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EDITORIAL

Impact Factors and the Law of Unintended Consequences

At the last annual meeting of the International Academy of Nursing Editors, held in July, Dr. Margaret Freda reported on progress made in getting the Institute for Scientific Information (ISI) to include more nursing journals in its rankings. At the moment, CINAHL lists 547 nursing journals, only 39 of which are ranked by the ISI, and these generally have low impact factors.

Does this mean that nursing research journals have relatively little impact, influence, or importance? Does it mean that journals not selected by the ISI are of such poor quality they do not even merit ranking? What does all of this say about the "impact" of nursing research on other researchers and on clinicians, educators, administrators, policy-makers, and decision-makers? Why are the editors of nursing journals clamouring to have impact factor assigned to their publications, given that they will be at a distinct disadvantage and will be relegated to the lowest rungs? And why is there reason for concern here?

One cannot address these questions without some understanding of the history of impact factor, what these scores really mean, and how the scores are affecting scholarship in nursing.

The Impact Factor and Its Impact

In the 1950s Eugene Garfield was looking for an objective way to measure the contributions of scholarly papers in the natural, medical, and biomedical sciences. In his search, he came across Bradford's Law. Samuel C. Bradford had observed, in 1934, that a few core publications in science were contributing a disproportionate share of the articles that had the greatest impact on the field (http://en.wikipeda.org/wiki/bradford's_law). Once these core journals have been identified, extending library searches to other publications in order to track down changes in our understanding of a phenomenon yields exponentially diminishing returns (Bradford's Law). Inspired by Bradford's Law and the need for a tool to assist librarians in the selection of journals, Garfield set out to identify the "core" biomedical and medical journals — those with the greatest impact. He co-founded the ISI, now a Thomson company, to carry out this work.

The ISI calculates an impact factor for each journal that it has chosen to rank. The calculation is based on the number of times that articles appearing in the journal are cited by the other journals in the ISI's databases over a 2-year period, in relation to the indexed journal's total number of eligible articles. An impact factor of 1 implies that the journal's articles tend to be cited once (among our colleagues in the hard[er] sciences, it is considered less than ideal to publish in journals with an impact factor below 5). With the ISI formula, a journal's impact factor can be influenced by one or two articles being very extensively cited, even if the majority are never cited at all. The editors of *Nature* report that 89% of that prestigious journal's impact factor is attributable to 25% of its articles ("Not-so-deep impact," 2005). Impact factor can be very sensitive to the types of articles a journal publishes. Not surprisingly, articles that review the literature on a particular topic are among the heavily cited ones, because authors use them extensively to establish the foundations of their research projects. A high or low number of reviews in a journal can easily skew the journal's impact factor.

Even the very idea of counting citations can be critiqued. It is noteworthy that impact factor calculations do not screen out inaccurate or inappropriate citations, although it is well known that cited articles do not necessarily address or support the point that an author is making. Nor does impact factor distinguish between favourable and unfavourable citations (in an area of active research, it is possible for one's work to be repeatedly cited as flawed in one or more respects) (Manske, 2004).

It must also be borne in mind that citation patterns vary by discipline and specialties within disciplines. Journals in "fast moving" fields like genetics and cancer research, where the most newsworthy findings with broad appeal are reported in a handful of large-circulation publications, tend to have high impact factors. This is because, in many fields, articles — with the exception of those that become classics for one reason or another — are cited most heavily within the first 2 years of publication, after which the odds of their ever being referenced fall steadily. Indeed, the formulae for computing impact factors militate against even the most established and widely read nursing journals, which tend to have relatively small subscription bases and among which it can take years for an idea or theme to be picked up by other authors. So even if nursing journals were to pool their resources in order to develop their own impact factors specific to the discipline (thereby jumping the ISI's long queue — thousands of journals are waiting to be evaluated), the basic method of calculating impact factor would always result in low scores for most if not all of the journals specific to our field. But why is this important?

The Fallout

Publish or perish — the imperative for researchers, particularly those in academic settings, to disseminate their work in print as often as possible — has become a cliché. The stakes have been raised. All but the most naïve readers of academic CVs know that some journals are much less discriminating than others in what they choose to publish. So an increasing number of universities care about not only the number of publications a scholar has to his or her credit, but also the prestige or selectivity of the journals in which the scholar's work appears. It is difficult to obtain an "objective" (often mistakenly equated with "fair") measure of prestige as interpreted by reviewers who may not be familiar with the pecking order of journals within various fields (or within specialties and subspecialties). Not surprisingly, skilful marketing has resulted in the widespread adoption, both formal and informal, of the ISI's impact factors in the criteria for merit raises, as well as for tenure and promotion decisions. Impact factors are also used by research funding agencies to weigh the scholarly productivity of grant applicants.

However, the impact factor was never intended as a measure of the quality of an individual researcher's work. It is widely assumed that if a scholar publishes in high-impact journals, then his or her work must be of superior quality. Remember, the impact factor concerns the impact of the journal, *not* an individual article. It is also argued that high-impact journals publish only high-quality articles. Porta, Copete, Fernandez, Alguacil, and Murillo (2003) report that 85% of citations of journal articles make up only about 15% of the articles that actually appear. Even if one accepts frequency of citation as a valid indicator of a scholar's contribution, 85% of the articles in "high impact" journals are, to some degree, part of a spillover, or halo, effect.

Practically speaking, career survival in some universities means publishing in the highest-impact journals possible. Increasingly, authors are telling editors that, regardless of where the logical scholarly "home" of their work might be, they cannot afford to submit their work to journals that lack high-impact factor. Thus nursing journals are fighting an uphill battle to publish at the cutting edge of the field. The end result is that if we continue to accept and integrate the impact factor, we will be encouraging our finest researchers to shape their studies and their findings for publication outside our field, such as in medical journals. The impact factor ratings of the most widely read general medical journals, such as the *Journal of the American Medical Association* and the *New England Journal of Medicine,* are 30 and higher. Many smaller journals of high scientific quality are important and influential among relatively small audiences yet will never achieve high impact factors. These journals may not survive in the long run unless someone speaks up, since libraries with tight periodical budgets may feel increasing pressure to drop them.

If we fail to think seriously about why we want to institutionalize the impact factor in our field, given the limited number of "slots" in high-impact journals, nursing scholarship may sink deeper and deeper into Darwinian selection. "Unfit" subject matter, "unfit" journals, and "unfit" scholars will fall away (not necessarily in that order). We may unwittingly censor ideas and approaches, because the priorities and emphases of most biomedical journals may be very different from those of nursing journals. In many settings, the "ideal" nurse academic is becoming one who achieves a favourable profile on a host of indices set by those outside of nursing. Whether we like it or not, this individual is quickly becoming one who does not publish in the nursing literature. If we continue to tell nurse scholars that publication in nursing is next to pointless (as it will most often be in a journal with a small impact factor or even no impact factor at all), many may withdraw from publishing and academic life altogether. This would impoverish our discipline immensely, and if it comes to pass we will have only ourselves — not the ISI or the impact factor — to blame.

Where to Next?

It is generally recognized that we do need criteria for assessing the importance of researchers' work. We must ask whether the impact factors of the journals in which nursing scholars publish are necessarily the best measure of the quality of scholarly output. Fortunately, the use of the impact factor, even in medicine, is being questioned. Many believe that the ISI and impact factors are exerting undue influence on the direction of the scientific enterprise (Monastersky, 2005). Many excellent articles have identified the distortions and misuses of impact factors (e.g., Cameron, 2005). Even Eugene Garfield has lamented the misuse of his system (Garfield, 1996). Yet misunderstandings about the meaning of impact factors persist even at the highest reaches of academic nursing and medicine.

Much responsibility lies with academic leaders who use impact factor data in their decisions and who are called upon to explain the nature of scholarship in our field to non-nurses. Impact factors for nursing journals must be interpreted within and outside the field, in proper context and in a way that does not denigrate the scholarship of the many nurses whose work has met with limited success in "crossing over" into high-impact biomedical journals.

We hasten to say that the impact factors of nursing journals make some sobering comments about the rarity of cumulative knowledge building in nursing. But solutions to this deeper problem will not be found by adopting arbitrary yardsticks that do not reflect the realities of nursing research and scholarship.

Several alternatives or adjuncts to the impact factor have been suggested. One of these is the Faculty of 1000 (http://facultyof1000.com) model that has been developed in biology and medicine. It shifts the focus from the journal to the individual paper, with articles that have had the most impact on a field being judged by the foremost scholars in that field. These and other approaches, such as examining the impact that articles have had on practice by determining whether they have been included in practice guidelines, certainly have their strengths and limitations. Fair assessment of any scholar's work hinges on one's actually reading the work and seeking out information that might situate it with respect to the work of his or her peers and with respect to its effects on research, practice, and policy. A combination of approaches will be much fairer and will lead to better decisions by those assessing a scientist's body of work than a reliance on an index like the impact factor, which often fails to tell much of the "real story."

Surely impact on science encompasses more than just the venues in the periodical literature where articles land, and surely the contribution of nursing scholarship extends beyond a work's influence on other publications — to include direct and indirect influences on the quality of health care. Nursing has an opportunity to lead by developing and testing new ways of assessing impact and influence, as an alternative to blindly following disciplines that, for a variety of reasons, have unquestioningly adopted the impact factor to the exclusion of other measures and considerations. Let us hope that researchers and leaders in academic nursing take up this challenge — and quickly.

Laurie N. Gottlieb, Editor-in-Chief
Sean P. Clarke, Associate Editor

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GUEST EDITORIAL

Aboriginal Health and Nursing Research: Postcolonial Theoretical Perspectives

David Gregory

As guest editor, I faced numerous challenges related to the production of this issue. The original vision, refreshing in its intent, was an international research "dialogue" on indigenous health, to be co-edited by a colleague from Australia. Regrettably, the envisioned issue did not come about. Laurie Gottlieb, however, remained steadfast in her commitment to dedicating an issue of the Journal to Aboriginal health and nursing research in Canada. With the competent and tireless support of Joanna Toti in her role as Managing Editor, I have had the privilege of editing a remarkable collection of research and research-related papers. This is not to suggest that the resulting issue on Aboriginal health is in any way less than what could have been. In fact, the opposite is true. Collectively, the papers are poised to reposition the nursing profession and its discipline. Specifically, the papers offer insight into postcolonial theoretical perspectives and their potential impact on nursing's research relationship with Aboriginal people.

Browne, Syme, and Varcoe offer a cogent account of the relevance and limitations of postcolonial theoretical perspectives when applied to research in the area of Aboriginal health. The authors take the position that analyses of issues pertinent to Aboriginal health are incomplete unless they consider the social conditions that have resulted from colonialism. They then observe that postcolonial perspectives give direction for conducting research with Aboriginal communities. Postcolonial perspectives challenge researchers to form authentic and mutually meaningful partnerships with Aboriginal people and their communities. All voices and experiences become thusly legitimated in the research enterprise. This is, of course, not without difficulties, tensions, and contradictions. Bona fide research partnerships and inclusive research processes are, however, integral to nursing research in the area of Aboriginal health. Browne et al. caution researchers about the colonizing potential of research itself. As they point out, research has the power to misrepresent and appropriate knowledge (Reimer Kirkham & Anderson, 2002), as well as to exploit and ingrain stereotypes. Furthermore, and according to the tenets of postcolonial scholarship, investigators have an obligation to work with their Aboriginal research partners to bring research findings "to life." Research can become a currency for positive change with respect to policy, health services, and inequities. Finally, Browne et al. describe how continuities from the past shape the present context of health and health care.

Picking up on this line of thinking, Smith, Varcoe, and Edwards present an important case study on the intergenerational impact of residential schools. This is a powerful and disturbing account arising from a critical postcolonial stance. In keeping with this stance, and with that of Browne et al., these authors maintained the integrity of participants' voices in context, and they established research agreements with their Aboriginal partner organizations around ownership, control, access, and possession of the research process and products (see Schnarch, 2004, regarding ownership, control, access, and possession [OCAP] as self-determination applied to research with Aboriginal communities). The research poignantly reveals residential schools as an historical continuity — that is, the schools created a veritable wave of suffering that continues to wash over generation after successive generation of Aboriginal people. All is not lost, however, as research participants spoke of "turning it around" (the impact of residential schools) with a sense of hope for the future, including the possibility of healing.

