines if they’ll come or not is who is calling them in and what was said when [they] called them in.”

The continual change in nurses means that patients must tell and retell their story. They may see a different person every visit, with each one asking them the same questions. Speaking about her own experiences, a local Community Health Representative said, “Sometimes there’s a new nurse here and I have to sit and talk, talk.” The detrimental effect of mental health clients having to expose their psyche to one person after another was noted with concern. People tire of having to repeatedly recount their symptoms and history and, frustrated, sometimes simply stop going to the nursing station for follow-up. Client disengagement in reaction to such experiences underscores the link between the *process* and *outcome* factors affecting continuity of care.

Cultural awareness emerges as a critical barrier for relief nurses. Often they are “in cultural shock to begin with.” They may then proceed to make social errors that impede effective communication with their patients; for example, not knowing “the smallest things like [avoiding] eye contact with elders.” In other instances the failure is the result of ignorance about clients’ lifestyle. One nurse told of a frustrated relief nurse whose client, an elderly diabetic, had not followed her advice to bathe his infected foot three times a day and stay off it as much as possible. “Well, why didn’t you follow through?” the relief nurse demanded, seemingly unaware of the fact that this person had to haul water from the lake and cut wood to heat it, before he could bathe his foot as she had recommended.

Outcomes

Broadly defined *outcomes* are the effects of care on clients, their families, and their communities. Obviously, such outcomes can derive from

various sources; for example, specific courses of treatment can be measured in changed health status for clients. The present study, however, sought to identify outcomes that are rooted in the system of care itself, rather than specific regimens of care. Nursing turnover, a systemic phenomenon, affects clients and their families directly in ways that are felt by the communities as a whole.

Respondents identified multiple ways in which clients' care may be compromised by the need to deal with an ever-changing nursing workforce. As indicated above, clients may avoid contact with unfamiliar care providers entirely, or, alternatively, discharge themselves from care when confronted with the continual arrival of new faces. In either case, their reluctance to seek help "may cause an exacerbation of their condition." Moreover, unsatisfactory experiences may result in "an unwillingness to be cooperative with health-care providers in the future." As well, the staff-shortage-driven need to focus on acute care, at the expense of all other health domains, serves to place the onus for managing their well-being on the clients, many of whom lack the required knowledge. With reference to diabetes patients, one person said, "Staff turnover [means] it falls back on patients to take more responsibility for their own diet, their own care." In sum, one nurse argued that the staffing instability creates "the potential for increased morbidity and mortality."

Like the concentric circles that ripple out when a stone is dropped into a pond, the effects of poor client care spread first to the family and then to the community. Family members who feel that their relative is not receiving adequate treatment become frustrated, angry, and disillusioned. "If you have a family member that is going through [bad experiences due to systemic problems], then you're going to be trying to deal with exacerbated symptoms and not be able to get support from the health-care system because your family member doesn't want you to do that." The problems compound to the point where they overwhelm family members. Speaking of a diabetes patient's refusal to return to care, a nurse said, "It simply leads to a deterioration of their condition, which then leads to a greater burden on the family." The combined effect of client disengagement from the system and restrictions that can be imposed on the range of community-based services offered at times when nursing coverage is limited is that "families burn out, and then...the community burns out" trying to help them.

Workforce instability can translate into poor outcomes for individuals, families, and communities. However, the consequences cited above could be tempered through the adoption of best practice models for holistic assessment and the requirement that these be followed by all providers serving the communities, even those who are there only for brief periods.

Discussion

While nursing turnover will likely continue to be problematic in these First Nation communities and others like them across Canada's provincial and territorial north, there are potential remedies for some of the worst consequences. For example, in situations where coverage can be maintained only through a series of short-term agency placements, it would be best if the same nurses rotated in and out of a given community. This is being tried to some extent, but could be adopted more widely (Minore et al., 2004). In a word, this strategy would breed *familiarity*: nurses who are familiar with the community, practices within the local health system, and patients; and patients who are familiar with, and likely more comfortable with, their nurses. The resulting reciprocal knowledge should serve to reduce some of the systemic and interpersonal communication barriers that currently disrupt care. If same-site rotations are not feasible, nurses going north for even the briefest time should receive proper orientation in advance; this orientation should cover the nature of the practice they will encounter, the essentials of culturally competent care, and particulars about the specific community they are about to join.

Changes in the way things are done at a community level would alleviate some of the problems created by the nursing situation. Some suggestions are simple and should be relatively easy to implement. If, for example, responsibility for monitoring prescription renewals were assigned to the nursing station's paraprofessional staff, the latter could remind nurses when reorders are required, so that the pharmacy delays identified by respondents would not occur. Another idea, more complex and perhaps harder to implement, holds the promise of reducing one significant effect of nursing workforce instability. At present, the nursing station is the principal conduit for health information in and out of the communities, but this is often disrupted by staff changes. However, the exchange of information related to health prevention and promotion activities need not depend on the participation of nurses. The Community Health Representatives and other paraprofessionals are responsible for implementing much of the community-based programming in areas where there are national strategies, related, for instance, to diabetes and tobacco use. Therefore, fostering a direct connection between those overseeing the programs at a regional level and those working locally would alleviate some of the communication breakdowns.

Conclusion

Nursing human resource issues emerge as both an underlying source of gaps in service and an overarching area of policy concern. Shortages,

turnover, and inadequate preparation among nurses recruited to northern First Nations affect continuity across the entire continuum of care. Health promotion and illness prevention activities are displaced by the pressure from acute treatment demands, while follow-up care is frequently impaired by communication breakdowns attributable to the staffing situation. Although the nursing workforce shortfall is likely to continue, certain strategies could reduce its impact. First, in instances where short-term placements are necessary to ensure coverage, a system allowing the same group of nurses to rotate in and out of a given community would be ideal. Second, no matter how brief their assignment, all nurses who go north must be properly oriented to the practice, culture, and particular community. Third, system-level accommodations should be made to maximize the contribution of paraprofessional staff from the communities; usually they are knowledgeable, competent, and the most stable component of the health-care team.

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