Impact of health care provider turnover on health outcomes: A scoping review

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Introduction

Nunavut's healthcare system relies heavily on short-term locum health care providers. A recent analysis of physician contract data from 2014-2016 revealed that more than half of the physicians were on contracts for less than 20 days at a time. At this time, we do not have access to data on the statistics for nursing, diagnostic technicians, or other key providers in the Nunavut health system.

This scoping review focused on several key areas of concern that have been identified in Nunavut with regard to the impact of a transient health care workforce. These include:

- Patient Exhaustion (repetition of story)
- Wasted Staff time (repetition of procedures)
- Orientation: Cultural, medical, procedural
- Primary care teams: Challenge in creating a team with constantly changing people
- Patient outcomes
- Continuity of Care and Communication
- Building Trusting Relationships in the Community

Each of these issues will be addressed with literature, below (See Figure 1).

There is limited evidence that examines the impact of a transitory workforce on the existing resident workforce, patient satisfaction, and the effectiveness of services (Wakerman et al., 2016). What does exist is primarily in the nursing literature.

Previous research has identified that there is an urgent need to examine the complex interactions between staff turnover and system performance in terms of being able to respond to health care demands, quality of care, and patient safety (Wakerman et al, 2016; Li & Jones, 2013). In addition, with respect to nursing care, Minore et al (2005) have specifically noted the dearth of information about the impact of turnover on continuity of care in Indigenous communities.

Patient Satisfaction/Exhaustion (repetition of story)

In a study which included in-depth interviews with 10 women from a First Nations community in BC, Browne et al (2000) found that long-term, positive relationships with family doctors or community health nurses resulted in more 'affirming encounters' for the participants. The authors found that that these types of relationships were difficult to develop and maintain for a number reasons including:

- Lack of choice among small numbers of providers in the local area
- High turnover rates among health professionals in northern and rural regions
- The frequency of invalidating experiences
- Participants recognized the value of having a stable provider whom they trusted. In a study of nursing recruitment in indigenous communities, Minore, Boone & Hill (2004) found that the need to consistently recount symptoms and history to each new provider became a deterrent to going to the nursing stations for follow-up, so patient exhaustion has important clinical implications.

Figure 1: Key issues of concern – impact of transience in Nunavut's healthcare workforce.

Saultz & Albedaiwi (2004) reviewed 22 articles "focusing on the relationship between interpersonal continuity in the doctor-patient relationship and patient satisfaction" and found that a consistent and significant positive relationship exists between interpersonal continuity of care and patient satisfaction (19 of the 22 articles, including 4 clinical trials).

In a study by Guerin & Guerin (2009), which focused on data from community members, service providers and stakeholders in remote Australian communities, the authors found that,
"…when service providers attending to communities are always different, this can result in depersonalized services if community members constantly have to deal with a new person who does not understand their situation, does not have their trust, and does not know the histories—both of the community and of service provision for particular individuals. We have many times heard community members greet news of a new person with, "Oh no, we have to train up someone else now!" It can also lead to inconsistencies in service provision— which can be positive if it is an improvement, but negative if service provision gets worse."

Wasted staff time (repetition of procedures)

From the nursing literature, high turnover is known to affect the morale of nurses and the productivity of those who remain to provide care while new staff members are hired and oriented; nurse turnover is costly in the form of productivity losses and organizational inefficiencies due to staff instability and when experienced nurses act as 'preceptors' to recently appointed nurses, and must take time to provide a new recruit with suitable orientation and support until they reach full productivity." (Hayes et al., 2006, 2012). In a study of remote area nurses in Australia, authors reported that nurses experienced elevated levels of occupational stress (related, among others,

to the need to repeatedly orient new staff), which might have an impact on their performance. (Lenthall et al., 2009).

Orientation: Cultural, medical, procedural

On the importance of orientation: a survey of 369 nurses working in First Nations' communities highlighted "the need for a consistent orientation program […] the need for introduction to their colleagues as well as orientation to the specifics of unit administration. The nurses also emphasized the need for a thorough briefing on the demographics of the population to be serviced, the unique needs of the assigned areas as well as focus on population health issues (Silverman et al., 2001).

Minore et al (2005) found cultural awareness emerged as a critical barrier for relief nurses. Often they were 'in cultural shock to begin with.' They may then proceed to make social errors that impede effective communication with their patients (pp. 95).

A quote from Minore et al (2005) study on turnover in First Nations communities, *"[…] 'although they are good nurses,' one longtime 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.'" (Minore et al, 2005: pp. 93)*

In a study of nurses introduced to working in remote indigenous communities in Australia, the authors found that a lack of cultural orientation of healthcare workers in can have a detrimental effect on the delivery of quality healthcare services to Australians living in those areas. The high turnover of health professionals in remote Indigenous communities was a 'serious, perennial condition affecting all aspects of community and regional development […] the negative aspects of culture shock [can] undermine a worker's ability to function effectively and perform their tasks successfully (Muecke et al., 2011).