In "Discourses Influencing Nurses' Perceptions of First Nations Patients," Browne brings postcolonial theoretical perspectives to a critical and practical focus: the point of contact between nurses and First Nations patients. This ethnographic study was concerned with understanding nurses' perspectives, knowledge, and assumptions about the First Nations patients they encountered. Although there are several noteworthy findings arising from the study, Browne's observations about culture are particularly insightful. Nurses in the study viewed and understood culture as an object or "thing" that could be identified or located during routine health care. As Browne notes, "narrow conceptualizations of culture can, paradoxically, reinforce the stereotyping of people who belong to particular ethnocultural groups — in this case Aboriginal patients." Browne is also most careful to suggest that the nurses in the study were not simply espousing individually based values and assumptions, but that these are discourses and assumptions embedded in Canadian society. The implications for nursing are clear. We need to reflect critically on our discourses concerning culture. How is culture conceptualized and manifested in nursing education, practice, and research? What do we teach our nursing students about culture? How is the concept of culture enacted in nursing practice? Postcolonial and other critical theoretical perspectives can be useful to us in dealing with such reflective questions and inquiries.

The Happenings piece addresses the Aboriginal Health Human Resources Initiative (AHHRI). McBride and Gregory provide an overview of this initiative and their role in assisting Health Canada's First Nations and Inuit Health Branch to situate it for success. The Canadian Association of Schools of Nursing (CASN) and individual schools recognize the need for more Aboriginal students. Indeed, many schools have taken action in this regard. AHHRI will provide nursing schools with occasions to build on successes and, for some, to create nursing education opportunities for Aboriginal people.

The question *Who conducts Aboriginal health research in Canada?* is important on several counts. Young (2003) reviewed journal articles published during the period 1992–2001 to determine whether research has adequately examined the health needs of the Canada's Aboriginal population. He concludes:

> The proportion of papers does not reflect the demographic composition of aboriginal people in Canada, with severe under-representation of Métis, urban aboriginal people, and First Nations people not living on reserves and over-representation of the Inuit. Children and women received less attention proportional to their share of the population. A few prolific research groups have generated a disproportionate amount of publications from a few communities and regions. 174 papers dealt with health determinants (eg., genetics, diet, and contaminants), 173 with health status, and 75 with health care. (p. 419)

What might the publication profile look like, in terms of populations and research focus, if cohorts of Aboriginal nurse researchers engaged Aboriginal people, their communities, and the Aboriginal polity in research partnerships?

One national initiative, the flagship of the Institute of Aboriginal Peoples' Health (IAPH) of the Canadian Institutes of Health Research (CIHR), is the Aboriginal Capacity and Developmental Research Environments (ACADRE). These centres are charged with developing a network of supportive research environments across Canada. "Although there are demonstrated pockets of excellence in Aboriginal health research in Canada," notes the CIHR, "this field requires the systematic development of both human resources and supportive research environments in order to ensure continued growth and broad regional development" (http://www.cihr-irsc.gc.ca/e/27071.html). Four key priorities shape the work of ACADRE: developing and nurturing health research partnerships; influencing policy development on ethical standards, peer review, and knowledge translation systems that respect Aboriginal values and cultures; building Aboriginal health research capacity; and funding initiatives that address urgent and emergent health concerns affecting Aboriginal people (Reading, 2003). Although there are Aboriginal graduate nursing students receiving training and support within some of the ACADRE centres (see, for example, the Atlantic Aboriginal Health Research Program at http://aahrp.socialwork.dal.ca), they are few and far between.

AHHRI is catalytic. Its potential to address historical and sociopolitical inequities regarding the presence of Aboriginal nursing students, however, rests in large measure with nursing schools. The need for Aboriginal nurses has been established. Schools have responded to the clarion call and progress has been made over the past 5 years — witness, for example, the partnership between Nunavut Arctic College in Iqaluit and the School of Nursing at Dalhousie University in Halifax.

Beyond basic nursing education, *Against the Odds* (Health Canada, 2002) identifies a dearth of Aboriginal students in master's and doctoral programs. Clearly the profession needs Aboriginal nurses educated at these advanced levels. To state the obvious, Aboriginal nurse researchers and nurse scientists prepared at the doctoral level are few in Canada. And yet the need for research in the area of Aboriginal health is truly great. This is a serious capacity limitation if Aboriginal health research is to be systematically addressed by Canadian nursing. The "nursing research lens" and the Aboriginal researchers who apply it are integral to improving the health and well-being of Aboriginal people and communities. Moreover, nursing can position its Aboriginal scholars to shape the research agenda in Canada. For example, envision the impact of having Canada Research Chairs filled by Aboriginal nurse scholars. Envision Aboriginal nurse scientists providing leadership to the ACADRE centres or to the IAPH. None of this can happen unless nursing schools make a concerted effort to foster the education of Aboriginal nurses at the master's and doctoral levels. In addition to individual and local efforts, there is a role for the CASN, the Canadian Nurses Association, the Office of Nursing Policy (Health Canada), the Aboriginal Nurses Association of Canada, Aboriginal organizations, and governments.

While modest, Young's study has direct implications for nursing. Nursing in Canada should be concerned with expanding its research reach beyond a few groups of investigators. The reach ought to extend to urban contexts, to the Métis people, to prevention and health promotion research, and to other health-related matters of great concern for Aboriginal people. Again, it is a matter of concerted effort to establish a cadre of researchers across Canada. Perhaps it is time to also create a nursing research network that fosters communication among Aboriginal and non-Aboriginal nurse researchers in the area of Aboriginal health.

When *CJNR* issues a call for papers on Aboriginal health 5 years from now, nursing will be repositioned in relation to Aboriginal health and nursing research. The guest editor, an Aboriginal nurse scholar, will highlight a constellation of research papers and inform us of the strides being made by Aboriginal researchers in relation to Aboriginal health.

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Résumé

Pertinence des approches post-colonialistes pour la recherche en santé autochtone

Annette J. Browne, Victoria L. Smye et Colleen Varcoe

Dans cet article, les auteures analysent la pertinence des approches post-colonialistes pour la recherche en sciences infirmières dans le domaine de la santé autochtone. Elles résument d'abord les principaux fondements de ces théories, leurs points communs et leurs divergences, puis abordent la pensée autochtone post-colonialiste dans son ensemble et d'autres courants théoriques. Elles s'inspirent également des réflexions de certains penseurs autochtones, proposant une analyse critique des discours post-colonialistes à la lumière des préoccupations des peuples autochtones, pour en exposer les limites éventuelles. Ensuite, Browne, Smye et Varcoe examinent ce qu'implique mener des recherches auprès des communautés autochtones, dans un cadre éclairé par une perspective post-colonialiste. D'après les auteures, cette approche comporte quatre implications interdépendantes : a) la question des partenariats de recherche et de la « prise de parole »; b) un engagement en faveur de recherches axées sur la praxis; c) un examen des facteurs historiques ayant contribué à façonner le cadre actuel en matière de santé et de soins; et d) l'aspect éventuellement colonisateur de la recherche. Les auteures soulignent l'utilité du concept de « sécurité culturelle » en tant qu'instrument pouvant servir à intégrer une approche post-colonialiste dans la sphère des soins infirmiers. Pour en illustrer l'application, elles donnent comme exemple des travaux récents effectués en collaboration avec certaines communautés autochtones. Même si l'intégration des analyses post-colonialistes est un fait relativement nouveau en sciences infirmières, celles-ci fournissent un cadre d'analyse solide et des plus utiles à l'examen des facteurs issus du colonialisme et du néocolonialisme qui ont une incidence sur le cadre de prestation de soins de santé.

Mots clés : théories post-colonialistes, analyse critique, santé autochtone, penseurs autochtones, recherche en sciences infirmières, sécurité culturelle, peuples autochtones

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The Relevance of Postcolonial Theoretical Perspectives to Research in Aboriginal Health

Annette J. Browne, Victoria L. Smye, and Colleen Varcoe

The authors critically examine the relevance of postcolonial theoretical perspectives to nursing research in the area of Aboriginal health. They discuss key theoretical underpinnings of postcolonial theory, citing differences and commonalities in postcolonial theory, postcolonial indigenous thinking, and other forms of critical theory. Drawing on insights from Aboriginal scholars, they critique the relevance of postcolonial discourses to issues of concern to Aboriginal peoples, and the potential limitations of those discourses. They then consider the implications of conducting research that is informed by postcolonial perspectives. They argue that postcolonial perspectives provide direction for research with Aboriginal communities in 4 interrelated ways. These are focused on (a) issues of partnership and "voice" in the research process, (b) a commitment to engaging in praxis-oriented inquiry, (c) understanding how continuities from the past shape the present context of health and health care, and (d) the colonizing potential of research. The authors draw attention to the concept of cultural safety as an instrument for incorporating postcolonial perspectives into the realm of nursing. To illustrate applications of postcolonial theory, they give examples from recent research conducted in partnership with Aboriginal communities. Although postcolonial theories are relatively new in nursing discourses, they provide a powerful analytical framework for considering the legacy of the colonial past and the neocolonial present as the context in which health care is delivered.

Keywords: postcolonial theories, critical inquiry, Aboriginal health, indigenous knowledge, racialization, inequities, nursing research, cultural safety, indigenous people, First Nations

Introduction

Despite recent improvements in health status and ongoing efforts to provide culturally sensitive health care, high proportions of Aboriginal[1]

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[1] Consistent with the terminology used by the Royal Commission on Aboriginal Peoples (1996), in this paper the term "Aboriginal peoples" refers generally to the indigenous inhabitants of Canada, including First Nations, Métis, and Inuit peoples, without regard to their separate origins and identities. The Commission stresses that the term Aboriginal peoples "refers to organic political and cultural entities that stem historically from the original peoples of North America, rather than collections of individuals united by so-called 'racial' characteristics" (p. xii). Specifically, the term First Nation replaces Indian and

peoples in Canada continue to experience health-status disparities and barriers to accessing health care (Canadian Institute for Health Information, 2004; Dion Stout, Kipling, & Stout, 2001). Persistent inequities in health and social status are indicators of longstanding, historically mediated disadvantages[2] and economic and political conditions that affect many Aboriginal peoples. As documented by the Royal Commission on Aboriginal Peoples (1996), strategies to redress these inequities "have not had a greater effect primarily because they do not address the underlying imbalance in relations between Aboriginal people and the broader society.... This history constitutes the backdrop against which future plans must be laid" (p. 304).

In this paper, we consider how postcolonial theories can provide direction for research that examines and addresses these inequities and imbalances. Assuming a pragmatic stance towards theory (Doane & Varcoe, 2005), we examine the contributions that postcolonial perspectives can provide to nursing research that aims to redress structural inequities and related health disparities experienced by Aboriginal people. Drawing on the notion of pragmatism, we consider this goal as both a means and an end — that is, we view the redressing of inequities as important in itself, not only as a means of improving health status.

Recently, postcolonial theories have been introduced into the realm of nursing research to refocus attention on contemporary constructions of "race," ethnicity, and culture and how they continue to create patterns of inclusion and exclusion within health-care settings (Anderson, 2000, 2002; Anderson et al., 2003; Reimer Kirkham & Anderson, 2002). These theories have shed light on the unequal relations of power that are the legacy of the colonial past and the neocolonial[3] present. Given the extent

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the term Inuit replaces Eskimo. The terms Indian and Eskimo, however, continue to be used in federal legislation and policy (e.g., the *Indian Act*) and in government reports and statistical data. In many reports the terms "Status" or "Registered Indian" refer to people who have been registered by the Department of Indian Affairs Canada as members of a First Nation under the terms of the *Indian Act.*

[2] Monture Angus (1995), a Mohawk lawyer and scholar, problematizes the terms "disadvantaged" and "marginalized" in relation to Aboriginal peoples, arguing that labels can perpetuate negative images, characterize people as victims of society or as lacking agency, and render invisible the many strengths inherent in Aboriginal communities. At the same time, terminology is needed to identify those conditions in society that impinge on life opportunities and impede access to resources. In light of these concerns, we use the terms "disadvantaged" or "marginalized" to refer to the material constraints under which many Aboriginal families live, and to the structural conditions that marginalize people from educational, economic, and political opportunities that might enhance health, social status, and community well-being.

[3] Neocolonial means, literally, "new colonialism" (Ashcroft et al., 1998, p. 163). The term is widely used to refer to any and all forms of control of prior colonies or populations

to which the health and health care of Aboriginal peoples have been shaped by social relations rooted in Canada's colonial history, these perspectives are particularly applicable in the area of Aboriginal health. Although postcolonial theories are still relatively new in nursing discourses, we argue that they provide a powerful analytical framework and vocabulary for understanding how health, healing, and human suffering are woven into the fabric of the socio-historical-political context. The purpose of this paper is to critically examine the relevance of postcolonial theoretical perspectives to nursing research in the area of Aboriginal health.

We begin by discussing the theoretical underpinnings of postcolonial theory that are most relevant to health, drawing attention to differences and commonalities in postcolonial theory, postcolonial indigenous thinking, and other forms of critical theory. Drawing on insights from Aboriginal scholars, we also critique the relevance of postcolonial discourses to issues of concern to Aboriginal peoples, and the potential limitations of those discourses. We then consider the implications of conducting research that is informed by postcolonial perspectives. In particular, we argue that postcolonial theories provide direction for research with communities in four interrelated ways; these are focused on (a) issues of partnership and "voice" in the research process, (b) a commitment to redressing inequities through praxis-oriented inquiry, (c) understanding how continuities from the past shape the present context of health and health care, and (d) the colonizing potential of research to perpetuate unequal relations of power and control. To illustrate applications of postcolonial theory, we draw on examples from the authors' research with Aboriginal communities — from these experiences, we discuss our evolving understanding of the implications of postcolonial theory for nursing research in the area of Aboriginal health.

Theoretical Underpinnings of Postcolonial Scholarship

Postcolonial theories are perhaps best conceptualized as a family of theories sharing a social, political, and moral concern about the history and legacy of colonialism — how it continues to shape people's lives, well-being, and life opportunities (Young, 2001). Although the discourses that give rise to the body of work known as postcolonial theory have evolved from diverse disciplinary perspectives (for example, cultural studies, political science, literary criticism, sociology), they converge on

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such as indigenous peoples who continue to live under conditions of internal colonialism. In postcolonial discourses, it is generally acknowledged that neocolonialism is more insidious and more difficult to detect and resist than older forms of overt colonialism.

several key points: the need to revisit, remember, and "interrogate" the colonial past and its aftermath in today's context; the need to critically analyze the experiences of colonialism and their current manifestations; the need to deliberately decentre dominant culture so that the perspectives of those who have been marginalized become starting points for knowledge construction; and the need to expand our understanding of how conceptualizations of race, racialization, and culture are constructed within particular historical and current neocolonial contexts (Gandhi, 1998; McConaghy, 2000; Reimer Kirkham & Anderson, 2002).

The notion of "post" in postcolonial implies not that we have moved past or beyond inequitable social and power relations but that emergent, new configurations of inequities are exerting their distinctive effects (Hall, 1996). Smith (1999) explains: "[To name] the world as 'post-colonial' is, from indigenous perspectives, to name colonialism as finished business.... There is rather compelling evidence that in fact this has not occurred...the institutions and legacy of colonialism have remained" (p. 98). For these reasons we draw on McConaghy's (1998) conceptualization of today's colonialism as "a place of multiple identities, interconnected histories, shifting and diverse material conditions" and a place "in which new racisms and oppressions are being formed" (p. 121). For example, in the context of postcolonial (and some would say internal colonial[4] or neocolonial) Canada, the regulation of the lives of Aboriginal peoples through social policies embedded in the *Indian Act,*[5] the restrictions placed on Aboriginal self-government, land claims, and entitlements, and the restrictions placed on economic development in

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[4] Internal colonialism refers to "Fourth World" situations in which a minority indigenous population is encapsulated within a nation-state wherein powers and privileges are held by a colonizing majority that consciously and unconsciously subordinates the original inhabitants of the land (O'Neil, 1986, 1989).

[5] The *Indian Act,* consolidated in 1876, was founded on the paternalistic guise of assisting "Indians" as wards of the state. The underlying intention, however, was to civilize and eliminate Indians (Fiske, 1995) and to govern Indians "until there is not a single Indian in Canada that has not been absorbed into the body politic, and there is no Indian question and no Indian Department" (cited in Manitoba Public Inquiry, 1991, p. 73). The drive to achieve assimilation was pursued on many levels. For example, classifications of Aboriginal peoples were legislated for the purposes of governing aspects of everyday life, Aboriginal lands were appropriated, Aboriginal peoples were relegated to reserve lands, cultural spiritual practices were outlawed, and indoctrination into the dominant culture was attempted by force through church- or state-run residential schools (Armitage, 1995). Although it is not commonly known among the Canadian public, Status First Nations people were not permitted to vote in federal elections until 1960 despite the fact that Aboriginal peoples were among the most intensively governed members of Canadian society (Furniss, 1999). Amendments to the *Indian Act* have removed many of the overtly racist policies; however, the Act continues to serve as the overarching governing policy for Status or Registered First Nations people in Canada.

Aboriginal communities are vestiges of the colonial past. These in turn shape life opportunities, economic conditions, and the overall health status of individuals, families, and communities.

Postcolonial theorizing has evolved as a body of scholarship by writers such as Bhabha (1994), Gandhi (1998), Gilroy (2000), Hall (1996), McConaghy (2000), Said (1978), and Spivak (1994). Influenced by a wide spectrum of disciplines, its diverse applications preclude a single, unified conceptualization of postcolonial theory. Moreover, postcolonial theories are applied in various ways, depending on one's disciplinary orientation. There are also many concepts associated with postcolonial discourses, including the concepts of identity, representation, subjectivity, the subaltern, nationalism, and political economy. However, the concepts that tend to be most relevant to health and health care relate to issues of race, racialization,[6] culture, and Othering (Anderson, 2004a). These issues are often interrelated. For example, Othering refers to the projection of assumed cultural characteristics, "differences," or identities onto members of particular groups. Such projecting is not based on actual identities; rather, it is founded on stereotyped identities. In the recent past, for instance, residential schooling was enforced as a means of preserving the health of Aboriginal children who required protection from their "negligent and ignorant" mothers (Kelm, 1998, p. 62). Kelm documents the efforts of federally employed public health nurses, who argued that high infant mortality rates in the 1950s were caused by Aboriginal mothers who, like "errant children," failed to follow edicts for cleanliness (p. 62). These negative stereotypes tend to endure today. For example, it is not uncommon for non-Aboriginal Canadians to equate the culture of Aboriginal peoples with the culture of poverty, substance abuse, and dependency (Furniss, 1999). As Furniss argues, these images are deeply embedded in the consciousness of many Canadians. Since race is no longer an acceptable context in which to discuss popularized mis/representations of Aboriginal peoples, they are increasingly framed as "cultural" characteristics. In health-care contexts, this helps to explain, for instance, how gendered assumptions about Aboriginal mothers as negligent can unwittingly shape health professionals' views of particular groups of patients (Browne, 2003).

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[6] Racialization is a process of attributing social, economic, and cultural differences to race. Racialization may be conscious and deliberate (an act of racism that discriminates openly) or unconscious and unintended. It takes its power from everyday actions and attitudes and from institutionalized policies and practices that marginalize individuals and collectives on the basis of presumed biological, physical, or genetic differences (Fiske & Browne, 2004). For example, racializing processes, policies, and practices have been central to the colonial project of defining, categorizing, and managing Aboriginal peoples.

While postcolonial theories draw on the work and insights of a range of theoretical positions, such as poststructuralism and postmodernism, they do not align with them neatly (McConaghy, 2000). A distinguishing feature of postcolonial theory, one that helps to distinguish it from other families of critical theory — for example, critical social theory, feminist theory, or poststructuralism — is its focus on disrupting the history of "race-thinking" and the structural inequities that have been brought about by histories of colonization and by ongoing neocolonial practices (Anderson, 2004a, p. 239). As Anderson writes, this distinction makes postcolonial theory particularly relevant to nursing research concerned with redressing inequities based on racializing and colonizing practices:

> What makes this discourse especially pertinent to nursing science is that it focuses our attention on the processes of dehumanization and human suffering throughout history, and gives us a context for understanding health inequalities. *It brings to the forefront the issue of "race" and makes explicit how this socially constructed category has been used in the colonizing process, and the effect that this has had on peoples' lives and life opportunities.* (p. 240)

We are not suggesting that one critical perspective is more valuable than the other. Each focuses our attention differently on facets of the social world, and each must be considered for its adequacy in achieving our goals. While each can provide a useful framework for analysis, postcolonial theories foreground particular analytical dimensions congruent with the goal of redressing health inequities experienced by Aboriginal peoples. These analytical dimensions focus attention on the various forms of inequities organized along axes of race, culture, gender, and class; the damaging effects of culturalist discourses; the significance of people's individual and collective histories and people's socio-historical positioning in society; and the development of knowledge that can disrupt racializing policies and practices. Thus, the explanatory power of postcolonial theory can be found in the framework and vocabulary it provides for understanding the "burden of history" and how this shapes present-day experiences and new forms of inequities.

Engaging Critically With Postcolonial Discourses

While postcolonial discourses offer a powerful set of analytical tools, researchers must engage critically with postcolonial theories and scrutinize what some might consider an imposition of Eurocentric theory onto issues of importance to Aboriginal peoples. Here we draw on the works of Aboriginal and non-Aboriginal scholars who have articulated the distinctions between postcolonial theorizing and postcolonial indigenous knowledge and have considered the strengths and limitations of postcolonialism generally.

Distinguishing Postcolonial Theory from Postcolonial Indigenous Knowledge

Although the positions of Aboriginal scholars vary on postcolonial perspectives, those who work with communities to address issues of relevance to Aboriginal peoples share a concern over "the burden and contradictions of colonial history" (LaRocque, 1996, p. 14). From LaRocque's perspective as a Métis scholar, the value of situating inquiry within postcolonial discourses is in seeking to "understand what happens to a country that has existed under the forces of colonial history over such an extended period of time.... We must become aware of the functions of power and racism, its effects on the Native populations, and the significance of resistance" (p. 11).

Growing numbers of Aboriginal scholars are contributing to postcolonial discourses as a way of reclaiming and repositioning indigenous voices,[7] knowledge, and analyses (Battiste, 2000). There is, however, an important distinction to be made. The postcolonial theoretical perspectives we are discussing in this paper arise from Western epistemologies and discourses. Postcolonial indigenous knowledge, on the other hand, is grounded in indigenous epistemologies and is concerned with developing knowledge based on indigenous ways of knowing, indigenous worldviews, and indigenous research processes (Battiste). While indigenous knowledge can (and should) be used to inform postcolonial theories, indigenous epistemologies represent different intellectual endeavours. This is not to imply that these epistemologies cannot be drawn on together — they are often used and invoked in parallel. However, it is important that we distinguish between these positions if we are to understand their relationship and to understand how the dominance of Eurocentric discourses has historically precluded an examination and acceptance of indigenous knowledge. As Battiste, a Mi'kmaq scholar, emphasizes, "although they are related endeavours, postcolonial Indigenous thought also emerges from the inability of Eurocentric theory to deal with the complexities of colonialism and its assumptions" (p. xix).

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[7] LaRocque (1996) reminds us that the use of "voice" should not be considered synonymous with "making a personal statement," which is then dichotomized from more legitimate (academic) forms of discourse; rather, "Native scholars and writers are demonstrating that 'voice' can be, must be, used within academic studies not only as an expression of cultural integrity but also as an attempt to begin to balance the legacy of dehumanization and bias entrenched in Canadian studies about Native peoples" (p. 13).

For Battiste, postcolonial indigenous thought is required if we are to envision and shape a more just society using complex "transformative strategies" that "engage with and react to the multiple circumstances and shapes of oppression, exploitation, assimilation, colonization, racism, genderism, ageism, and the many other strategies of marginalization" (2000, p. xxi). Battiste's framing of postcolonial indigenous thought has resulted in a collection of works by indigenous scholars from Canada, the United States, and New Zealand who provide new frameworks for understanding the complexities of colonization and decolonization. Of vital importance is the emphasis Aboriginal scholars place on postcolonial discourses as tools for challenging their non-Aboriginal colleagues to "re-evaluate their colonial frameworks of interpretation, their conclusions and portrayals, not to mention their tendencies of excluding from their footnotes scholars who are Native" (LaRocque, 1996, p. 13). By remaining cognizant of the distinctions between postcolonial theory and postcolonial indigenous thinking, we can use each to inform the other while resisting both imposition and appropriation.