Primary care teams: Challenge in creating a team with constantly changing people

Bae et al.'s (2010) study based on nurse (turnover rates, questionnaires measuring workgroup processes such as group cohesion, relational coordination, and workgroup learning) and patient data (length of stay, patient falls, medication errors, and patient satisfaction scores) from 268 nursing units at 141 hospitals throughout the USA showed that turnover had negative impacts on workgroup processes and patient outcomes:
"*Nursing units with moderate levels of turnover were likely to have lower levels of workgroup learning compared to those with no turnover (p<.01). Nursing units with low levels of turnover were likely to have fewer patient falls than nursing units with no turnover (p<.05). Additionally, workgroup cohesion and relational coordination had a positive impact on patient satisfaction (p<.01), and increased workgroup learning led to fewer occurrences of severe medication errors (p<.05)."* (Bae et al, 2010).

Patient outcomes

In 3 reviews on the impact of nurse turnover, Hayes et al (2006, 2012) and O'Brien-Pallas et al, 2010) found the following key impacts on patient outcomes;

- As nurse turnover increased, the percentage of patients that were satisfied with their care decreased. Additionally, the ''churn'' (changes in staffing numbers and mix) created by excessive turnover and the resulting number of newly hired staff, part-time staff, and temporary (agency) staff was also identified as a detriment to organizations and patients
- In a specific case of nursing home care and effect on infection and

hospitalization for infection, RN turnover was significantly related to both outcomes; with each proportionate loss of an RN the risk of infection increased almost 30% and the risk of hospitalization increases more than 80%.

- Downstream effects of 'churn' included adverse outcomes for patients, lack of continuity of care, additional time required to manage employees, and loss in staff productivity.
- Skill mix changes in proportions of full-time, agency and temporary staff presented challenges to scheduling, performance management, and providing clinical supervision.
- Turnover may contribute to symptoms being overlooked and prolonged length of patient stay, thereby indicating inadequate management of care.

Regarding access to mental health services, we found 3 studies, which specifically addressed this issue in a Canadian context:
Boksa et al (2015): Identified a dearth of trained mental health workers of indigenous origin and a high turnover of non-indigenous health workers leading to a lack of continuity of services and a lack of connection to specialized services for persons with severe mental illness or excessively long wait lists
Lessard et al (2008) found that in Nunavik, personnel turnover is high even though mental health is an area requiring great continuity of healthcare services.
Minore et al (2005) 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.'

Regarding medial errors:

- In a pan-Canadian study of the impact and determinants of nurse turnover, higher turnover rate and higher level of role ambiguity on a nursing unit were associated with increase in the likelihood of experiencing at least one medial error (O'Brien-Pallas et al. 2010). Medical errors were more likely with increased turnover rate.
- In other research, the rate of medication errors, falling incidents, and adverse event incidents showed improvement in a year of lower nurse turnover when compared to a year of high nurse turnover (Hayes et al, 2012).

Continuity of Care and Communication

Cabana & Jee (2004) reviewed 18 studies focusing on the effect of sustained continuity of care (SCOC) on the quality of patient care and found that SCOC is associated with patient satisfaction, decreased hospitalizations and emergency visits, and improved receipt of preventive services and this association was consistently documented for patients with chronic conditions (e.g. asthma, diabetes).

A study examining the consequences of nursing turnover on the continuity of care provided to residents of three Ojibway communities in northern Ontario focused 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 was shown to detrimentally affect communications, medications management, and the range of services offered; it also resulted in compromised follow-up, client disengagement, illness exacerbation, and an added burden of care for family and community members (Minore et al 2005).

Lack of knowledge about procedures can also undermine patient care. Minore et al (2005) found temporary nurses will administer medications, but may not order refills because they are unfamiliar with the system for pharmacy orders. One nurse in the study 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 were not in the communities long enough to establish rapport with their clients.

Building a trusting relationships

Vukic & Keddy's study (2002) explored the significance of building trust in a community nurse-patient relationship. The authors indicated that this important dimension of nursing may be undermined as skill acquisition, employment, and administrative requirements take precedence. For nurses working in any community, the need to work on a relationship with the community that is grounded on mutual trust takes time, and requires nurses to provide care that is community-centered.

*"It was around the third year that you could see this gradual opening up. They were starting to trust that I was their nurse; it really felt like they have adopted me. I was their Najanguaq… Inuktitut for nursing sister… They called any nurse that came in Najanguaq – but by the time three years was finished, I was their Najanquaq. There's some things that they share with you up front, but it's almost like an onion, there's different levels that they let you get to and once you've been with them through some of their births and their deaths and you've been there through good and bad times, and you're still there when they turn around, they start trusting you more and more. And I found through the years that as they start to trust you more, you're able to get them to do things that are good for them, that they weren't willing to." (*Tartlier et al., 2003: pp.182, study based on interviews with nine experienced outpost nurses)

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