Critiques of Postcolonial Theories

Critiques of postcolonialism have centred on a number of issues, which are discussed in depth in several key texts (see, for example, Ashcroft, Griffiths, & Tiffin, 1998). One of the most pertinent issues to consider in relation to research in Aboriginal health is the potential for postcolonial theorizing to revert to a politics of binary opposition that implies clear-cut distinctions between the colonized and the colonizer (Hall, 1996; Narayan, 2000). Such binary distinctions tend to ignore the complexities and ambiguities of social locations and the shifting capacity for resistance and agency. In our research, we increasingly have come to understand that social categories are not clearly defined: each of us may experience varying degrees of penalty and privilege depending on context and situation (Collins, 2000). In developing analyses that explicate the complexity of issues shaping human experiences, we have been influenced by McConaghy (2000), who writes:

> It is no longer always useful to present dichotomies of the coloniser and the colonised to illustrate the differential power relations and life experiences of those in colonial contexts… An important task is to better understand the specific nature of specific oppressions at specific sites: to understand current forms of oppression. (p. 8)

This is not to imply that social categories cannot be invoked to explain dimensions of shared experiences or socio-historical locations. However, we must guard against undermining human agency by portraying people as necessarily marginalized or disadvantaged, or as victims by virtue of their category, for we risk reinforcing the very power relations we seek to dismantle (Anderson, 2004b).

Critiques of postcolonial discourses also focus on the presumption of an essentialized, shared experience of colonization among members of a group (Gandhi, 1998). This form of essentialism reduces the experiences of diverse peoples to a presumed, reified commonality, and in doing so overlooks important differences and unique experiences, and too often overlooks the agency of those assigned to the "oppressed" side of the binary oppressed/oppressor. Postcolonialism has also been critiqued for its preoccupation with questions of race, ethnicity, and culture, sometimes to the exclusion of forms of oppression based on gender or class. This carries the risk of privileging one set of influential social relations over another (Reimer Kirkham & Anderson, 2002). For example, postcolonial scholarship does not necessarily include a gendered analysis or perspectives from feminist scholarship (Gandhi). To address this limitation, some scholars have incorporated feminist theories into postcolonial discourses to develop analyses of people's experiences as shaped by intersecting factors, including gender, historical positioning, class, and racializing processes (see, for example, Anderson, 2000, 2002, 2004a; McConaghy, 2000; Narayan, 2000; Narayan & Harding, 2000). Postcolonial-feminist scholarship, therefore, has been used to extend the analytical boundaries of feminist and postcolonial theories. Remaining cognizant of these areas of critique, we continue to argue that postcolonial theories can provide important critical perspectives for research teams that seek to address health disparities and inequities in the area of Aboriginal health.

Implications for Nursing Research in the Area of Aboriginal Health

Postcolonial perspectives provide direction for researchers, nurses, and others in the health disciplines who seek to redress the underlying imbalances between Aboriginal peoples and the broader society — perspectives that we argue are imperative if inequities between Aboriginal people and the broader society (and thus health) are to be reduced. Moreover, we take the position that analyses of issues pertinent to Aboriginal health are incomplete if they fail to consider the social conditions that have resulted from our colonial heritage and their effect on the context in which health is experienced and health care is delivered.

The research teams on which we have worked, comprising Aboriginal and non-Aboriginal members, have turned to postcolonial theories because they focus attention on these issues. Our experiences tell us that postcolonial theories provide direction for research with Aboriginal communities in several interrelated ways. First, they draw critical attention to issues of partnership and voice in the research process. Second, they involve a commitment to applying knowledge for social change. Third, they require research teams to critically consider continuities between the past and the present — that is, how socio-historical conditions continue to shape health, healing, and access to health care. Fourth, by engaging critically with postcolonial discourses, we are directed to critique the colonizing potential of research, and in the process take steps to mitigate potentially detrimental consequences. Finally, postcolonial theories draw attention to the concept of cultural safety and how it has been used to incorporate postcolonial perspectives into the everyday realm of nursing.

Attention to Issues of Partnership and Voice in Research and Knowledge Development

A central feature of postcolonial scholarship is the deliberate decentring of the dominant culture so that the "voices," perspectives, and experiences of people who typically have been marginalized become a starting point for inquiry (Reimer Kirkham & Anderson, 2002). In the context of research in Aboriginal health, this raises important questions about the potential for misrepresentation and appropriation of knowledge. McConaghy (1997) asks, for example, "can and should non-indigenous people speak about indigenous issues?" (p. 82). From McConaghy's perspective, the principles of participatory democracy as espoused by Iris Marion Young (1990) and others suggest that both indigenous and non-indigenous participants have a role to play in the process of decolonization. LaRocque (1993) echoes this view, arguing that Aboriginal and non-Aboriginal people must share the burden of social transformation. Speaking specifically in relation to the research agenda in Canada, Dion Stout et al. (2001) call for more partnership-based research and "indigenization" of the research process (p. 35). On the subject of Aboriginal women's health research, they note that indigenization involves ensuring that "research methodologies are clearly articulated and respectful of Aboriginal women's multiple burdens" (p. 31); that attention is focused on women whose needs and concerns have been under-represented in research; that Aboriginal women have control over research that affects them; and that partnerships and dialogues "between academic and community researchers are promoted to encourage a greater understanding and acceptance of community perspectives, realities and definitions about life and health" (p. 35). Building on this notion of indigenization, McConaghy (1997) asserts that those closest to the consequences of research should be the most involved in decision-making; in many cases, this principle would support a process of indigenous control.

It is critical that inquiries conducted within this paradigm remain cognizant of the potential for the research process to perpetuate unequal relations of power and representation. However, it should not be assumed that collaborative or partnership-based approaches are necessarily the answer. Espousing a rhetoric of collaborative research should not overshadow the importance of viewing participation as mere involvement and participation as control (McConaghy, 2000). Although the notion of "speaking with" implied in collaborative research reflects a concern for an inclusionary politics of representation, it can also imply "an us and a them" — an us who speaks with, and a them who is spoken with (McConaghy, 2000, p. 213). To address these concerns, McConaghy puts forward Jan Pettman's (1992) notion of "speaking from" to acknowledge the fact that we all speak *from* somewhere. "Speaking from" reminds us that it is imperative we consider our own socio-historical and professional locations, our motivations for seeking out collaborative research relationships, and the power relations that position us all (though not necessarily in obvious ways). To illustrate our points, we turn to an example. Recently, a team of Aboriginal and non-Aboriginal researchers worked together with Aboriginal and non-Aboriginal communities to examine the interacting risks of HIV/AIDS and violence for rural women (Varcoe, Dick, & Walther, 2004). As the study proceeded, it became increasingly apparent that each of the researchers was "speaking from" multiple and complex positions simultaneously. After some initial challenges, the team, instead of reverting to a litany of diverse social locations to legitimize one's perspective, continuously tried to examine how each was positioned in relation to the others and to the various communities, stakeholders, and participants in the study. This required the team members to consider their own particular historical and racialized locations and how personal experiences of privilege and racism are brought into our relations with others, our professional work, and our research. Thus, taking voice and partnership seriously often means working against prevailing power structures and relations. This is almost always challenging and "messy"; in the process, research teams will need to remain focused on their common goals and objectives.

Commitment to Applying Knowledge for Social Change

A central facet of postcolonial scholarship as an approach to inquiry in nursing research is the explicit commitment to praxis-oriented inquiry (Anderson, 2000, 2002; Reimer Kirkham & Anderson, 2002). Researchers and practitioners working within this paradigm have a social obligation to work with communities and organizations to disseminate knowledge to policy-makers, health authorities, leaders in health-care organizations, and community members — with the aim of shifting social attitudes, correcting past and current injustices, reducing health disparities, and mitigating inequities in access to health and health care. We reiterate that the responsibility lies with the researcher (whether Aboriginal or non-Aboriginal) to work in partnership with Aboriginal communities and organizations, to take direction from communities regarding issues of concern, to mitigate power differences in the research process, and to present research findings in ways that do not perpetuate colonizing images of Aboriginal peoples.

For example, in the study of the interacting risks of HIV and violence against women (Dick & Varcoe, 2004; Varcoe, Dick, & Walther, 2004), the researchers and community members overseeing the project were concerned that the study would overlook issues particular to Aboriginal women if it included all women but would play into racialized stereotypes if it included only Aboriginal women. To ensure the broadest possible base of support, the research team sought to demonstrate that while risks for all women were shaped by gender and socio-economic conditions, the risks for Aboriginal women were compounded by racialization, historical colonialism, and ongoing colonialist control of Aboriginal peoples. For example, in the wake of cuts to social welfare, all women in the community were at greater risk for poverty. However, many Aboriginal women were forced to return to reserves for economic reasons, often doing so at grave risk to their personal safety due to exposure to community members who had previously assaulted or abused them. Because of the approaches used in this study, which were informed explicitly by postcolonial theory, trust and involvement were fostered across a wide range of participants, support for the project was bolstered, and actions supportive of diverse groups of women were taken up across the communities.

In the study discussed above, both a postcolonial lens and a postcolonial indigenous perspective helped the research team to appreciate why "trust" might be very difficult to earn (particularly within Aboriginal communities), increased the complexity of the analysis of the research findings, and deepened the team's sense of caution regarding how to position the findings and recommendations so as not to perpetuate stereotyping and discrimination. Ultimately, this approach enhanced understanding of shared challenges and at the same time illustrated how differences between groups placed some people (for example, Aboriginal women) at a particular disadvantage. The entire community was engaged by the enhanced understanding, among service providers, politicians, and women themselves, of the multiple layers of risk to women produced by intersecting forms of oppression (gender, race, poverty, and rural geography). For instance, at the final day-long community meeting, the mayor of one of the largest towns in the region made a spontaneous speech in which he declared that the project had shown him how colonial policies continued to affect Aboriginal people, something he had not previously understood. This understanding in turn contributed to support by the mayor and other local politicians for proposed interventions such as a travelling women's health clinic. The shared commitment to social change required the team to take voice and representation seriously, and turned the spotlight on the ways in which colonialism continues to shape lives and human relations.

Addressing the Complexities of Past and Present Continuities

The need to grapple with the complexities and tensions inherent in postcolonial perspectives highlights the importance of recognizing and responding to continuities between the past and the present. "The interval we assert between ourselves and the past may be much less than we assume," writes Young (1995). "Culture and race developed together, imbricated within each other. We may be more bound up with its categories than we like to think" (p. 28). Postcolonial theory draws attention to the ways in which the past is present in every moment of every day, in every policy and practice and in the very language we use. For example, drawing on postcolonial theory as an interpretive lens through which to critically analyze empirical data and policy documents, Smye (2004) illustrates how mental health institutions and policies continue to support a longstanding ideology of assimilation, despite the impetus from Aboriginal peoples to move towards autonomous control and self-government. Smye points out that Aboriginal perspectives and concerns are largely excluded or overshadowed in the intersection between the dominant biomedical model (i.e., psychiatry) and the jurisdictional debate regarding who is responsible for Aboriginal mental health (federal, provincial, or regional bodies) — a highly contested topic. Dominant cultural frameworks now taken for granted — including how policy decisions are made and what gets on the policy agenda — are interwoven and reproduced in the everyday world of mental health service delivery. As a result, some of the most pressing mental health concerns of Aboriginal peoples — those with devastating consequences such as suicide, alcohol and drug use, and violence and their longstanding root causes, including extreme poverty, homelessness, and despair — are often rendered invisible and decontextualized from the structural inequities that produce them. By elucidating these wider, taken-for-granted influences on health institutional policies and practices, research informed by postcolonial discourses has the potential to disrupt inequities that are part of the status quo.

Postcolonial perspectives have served as a point of reference for exploring the health-care experiences of First Nations women in a northern community and as a means of illuminating how marginalizing practices in health care are not merely things of the past (Browne & Fiske, 2001; Browne, Fiske, & Thomas, 2000). Taking women's health-care experiences as a starting point for inquiry, research has illustrated the extent to which women's local experiences are linked to wider social issues around Aboriginal-state relations, dominant conceptualizations of Aboriginality, and routine racializing practices. For example, after seeking health care in a nearby non-First Nations municipality, women described a sense of being on the outside, of lacking entitlement to services, of "intruding on the system," and of being disconnected from the social processes inherent in the clinics they attended. Even those encounters understood to be positive were imbued with deeper meanings, interpreted by the women as representing exceptions to ubiquitous forms of racializing experiences encountered on a daily basis in the wider social world (Browne & Fiske).

Commonly held assumptions about various groups of people often reflect historical and institutionalized points of view and sustain them into the present. In a subsequent study, Browne (2003, 2005) drew on postcolonial perspectives to explore in more depth how popularized discourses about Aboriginal peoples continue to shape the knowledge and assumptions that health professionals bring to their practice and continue to influence the ways in which professionals relate to Aboriginal patients. Browne found that historically mediated images — pervasive in the media, public venues, and everyday conversations — of Aboriginal people as irresponsible, dependent wards of the state, as "getting everything for free," and as passive recipients of government benefits can be readily taken up by health professionals in the practice setting. Despite a commitment to the ideals of egalitarianism and colour-blindness, negative images framed as "cultural" characteristics can become widely applied as markers of difference, particularly when health professionals have frequent contact with patients who embody manifestations of social problems and impoverishment. Without tools for thinking about poverty as the legacy of forced state dependency, health professionals can associate Aboriginal "culture" with the cultures of poverty, substance abuse, and dependency — and invoke discourses on individual responsibility and choice. Drawing on postcolonial perspectives to contextualize the assumptions of health professionals as reflections of socially shared knowledge helps to locate the problem (for example, social judgement) as socially organized. These findings prompt those of us in research, education, and practice to consider how we might change socially mediated misconceptions about Aboriginal peoples — misconceptions that could otherwise remain unchallenged in health care and serve to maintain the colonizing practices we seek to transform.

Critiquing the Colonizing Potential of Research

As our understanding of postcolonial theories continues to evolve, we remain conscious of the need to continually interrogate the colonizing potential of research itself. Given the long history of exploitation in academic research and the expropriation of knowledge from Aboriginal communities, researchers must reflect carefully on the responsibilities and implications of conducting research in today's postcolonial context (Smith, 1999). For example, when researchers use epidemiological statistics to draw attention to inequities in health status, they run the risk of perpetuating a view of Aboriginal communities as sick, disorganized, and dependent — a view that reinforces unequal power relations and that may be used to justify paternalism and dependence (O'Neil, Reading, & Leader, 1998). The study on HIV risks discussed earlier provides a case in point. In that study, there was an inherent danger of perpetuating negative stereotypes by pointing to the high rates of HIV infection among Aboriginal women. To avoid reinforcing stereotypes that repeat and compound the increased risks for Aboriginal women, team members had to describe the risks as connected to experiences of colonialism, racism, poverty, and despair. Similarly, as discussed by Smye (2004), the factors most often identified as contributing to the discrepancy between non-Aboriginal and Aboriginal peoples with regard to mental health status are multiple and arise from social-structural constraints — for example, poverty, unemployment, discrimination, racism, and threats to cultural identity (Kilshaw, 1999; Royal Commission on Aboriginal Peoples, 1996). Thus, it is crucial that researchers highlight the conditions that produce these inequities, understanding that an inherent tension is created between exposing and redressing inequities, and risking further perpetuation of negative stereotypes (Browne & Smye, 2002). These cautionary points about epidemiological discourses are intended not to diminish the importance of epidemiological research but, rather, to raise awareness of epidemiological studies as systems of surveillance that have been instrumental in shaping public understandings about Aboriginal peoples and communities (O'Neil, 1993; O'Neil et al.). A postcolonial interpretation locates health and social conditions in the domain of the historical and structural disadvantages that shape them. From the selection and framing of research questions, to decisions on the dissemination and presentation of findings, vigilance is required, in order to decrease the potential for research processes to undermine our broader transformative goals.

Cultural Safety: Bringing Postcolonial Perspectives into the Realm of Nursing

As our examples show, inequities in health and health care are influenced by everyday practices and policies. Thus, nursing research that aims to redress inequities must be contiguous with practice. In the 1990s the concept of cultural safety emerged in the nursing literature as a tool for incorporating postcolonial perspectives in the everyday realm of nursing practice and education. Rooted in postcolonial theoretical perspectives, the notion of cultural safety was developed in New Zealand by Maori nurse leaders in collaboration with Maori people to address concerns about persistent disparities in health and in access to health care (Papps & Ramsden, 1996; Ramsden, 1993, 2000, 2002). Through a focusing of attention on power imbalances and on individual and institutional discrimination — and how these play out in health-care practices — cultural safety has been developed with a view to countering tendencies in health care to create "cultural risk" — situations that arise when people from a particular group believe they are "demeaned, diminished or disempowered by the actions and the delivery systems of people from another culture" (Ramsden & Spoonley, 1993, p. 164). The principles and perspectives underpinning the concept of cultural safety have been incorporated as required content in New Zealand nursing education and licensing examinations, as a means of transforming dominant attitudes and practices in health care that marginalize Maori people.

Despite significant distinctions between Canada and New Zealand with regard to the processes of colonization and decolonization, the assumptions underpinning cultural safety remind us that colonial practices and attitudes in health care do cross geographical and political boundaries (International Council of Nurses, 2004; Reimer Kirkham et al., 2002). Cultural safety is increasingly identified by researchers, practitioners, and educators as a pragmatic tool for placing abstract postcolonial theorizing in everyday nursing contexts (Ramsden, 2002). By intentionally shifting the focus of analysis away from cultural characteristics or cultural differences as the source of the problem, cultural safety has been instrumental in directing us to shift our gaze onto the *culture of health care* and in showing us how practices, policies, and research approaches can themselves create marginalizing conditions and inequities. For example, in several of our research endeavours, cultural safety has been used as a lens through which to examine the ways in which research findings, policies, and health-care practices can inadvertently create situations of risk for Aboriginal people (Browne & Fiske, 2001; Browne & Smye, 2002; Smye, 2004; Smye & Browne, 2002). By calling for the transformation of deeply ingrained relations of power, paternalism, and authority in health care, cultural safety provides a framework that is more radical than that of cultural sensitivity (Kearns & Dyck, 1996) and that requires us to reflect on the ways in which our practices, policies, and research have the potential to devalue particular groups. Thus, in nursing research, practice, and education cultural safety continues to be applied across a range of contexts as an analytical lens through which to examine and challenge marginalizing practices and policies in health care.

Concluding Comments

Our purpose in this paper has been to explore the analytical relevance of postcolonial theory to research in the area of Aboriginal health. Postcolonial perspectives have been especially influential in our research, because they provide both a vocabulary and an analytical lens for considering the legacy of the colonial past and the neocolonial present as the context in which health care is delivered. While we have focused on the implications for research in Aboriginal health, we are not implying that postcolonial discourses are somehow less applicable to research in other areas or with other groups. Indeed, Anderson (2004a) and others caution against marginalizing postcolonial discourses by limiting our notions of whom or what they are intended for or how they can be applied. As demonstrated by the growing body of postcolonial nursing scholarship, the analytical depth of postcolonial perspectives is broad. In Canada, for example, these perspectives have informed recent research addressing the health concerns of diverse population groups, including Anglo-Canadians, health professionals, immigrant populations, and women of colour (see, for example, Anderson, 2000; Anderson et al., 2003; Racine, 2003; Reimer Kirkham, 2000, 2003). As postcolonial discourses continue to be used in various contexts, we may come to realize that "there are no spaces that are not colonized; the racializing gaze is fixed on all of us" (Anderson, 2004a, p. 239). As researchers, educators, and practitioners working in today's postcolonial climate, we must remain cognizant of the deep-rooted attitudes and relations of power that are built into the fabric of the systems in which we conduct our research and practice. By forming partnerships with communities and by engaging critically with theory, we will be better prepared to address relevant issues in local contexts and to strive towards the goals of social justice and equity in health and health care.

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Résumé

Renverser les effets intergénérationnels des pensionnats sur les populations autochtones : implications pour les orientations et les pratiques en matière de santé

Dawn Smith, Colleen Varcoe et Nancy Edwards

Cet article recense la première vague de résultats issus d'une enquête sur les opinions et les expériences de certains acteurs communautaires travaillant à l'amélioration des soins offerts aux femmes enceintes et aux parents chez les populations autochtones du Canada. La question du manque d'accès aux soins prénatals est traitée ici à la lumière d'une analyse postcolonialiste définissant le contexte historique et social. L'étude de cas proposée est fondée sur des principes de recherche participative. Les données ont été recueillies au moyen d'entretiens exploratoires et de discussions en petits groupes. L'échantillon comprend des dirigeants communautaires, des fournisseurs de soins et des membres de la communauté affiliés à deux services de santé autochtones dans une région surtout rurale, tous choisis à dessein. Les participants des trois groupes considèrent que la prestation des soins aux femmes enceintes, aux mères et aux familles autochtones devrait tenir compte des priorités et des expériences de ces dernières. Voilà pourquoi les auteures ont ajouté la question « Quelle importance la grossesse et le parentage revêtent-ils aux yeux des parents autochtones » au questionnaire d'entrevue. Selon les répondants, la prestation des soins doit absolument tenir compte de la nécessité de « renverser » les effets intergénérationnels des pensionnats. Les résultats suggèrent que la grossesse et le parentage doivent être envisagés comme une expérience propre aux personnes et aux familles appartenant aux communautés autochtones. Par ailleurs, il faut traiter les effets intergénérationnels des pensionnats comme un instrument de violence collective et comme un facteur clé pouvant expliquer le traitement inégal que subissent les Autochtones du Canada en matière de santé et d'accès aux services.

Mots clés : populations autochtones, pensionnats, grossesse et parentage

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Turning Around the Intergenerational Impact of Residential Schools on Aboriginal People: Implications for Health Policy and Practice

Dawn Smith, Colleen Varcoe, and Nancy Edwards

This paper reports on the first wave of results from a study exploring the views and experiences of community-based stakeholders on improving care for pregnant and parenting Aboriginal people in Canada. The issue of poor access to prenatal care by Aboriginal women and families is viewed through a post-colonial lens within a historical and social location. This case study was guided by participatory research principles. Data were collected through exploratory interviews and small-group discussions. The sample comprised purposively selected community leaders, providers, and community members affiliated with 2 Aboriginal health-care organizations in a mainly rural region. Participants from all 3 stakeholder groups expressed the view that care should be based on an understanding of the priorities and experiences of the pregnant and parenting Aboriginal women and families themselves. Therefore the research question *What are Aboriginal parents' views of the importance of pregnancy and parenting?* was added to highlight the views and life experiences of Aboriginal parents. "Turning around" the intergenerational impact of residential schools was identified as pivotal to care. The results suggest that pregnancy and parenting must be understood as reflecting both the unique individual and family experiences of Aboriginal people and the intergenerational impact of residential schools as an instrument of collective violence and as a key factor in Aboriginal Canadians' inequitable health status and access to health services.

Keywords: Aboriginal people, residential schools, health impact, pregnancy and parenting, population health

Introduction

> Two thirds of that last generation to attend residential schools has not survived. It is no coincidence that so many fell victim to violence, accidents, addictions and suicide. Today the children and grandchildren of those who went to residential schools also live with the same legacy of broken families, broken culture and broken spirit. (Chief Councillor Charlie Cootes, cited in Royal Commission on Aboriginal Peoples [RCAP], 1996, p. 22)

From the mid-1800s until as late as 1996 an estimated 100,000 Aboriginal[1] children aged 4 to 18 were removed from their families and placed in residential schools as part of the Canadian government's assimilation plan to "deal with the Indian problem" (Indian and Northern Affairs Canada, [INAC], 1998; RCAP, 1996). Along with the enforced separation of young children from their families and communities, residential schooling entailed the deliberate suppression of language and culture, substandard living conditions and second-rate education, and widespread physical, sexual, emotional, and spiritual abuse (Aboriginal Healing Foundation [AHF], 2002; INAC, 1998; Nuu-chah-nulth Tribal Council [NTC], 1996; RCAP, 1996; United Church of Canada, 1998). "Disclosures of abuse, criminal convictions of perpetrators, and findings from various studies tell of a tragic legacy…that leave former students, their families and communities to deal with issues such as physical and sexual abuse, family violence, and drug and alcohol abuse" (INAC, 1998, p. 1). As a result of the residential school system,

> Aboriginal children learned to despise the traditions and accomplishments of their people, to reject the values and spirituality that had always given meaning to their lives, to distrust the knowledge and life ways of their families and kin. By the time they were free to return to their villages, many had learned to despise themselves. (RCAP, 1996, p. 57)

The residential school system and its enduring impacts is a complex and historically situated phenomenon.

> While it is not uncommon to hear some former students speak about their positive experiences in these institutions, their stories are overshadowed by disclosures of abuse, criminal convictions of perpetrators and the findings of various studies such as the Royal Commission on Aboriginal Peoples, which tell of the tragic legacy that the residential school system has left with many former students. They, and their communities, continue to deal with issues such as physical and sexual abuse, family violence, and drug and alcohol abuse. (INAC, 2004, p. 1)

Aboriginal people have sought an approach to healing that addresses individual, family, and community needs arising from the legacy of physical and sexual abuse at residential schools. In response, the federal government has committed $350 million in support of a 5-year

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[1] The term Aboriginal "refers to organic political and cultural entities that stem historically from the original Peoples in North America, rather than collections of individuals united by so-called 'racial' characteristics" (RCAP, 1996). These include the First Nations, Inuit, and Métis peoples of Canada.

community-based healing strategy and has acknowledged that it is in the interests of Aboriginal and non-Aboriginal people to support individuals, families, and communities in their efforts to begin the healing process (INAC, 2004).

Though there has been legal and political recognition, and the commencement of a process of retribution for the enduring and intergenerational impacts of residential schools (Government of Canada, 1998; United Church of Canada, 1998), the implications of residential schools for health policies and programs have received limited attention. Qualitative and quantitative research has begun to describe the long-term health impacts of residential schools (Dion Stout & Kipling, 2003; NTC, 1996; Tait, 2003). For example, a qualitative study exploring the experiences of close to a hundred survivors in one region of British Columbia found that 93% of former residents reported extreme loneliness and feelings of abandonment, 91% reported loss/suppression of language and culture, 92% had witnessed abuse of other residents, 90% reported having been abused in one or more ways (e.g., sexually, physically, emotionally), 76% reported having lost their self-respect or feeling inferior, and 84% reported problems with relationships, family, parenting, and communication (NTC, 1996).

During a study focusing on learning from successful care for pregnant and parenting Aboriginal women, the critical importance of the Aboriginal participants' vision for "turning around" the intergenerational impact of residential schools (IGIRS) became central. Participants viewed pregnancy and childrearing as an opportunity to turn around the IGIRS on Aboriginal individuals, families, and communities. Orienting care for pregnant and parenting Aboriginal people within this understanding will require a significant shift in the roles, relationships, and intended outcomes of care. Understanding IGIRS as one of the root causes of the inequitable health and social conditions experienced by Aboriginal people has implications for the underlying purpose and rationale of health policy, health programs, and the practices of health-care providers more generally.

This paper focuses on this central finding from the study and describes participants' vision for "turning it around." The participants' experience of pregnancy and parenting, and therefore their care needs and priorities, could be understood only in the context of their experiences of and efforts to change the IGIRS and related colonizing influences and structures. Participants felt that understanding and acknowledging the IGIRS as a root cause of poor health and social conditions such as poverty, addictions, and violence was imperative for healing and building strength.

Background

The federal government has had jurisdiction over health services for First Nations and Inuit people living on reserves since 1876 and passage of the *Indian Act* (Government of Canada, 1985). Since that time, services have been provided through the First Nations and Inuit Health Branch, formerly known as the Medical Services Branch of Health Canada. At present, a growing majority of First Nation communities have transferred, or are in a multi-year process of transferring, administration and delivery of on-reserve health services from the federal government to First Nation control (First Nations and Inuit Health Branch, 2005). Health services for Aboriginal people living off-reserve are the responsibility of provincial governments, and in most provinces are regionally administered.

On-reserve maternal-child health care comprises pre- and postnatal care and evacuation from rural, but not necessarily remote, settings to provincial tertiary care facilities for birth (Smith, 2002). Pre- and postnatal programs are delivered primarily by registered nurses in partnership with community health representatives, and are delivered alongside several related programs such as the Canada Prenatal Nutrition Program, the Fetal Alcohol Syndrome/Fetal Alcohol Effects Prevention Program, and the Aboriginal Head Start On-Reserve Program. Services vary considerably across the regions and among communities in terms of presence, size, and scope (Health Canada, 2000). The result of this variety of services is a collection of programs with independent administrative, governance, and implementation systems, rather than a coherent, integrated system of care. Further, continuity and depth of care over the childbearing continuum are disrupted by evacuation for birth, high turnover among nursing staff, and difficulty integrating the various programs offered on-reserve (Smith).

Anecdotal and research evidence suggest that this model of maternal-child health care has contributed to the health and social inequities experienced by Aboriginal women, children, families, and communities (Adelson, 2004; Dion Stout & Kipling, 1999a, 1999b). Aboriginal people have pointed out that new health and healing systems must embody equitable access to services as well as health status outcomes, holistic approaches to interventions, Aboriginal authority over health systems, responsiveness to differences in cultures and community realities, and, where feasible, community control over services (RCAP, 1996). The need for change has been publicly acknowledged. For example, Romanow (2002) asserts that "action must be taken to create new models to coordinate and deliver health services," address health needs further upstream, adapt health services and programs to each community's unique cultural, social, economic, and political circumstances, and "give Aboriginal people a direct voice in how health care services are designed and delivered" (p. 212).

While the need for change is being recognized, studies describing the problems related to maternal-child health care far outweigh those describing appropriate alternatives for indigenous[2] populations globally. For example, the problem of late access or lack of access to care, poor use of care, and poor pregnancy outcomes in Aboriginal women is well documented (Baldwin et al., 2002; Bridge, 1999; De Costa & Child, 1996; Goldman & Glei, 2003; Heaman, Gupton, & Moffat, 2005; Hoyert, Freedman, Strobino, & Guyer, 2001; Humphrey & Holzheimer, 2000; Luo, Kierans, et al., 2004; Luo, Wilkins, Platt, & Kramer, 2004; Public Health Agency of Canada, 2005). Evidence suggests that Aboriginal women and families require care that is more culturally appropriate and more relevant to their needs and strengths (Battiste, 2000; Browne & Smye, 2002; Long & Curry, 1998; Powell & Dugdale, 1999; Sokolowski, 1995; Westenberg, van der Klis, Chan, Dekker, & Keane, 2002). Evidence shows that culturally appropriate prenatal services have resulted in improved client satisfaction with care, earlier initiation of care, and higher rates of breastfeeding initiation and duration among indigenous women, although definitions of "culturally appropriate" interventions vary (Affonso, Mayberry, Inaba, Matsuno, & Robinson, 1996; Affonso, Mayberry, Inaba, Robinson, & Matsuno, 1995; Buchareski, Brockman, & Lambert, 1999; Nel & Pashen, 2003). Research and evaluation studies (Affonso et al., 1995; Buchareski et al.; Fisher & Ball, 2002; Martens, 2002; Nel & Pashen) have found that community involvement in program design, implementation, and evaluation results in improved participant satisfaction, early access to and participation in care, improved health behaviours such as with regard to nutrition, lower tobacco and alcohol consumption, and feelings of mastery concerning infant care.

However, programs of research thus far have been conducted in single settings, close to urban centres, and/or with particular populations. Given the gap in knowledge to inform a responsive and sustainable approach to care for pregnant and parenting Aboriginal people, research exploring the views and experiences of Aboriginal and community-based stakeholders is needed.

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[2] The term Aboriginal is used widely in some contexts (e.g., in Canada and Australia), while the term indigenous is more globally inclusive.

Method

The purpose of this study was to describe the perspectives of community-based stakeholders on their experience in designing, implementing, and evaluating care for pregnant and parenting Aboriginal women and families. As the study progressed it became clear that participants felt that care should be based on the priorities and experiences of the women and families themselves. Therefore, the focus of the study brought into the foreground the views and life experiences of the Aboriginal parents in the sample, to answer the research question *What are the views of Aboriginal parents regarding the importance of pregnancy and parenting?*

The study takes a critical postcolonial stance (Battiste, 2000; Reimer-Kirkham & Anderson, 2002) and uses participatory research principles (Cargo, Levesque, Macaulay, & McComber, 2003; Fletcher, 2002; Macaulay et al., 1998). Participatory research principles include explicating power imbalances, subject-subject relations in the focus and process of research, and application of the knowledge generated in the inquiry to influence change in the research problem (Anderson, 2002; Mill, Allen, & Morrow, 2001). Methods used to uphold these principles in the study included critical reflexivity (Anderson et al., 2003; Browne, 2003), maintaining the integrity of participants' voices in context (Dion Stout, Kipling, & Stout, 2001; Kirby & McKenna, 1989), and taking direct action on the research problem (Cargo et al.; Fletcher, 2002).

Participants' experiences were viewed through a critical postcolonial lens to explicate their efforts to understand, deconstruct, resist, and transform the impact of colonialism and its institutions (Battiste, 2000; Reimer Kirkham & Anderson, 2002). Postcolonial and participatory research perspectives include diverse value systems, are sensitive to differences (Battiste), value all forms of knowledge, and seek to generate knowledge that is relevant to stakeholders and is useful for solving problems (Mill et al., 2001). A case study design (Yin, 2003) was used to collect in-depth contextual data regarding the experience of individual and organizational participants in improving care for pregnant and parenting Aboriginal people in each setting (Abelson, 2001; Cowley, Bergen, Young, & Kavanaugh, 2000; Dopson, 2003; Langley, Denis, & Lamothe, 2003). Ethical approval for the study was granted by the Health and Social Sciences ethical review board of the University of Ottawa, the ethical review committee of the participating Tribal Council, and the Chiefs and Councils of the participating communities.

In phase 1 of the study, 16 participants from provincial, regional, and community-based organizations responsible for services for pregnant and parenting Aboriginal people were selected using snowball sampling techniques. They were interviewed by phone or in person. Participants were asked to share their perspectives with regard to influences on the pregnancy experiences of Aboriginal women and families. They were also asked to identify health-care organizations with a reputation for having developed prenatal services with high rates of early access and participation by Aboriginal women.

In phase 2, one urban and one rural Aboriginal health-care organization located within a single region in a Canadian province agreed to participate in the community-based case study. Research partnerships were formed and research agreements developed with the two partner organizations in order to identify ownership, control, access, and possession of the research process and products. Formalization of the agreements followed the protocols and requirements of the partner organizations and communities. For example, a description of the study, including cost/benefits to the community, was presented to local Chiefs and Councils and necessary adjustments were made in order to secure their support for the study. Once ethical approval was obtained, participants in each setting were purposively selected with a view to obtaining a variety of perspectives. Clients, family members, providers, managers and administrators, policy decision-makers, and community leaders were interviewed. Table 1 shows the composition of the sample for phase 1 and for each of the community settings in phase 2.

Over 60% of the total sample self-identified as Aboriginal and 90.4% were women. Many of the Aboriginal participants chose to share their personal experiences as children and as parents, grandparents, aunts, and uncles. For many participants, it was imperative that their perspectives be understood and acknowledged within personal, historical, and social

Table 1 *Composition of Sample*

Phase and Setting	**Total**	**Aboriginal Identity**		**Female**	
	#	#	%	#	%
Phase 1	16	8	50	15	93.75
Phase 2 – rural community	29	21	72.4	25	86.2
Phase 2 – urban community	28	15	53.6	26	92.9
Phase 2 totals	57	36	63	51	89.5
Study totals	73	44	60.3	66	90.4

contexts. As the purpose of this paper is to describe those experiences and their significance, the paper draws extensively on the interviews with Aboriginal community members, providers, and leaders.

Data were collected by the first author using one-to-one exploratory interviews and small-group discussions during field work for a period of 3 months in the two settings. In response to the opening question, "Tell me a bit about yourself and your experiences related to pregnancy and parenting," many participants chose to share their personal experiences growing up and becoming parents, grandparents, aunts, and uncles. Although it was not a planned area of exploration, residential schools emerged as central to participants' experiences and their efforts to make a difference for the children of the future. Supplementary documents and field notes were included in the data set. Interviews were audiotaped and then transcribed by a third party.

During a long period of immersion in the data, the first author used NVivo software and an interpretive descriptive method to analyze the data (Thorne, Reimer Kirkham, & O'Flynn-Magee, 2004). "The intellectual task of the analyst [is] to engage in a dialectic between theory and the data, avoiding theoretical imposition on one hand and atheoretical description on the other, in the quest for a coherent rich interpretation that allows apriori theory to be changed by the logic of the data" (Thorne et al., p. 4). During the course of carrying out this analytic task it became clear that turning around the IGIRS pervaded the participants' experience of becoming and being parents. "Turning it around" was therefore brought into the foreground in the purpose and ontological landscape of the study.

Findings

"Turning it around," a central and overriding theme of the project, reflected a sense of hope based on understanding and confronting the IGIRS:

> *We are turning it around… We are going to be better parents for our children because we are healing. And our children won't experience the legacy. I mean, that is my hope, that my children won't experience the pain and things like that, that they will have an understanding, and what they will acquire is the gift of…resiliency and the gift of survival, but not the pain of the abuse and everything else.* (parent/provider/leader)

"Turning it around" had three sub-themes: understanding the IGIRS, healing, and building strength and capacity. A fourth, cross-cutting, subtheme of turning it around, "rebuilding our cultures in contemporary contexts," was interwoven within participants' journey through successive cycles of understanding the IGIRS, healing, and building strength and capacity.

Understanding and Acknowledging the Intergenerational Impact of Residential Schools

"Turning it around" starts with and depends on "understanding and acknowledging the IGIRS." Participants described many levels of disconnection and alienation resulting from the IGIRS. Because children were removed from their families over multiple generations, cultural teachings, parenting skills, and community identities were disrupted:

> *It's so intergenerational. You have generations of people who have been affected by the trauma.... I have talked to people who have got five generations of trauma coming down. So you have four or five generations of people who haven't been able to connect, who haven't had a sense of spirituality, who haven't been able to make firm attachments with their caregivers. It is a direct result of residential school violence.* (provider)

Participants described how residential schools shamed and belittled Aboriginal values, beliefs, practices, and people. For those attending residential schools, this resulted in disconnection or dissociation from painful feelings, low self-esteem, negative identity as an Aboriginal person, and lack of respect for traditional beliefs and practices. Because these experiences occurred during a formative period of emotional and moral development, they became encoded into identity, beliefs, and behaviour patterns:

> *They all went to residential schools except the youngest. And, again, that's when we are starting to work on the child's confidence and esteem too. ...the older kids in residential school are told: "You are good for nothing. You are just an Indian. You will never amount to anything."* (parent/provider)

Participants conveyed the powerful influence of this encoding process in their stories about the role of "teachings" in human social, emotional, and moral development. They described "teachings" as how children learn to interpret the world and their place in it. Teachings are the values, beliefs, knowledge, and practices that make up a person's culture. In children, they shape identity and ways of being in relationships. Participants described how residential school survivors pass on to their children the residential school teachings with which they grew up. The cycle continues as their children take up residential school teachings and then subconsciously pass them on to their own children:

> *To be really perfectly honest, for years we weren't even considered citizens — or people, for that matter. There were certain things that…stereotyping — we were this and we were that. So that attitude, I went through that, and I think in a sense I passed that on to my kids, you know, without me really saying it so much, and anyway I think that is where it comes from. It's hard to see. Sometimes I don't notice it until I start talking about it. Sometimes we have to forgive ourselves for what we did to our kids, for what we passed on to them.* (elder/parent)

Participants described the IGIRS as the root of a *downward spiral of addiction, violence, and poverty* in individuals, families, and communities:

> *The IGIRS is seen as underlying a lot of the substance abuse issues, the sexual abuse and the physical abuse. So to get [to] the root of the problem, there was more attention put on the experience of residential school.* (provider)

As emotional, spiritual, and social well-being were compromised by IGIRS and people became caught in the *downward spiral of addiction, violence, and poverty,* their strength and ability to successfully manage life's challenges diminished. For example, many participants described leaving home as a preteen or teenager to escape the chaos and interpersonal violence in their family, home, and community. This often meant dropping out of school to look for work, finding only unskilled or seasonal jobs and inadequate housing. These difficulties further alienated them from family, community, and culture, perpetuating the downward spiral.

Healing

Healing from the trauma brought on by the IGIRS is the second subtheme of "turning it around." Participants explained that if things are to be different for their children and grandchildren, if the cycle is to be broken, then they have to face their own trauma resulting from the IGIRS and the intergenerational transmission of residential school teachings in order to stop the downward spiral of behaviours, cope with life's challenges, and find ways of healing. They described healing as a self-determined process, for individuals, families, and communities. Participants described their healing journey as a gradual back-and-forth process of facing up to and forgiving oneself and others for the hurts, changing beliefs about oneself and others, and accepting responsibility for oneself and one's choices. Healing requires courage, determination, persistence, and support:

> *People need to do their own work…their own healing work: develop the skills, the life skills, the decision-making skills, the comfort with themselves.*

> *And that's one part. But then another part is the relationships thing…the relationship with self, the relationship with family, relationship with community. And I think number one is that you really have to get your relationship with yourself sorted out.* (grandmother)

Participants identified forgiving self and others for past hurts and acknowledging strengths as important aspects of healing. One parent said, "I'm afraid to admit when I'm wrong; I'm afraid, but I have the ability to forgive." Participants expressed the view that part of healing is changing personal core beliefs, particularly regaining *respect* for self and all living things:

> *We don't need to be powerful; we just need to be equal, to respect each other. Letting it all go to hate, that is not good for your inside. You got to think about your own body, deal with it, heal it and not fill it with hate. Turn things around. Let's do it with love and respect for each other as women and in turn feed it to our children.* (parent/community member)

Building Strength and Capacity

Building strength and capacity was described as a significant priority for individuals, families, and communities, in order to address the deficits resulting from decades of the IGIRS. Healing was seen as a process of going back to make sense of, to accept, and to heal the losses and hurts resulting from the IGIRS. Building strength and capacity was about acquiring the skills and resources to move forward towards one's vision for a better future. Participants described their efforts to develop the knowledge, skills, confidence, and networks of support required to work towards their vision for strong and healthy people, families, and communities. Developing goals according to their own priorities, beliefs, and vision for the future was described as a necessary and significant part of capacity building.

Participants' experiences and efforts in building strength and capacity were focused at individual, family, and community levels. At the individual level the efforts included returning to school, reaching out, developing healthy support networks, and renewing spiritual practices. Community capacity building was reflected in many of the interviews. One participant described a community's coming together, talking, and building the capacity to set and achieve goals:

> *[Treaty negotiations] brought the community together to talk about the problems, to talk about the issues, to talk about what we wanted. And really, what they did in the development of treaty negotiations is they said, "This is what we want in economic development, this is what we want in*

> *education, this is what we want in social development." They went through everything, and what they did without realizing it is that they just did their long-term goals. And then once they realized what they wanted, then of course they started doing things about it.* (leader)

Parents and community leaders described collective efforts to rebuild a strong infrastructure and a positive social environment in order to support parents in making better choices. One community leader described years of commitment and tenacity on this issue:

> *I will always stand for making this community safe for women and children. And I need the support of everyone here. I can't do it myself. I can't be everywhere. When you see something, you have to speak up about it. I'm always telling people that we all have responsibility for making this a safe, healthy community. Like, if you see someone molesting a child over there, it is your responsibility to speak up.* (community leader/parent)

The emphasis on rebuilding positive parenting capacity and skills cut across many programs and sectors. Initiatives that were successful fit into all three sub-themes — *understanding the IGIRS, healing,* and *building strength and capacity* — to create a supportive environment for individuals and families as they moved through their own process of "turning it around":

> *There's more linkage there now. They [have] a lot of parenting initiatives that they did at a school level, which would get the kids before they were pregnant actually, and then…a lot of parenting support for young parents, or teen parents themselves, and…a lot of professional workers who had been given training in developing parenting programs and parenting support programs… So I think that the issues that relate to residential schools that affect a person's ability to parent in a healthy way were probably addressed in those programs. In addition, there was…the [Residential Schools] Survivor Program.* (provider)

Role models, mentors, and *support people* were described as important to capacity building. Many participants described the importance of having even one person who believed in them and showed them that it was possible to achieve their goals and dreams. For many participants, having a single person — a sister, an aunt, a grandparent — believe in them and witness their struggles and achievements played a significant part in turning childhood adversity and trauma into resilience, coping, and acquiring life skills.

> *There's a lot that happens in our communities, and I think one of the big challenges for me was getting past that whole idea that there was no way I could be successful and be a mother. And I think that one of the things*

> *that greatly helped me was the fact that my mom was a teen mom. She was 16 when I was born, 15 when she got pregnant. And everyone said that she should either have an abortion or give me up for adoption…when I was born her doctor said to her, "There's no way that you are going to provide her with a good life, and you are going to be condemning this little girl to a horrible life and she will never amount to anything." And my mom did not stop working her butt off to make sure that I had a really good life, and I did. And so I guess from seeing her I knew that all hope was not lost. I knew that if I just worked really, really hard…I could get there. Unfortunately I think that not everybody grows up being able to see that.* (parent)

Rebuilding Our Cultures in Contemporary Contexts

The sub-theme rebuilding our cultures in contemporary contexts cut across all aspects of "turning it around," because it is a healing, reconnecting activity in itself and because it was viewed as at the root of strong people, families, and communities. *Rebuilding our cultures in contemporary contexts* reconnects people with their culture and is rooted in a strong positive identity:

> *How do you change society? But that's where the cultural pride comes in — to have strong cultural teachings and strong pride in who you are, [and] to really give children a sense of pride in who they are.* (parent/provider)

Reconnecting with their culture and nurturing a strong positive cultural identity was viewed by the participants as an opportunity to reconnect with themselves. For the participants, the process of rebuilding their culture also reconnected families and provided them with opportunities to heal broken relationships. Family members reached out to learn, discuss, and make decisions about how to adopt traditional ways and teachings. For the participants, reclaiming their culture was an affirmative process that engaged them in the upward spiral of "turning it around": understanding how the IGIRS influences parenting behaviours, forgiving, accepting and recovering from past hurts, and coming together to build a different future for themselves and their children.

However, participants acknowledged that reconnecting with their culture meant that they had to work through multiple impacts of the IGIRS simultaneously. They had to mend relationships, learn how to engage with each other in a healthy way, identify lost cultural teachings and work out how they will be practised today, and help the person and family reframe their cultural identities and beliefs:

> *There's a lot of disjoining in our communities. We talk about how we have these strong family bonds…these strong cultural bonds, but quite honestly I don't believe they are there, all together. For instance, if we were to sit down and talk about a practice such as a coming-of-age ceremony, truly people would, like, say, "You're doing it wrong…" There's no appreciation for the real differences between people. We are really, really focused on making sure that everybody does it right — our way. There's a huge cultural loss and a huge problem of identity, both culturally and as a family.* (parent/leader)

Rebuilding our cultures in contemporary contexts was often described as challenging, as people debate how to manage, grow with, and live traditional cultural teachings given today's social, geographical, and occupational realities. It is not a matter of simply reclaiming traditions; rather, it entails the creation of a new culture that honours tradition and identity. For example:

> *It depends. If you're in more of an urban area maybe you'll draw on, say, the Cree cultures and a mix of cultures, Métis cultures. Whereas…say [large First Nation], who are really strong and they're feeling comfortable, they draw maybe more from one culture. But if you go outside of the [large First Nation] tribe group, to, say, a Friendship Centre, it's quite different how they might approach it. So I think that diversity exists — how they do their teachings and how they involve the family and the mother.* (leader)

Discussion

According to international law, "forcibly transferring children of the group to another group" is a form of genocide, or state-perpetrated collective violence intentionally targeting a population group with the aim of destroying it (*Convention on the Prevention and Punishment of the Crime of Genocide, 1951,* cited in Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002, p. 216). The long-term individual and population health effects of genocide are well documented. They include increased rates of depression and anxiety, psychosomatic ailments, suicidal behaviour, intra-familial conflict, substance abuse, and antisocial behaviour (Krug et al., p. 216). "Intergenerational transmission of mental health sequellae (of collective violence) has also been documented, with offspring of holocaust survivors reporting higher rates of current and lifetime post-traumatic stress disorder symptoms than control subjects, despite similar self-reported rates of traumatic experiences in both groups" (Yehuda et al., cited in Krug et al.). Thus an extended burden of disease may be conferred on communities already coping with a multiplicity of genocide-related health consequences (Adler, Smith, Fishman, & Larson, 2004). In the case of Canada's Aboriginal peoples, the residential school system was just one in a collection of human rights abuses: being required to stay on reserve (written permission to leave was required until the mid-1960s), loss of work because of traditional activities such as fishing or hunting, denial of rights of citizenship such the right to vote or to own land (Furniss, 1995, 1999; NTC, 1996; RCAP, 1996), and a host of others.

Aboriginal participants' experiences of and explanations for intergenerational transmission of the traumas inflicted by the residential school system are congruent with evidence on the impact of childhood trauma on neurobiological (National Clearinghouse on Child Abuse and Neglect, 2001), moral, and emotional development (Tangney & Dearing, 2002). Trauma during childhood often results in withdrawal and dissociation, with the person being cut off from his or her feelings (Dion Stout & Kipling, 2003; Tangney & Dearing). The unhealthy relationship behaviours modelled in residential schools, such as coercion, abuse, and neglect, as well as dissociation from feelings, constrains opportunities for affected children to develop the skills necessary to form healthy relationships (Dion Stout & Kipling, 2003). These problems are complicated by the dysfunctional coping behaviours, such as alcohol and drug use, that they pick up from residential school staff in order to escape from the spiritual and emotional pain, loneliness, and isolation (AHF, 2005; Dion Stout & Kipling, 2003; NTC, 1996; RCAP, 1996). Survivors then pass on the resulting identities, beliefs, and patterns of social behaviour.

Participants' experiences with turning around the IGIRS extend the evidence on resilience, recovery from trauma, and cultural continuity into the domain of care during pregnancy and parenting. For example, participants stated that having at least one person witness either their painful experiences or their successes was critical to their progress in "turning it around." This finding echoes the conclusion of many studies that being connected to at least one other person is a significant factor in the health of survivors of trauma such as severe violence or child sexual abuse (Brown, Henggeler, Brondino, & Pickrel, 1999; Gilgun, 1990; Hall, 1996; Rew, 2002; Testa & Miller, 1992; Wilcox, Richards, & O'Keeffe, 2004). Dion Stout and Kipling (2003) synthesize evidence on resilience to identify its potential contribution to facilitating resilience among residential school survivors and their family members. The results from the present study suggest that understanding the IGIRS may tap into sources of resilience that serve to transform parenting and family relationships and to avert the intergenerational transmission of patterns set by residential schools.

Participants' experiences of r*ebuilding our cultures in contemporary contexts* resonates with evidence on the positive impact of community-based efforts to rebuild First Nations cultural continuities devastated by decades of colonization (Chandler & Lalonde, 1998). The results of this study extend the significance of this work on cultural continuity into the domain of pregnancy and parenting.

The present study contributes to the emerging body of evidence on cultural safety (Browne, 2001; Browne & Smye, 2002) by raising the issue of safety in the context of care during pregnancy and parenting. Culturally safe care entails an understanding of the history of colonization and its impact on Aboriginal people, attention to power relations in health-care relationships, and the fostering of safe, supportive relationships (Polashek, 1998; Wood & Schwass, 1993). The present findings add to the literature on cultural safety by demonstrating the importance of bringing these issues to the fore in the design and delivery of safe and supportive policies and programs.

Implications

Understanding and acknowledging the IGIRS emerged as central to participants' vision for a better future for their children, and thus as salient to safe and supportive health-care relationships. *Understanding and acknowledging the IGIRS* requires an understanding of the pathway of devastation that results from multiple levels of disconnection and alienation when people undergo decades of genocidal policy and social relationships. The resulting *downward spiral of addiction, violence, and poverty* is often racialized as being an Aboriginal "characteristic" instead of recognized as the consequence of collective violence (Browne, 2001; Reimer Kirkham & Anderson, 2002).

Colonialist health policies and practices and colonialist relations in general are reinforced by silence on the subject of residential schools, both within and outside of Aboriginal communities, and racialized explanations for the inequitable health and social conditions endured by Aboriginal people (AHF, 2005; Adelson, 2004). Health policy and programs may inadvertently reinforce stereotypes if addictions and violence, rather than IGIRS, are conceptualized as the root cause of health and social inequalities. The underlying assumption is that characteristics of Aboriginal people actually explain increased rates of addiction and violence. When policies and practices are based on racialized explanations of health and social conditions, the result is unresponsive and unsafe services. Such racialized explanations may also be responsible for the pattern, among Aboriginal people, of poor access to and use of mainstream pregnancy and parenting programs. The health and social conditions resulting from the IGIRS cannot be reversed unless the views and experiences of Aboriginal people are recognized and unless their vision for change is brought into the foreground of maternal-child health policy and practice.

The present results suggest that the understanding of community-based stakeholders with regard to both the root causes of and acceptable approaches to safe and supportive care in Aboriginal communities must be part of the discourses that shape health policy and programs as well as training programs for health professionals. Health status and experiences like pregnancy and parenting must be seen within a broad understanding of the impact of colonization on Aboriginal people. The unique life experiences and life meanings of individuals, families, and communities must also be acknowledged. Practitioners must develop a critical understanding of colonization as a process of collective violence perpetrated to "deal with the Indian problem." However, safe practice also requires respect for individual responses to the IGIRS shaped by the interplay of diverse personal, family, and community contexts. Further, system differences related to geographical location, population size, and governance arrangements also contribute to variations in experiences and meanings with regard to both individuals and communities.

Conclusion

The foregrounding of Aboriginal parents' explanations for the root causes of poor health and social conditions in their communities represents a paradigm shift for maternal-child health policy and programs and professional practices, which have positioned Aboriginal people themselves as "the problem" and focused efforts on the downstream effects of residential schools. The sub-themes in the participants' stories serve as a prescription for action, on the part of both Aboriginal and non-Aboriginal people, with regard to relationships, programs, and policies to bring the culture back by acknowledging the profound effects of IGIRS, emphasizing healing, and focusing on strength and capacity. Such a perspective will enable health policy, organizations, and providers to work in closer harmony with Aboriginal people to achieve their vision, instead of reinforcing the colonizing relations that are a legacy of the past and a feature of everyday practice.

Such a shift will require nurses to develop the individual competencies necessary for culturally safe nursing practice. Further research is needed to explicate competency development processes that will build partnerships between Aboriginal organizations and communities and to identify implications and actions for the nursing education and practice organizations that oversee our professional responsibilities to the public.

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Résumé

Les discours influençant les perceptions des infirmières à l'égard des patients autochtones

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Cette étude explore les discours sociaux et professionnels ayant une influence sur les connaissances et les présupposés des infirmières à l'égard des patients autochtones. Elle est fondée sur un modèle d'investigation ethnographique, des entrevues en profondeur et l'observation des participants. Les données ont été recueillies au cours d'une immersion de neuf mois effectuée par l'auteure dans un hôpital de taille moyenne, situé dans l'Ouest canadien. Trente-cinq participants ont été recrutés grâce à un sondage par choix raisonné, soit des infirmières, des patientes autochtones hospitalisées et des informateurs clés spécialisés en santé des Autochtones. Les résultats indiquent que les perceptions des infirmières à l'égard de leurs patientes autochtones sont façonnées par le chevauchement de trois discours : un discours concernant la culture, un discours professionnel sur l'égalitarisme et un discours populaire sur les peuples autochtones. Ils révèlent que les présupposés culturels sont entrelardés des stéréotypes entretenus par la société dominante et sont parfois présentés comme des faits même lorsqu'ils contredisent les idéaux égalitaires du locuteur. Les conclusions de l'étude mettent en lumière la nécessité de concevoir des stratégies pour stimuler chez les infirmières une réflexion critique sur la culture, le cadre sociopolitique qui détermine les rapports dans le milieu de la santé et, dans une perspective plus large, les discours sociaux ayant une influence sur leurs attitudes.

Mots clés : peuples autochtones, femmes autochtones, Canada, perceptions des infirmières, culture

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Discourses Influencing Nurses' Perceptions of First Nations Patients

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This study explores the social and professional discourses that influence nurses' knowledge and assumptions about First Nations patients. Through the use of an ethnographic design, in-depth interviewing, and participant observation, data were collected over a 9-month period of immersion in a midsized hospital located in western Canada. Purposive sampling was used to recruit 35 participants: nurses, First Nations women who were patients in the hospital, and key informants with expertise in Aboriginal health. The findings indicate that 3 overlapping discourses were shaping nurses' perspectives concerning the First Nations women they encountered: discourses about culture, professional discourses of egalitarianism, and popularized discourses about Aboriginal peoples. Cultural assumptions were intertwined with dominant social stereotypes and were sometimes expressed as fact even when they conflicted with egalitarian ideals. Conclusions highlight the need for strategies to help nurses think more critically about their understandings of culture, the sociopolitical context of health-care encounters, and the wider social discourses that influence the perspectives of nurses.

Keywords: Aboriginal peoples, indigenous people, First Nations, First Nations women, Canada, provider-patient relations, nurses' attitudes, culture, colonialism, cultural safety

Health care involving Aboriginal peoples[1] in Canada continues to unfold against a backdrop of colonial relations[2] that shape access to health care, health-care experiences, and health outcomes. Despite significant

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[1] The term "Aboriginal peoples" refers generally to the indigenous inhabitants of Canada, including First Nations, Métis, and Inuit peoples (Royal Commission on Aboriginal Peoples, 1996, p. xii). These three groups reflect "organic political and cultural entities that stem historically from the original peoples of North America, rather than collections of individuals united by so-called 'racial' characteristics" (p. xii). Specifically, the term First Nation replaces the term Indian, Inuit replaces the term Eskimo, and Métis refers to people of mixed European and Aboriginal ancestry. The labels "Native" and "Indian," however, continue to be used in federal legislation and policy (e.g., the *Indian Act*), statistical reports, and public discourses. In 2001, 1.3 million people, or 4.4% of the total Canadian population, reported Aboriginal ancestry (Statistics Canada, 2003).

In this paper, the term "Aboriginal peoples" is used to refer generally to the diverse groups within Canada. First Nations is used more specifically to refer to the participants in the study who identified as First Nations.

[2] Kelm (1998) discusses colonization from a historical perspective as the "sociocultural dislocation, the establishment of external political control and economic dispossession,

improvements in recent years, the health of Aboriginal peoples continues to lag behind that of the overall Canadian population on virtually every measure (Canadian Institute for Health Information [CIHI], 2004). Scholars across all sectors of Aboriginal health research concur that persistent disparities in health and social status are entrenched in the history of relations between Aboriginal peoples and the nation-state (Adelson, 2005; Dion Stout, Kipling, & Stout, 2001; Kelm, 1998).

In Canada, O'Neil's (1989) hallmark study of health-care encounters involving Inuit patients and Western care providers has been highly influential in drawing attention to the political context of patient-provider relations. By situating individual patient-provider interactions in the internal colonial context of health-care provision in northern Canada, O'Neil demonstrates how paternalism, power differences, and cultural misunderstandings are shaped by wider sociopolitical issues. O'Neil argues further that the tendency of Western nurses and doctors to "bracket out" the sociopolitical context of health-care encounters stems from their professional socialization and their predominantly middle-class values.

Most of the research on health-care encounters involving Canadian Aboriginal patients subsequent to the publication of O'Neil's (1989) work has been conducted from the perspective of patients (Baker & Daigle, 2000; Browne, 1995; Browne & Fiske, 2001; O'Neil; Sherley-Spiers, 1989). For example, Browne and Fiske found that some women were acutely aware of their gendered stereotyping as First Nations women by health-care providers. Findings from this and other studies demonstrate the need to locate the micropolitics of health care within sociopolitical and historic contexts. Research conducted from the vantage point of patients is critical to improving the provision of services. Such research shows that it is equally important to explore how it is that health professionals come to hold the knowledge and assumptions that

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the provision of low-level social services, and finally, the creation of ideological formulations around race and skin colour" (p. xix). In the current context, LaRocque (1993) defines colonization from an Aboriginal perspective as the "loss of lands, resources, and self-direction and…the severe disturbance of cultural ways and values" (p. 73). It should be kept in mind, however, that colonizing forces did not operate as a single, uniform trajectory of subjugation — oppositional voices and resistance also existed: "The processes of power inherent in colonization [are]…diffuse, dialectical, and subject to competing positions both from within the society of the colonizers and from the colonized" (Kelm, p. xviii). Further, Furniss (1999) argues that what characterizes colonial culture in Canada is "not merely the presence of racist discourses" but also the distinctions drawn between Aboriginal and non-Aboriginal peoples through the assignment of "difference — negative, neutral or positive — or through the denial of difference.…These alternating tendencies toward…assertion and denial of indigenous differences are central dynamics within colonial discourses and practices" (p. 13).

shape their views of particular patients or patient groups. The present study takes up this challenge by exploring the social and professional discourses that influence nurses' knowledge and assumptions about the First Nations patients they encounter in hospital.

Several concepts central to this paper require defining at the outset. Discourse can be defined as a "coherent way of describing and categorizing the social world" through patterns of "words, figures of speech, concepts, values, and symbols" (Lupton, 1994, p. 18) or as a "domain of language-use that is characterised by common ways of talking and thinking about an issue (for example, the discourses of medicine)" (Germov, 1998, p. 341). Further, "it is through discourse that social reality comes into being" (Escobar, 1997, p. 85).

The notion of "dominant culture" is also central to this paper. Furniss (1999), a Canadian anthropologist, describes dominant culture as a "deeply rooted set of understandings" that is experienced as a "set of common-sense, taken-for-granted truths" about individuals, society, and social relationships (p. 14). This does not imply that there is a unitary dominant culture, that all people subscribe to dominant cultural assumptions, or that these assumptions are static or fixed. However, various kinds of dominant cultural assumptions infuse many aspects of everyday life — through the media, schoolbooks, public interest debates, and everyday conversations. They shift and change according to one's life context, the local issues of which they are a part, and current political and economic contexts. Hence the "different life experiences of individuals, conditioned not only by their individual biographies but also by their varied positions within structures of inequality…give rise to different perceptions" that challenge the legitimacy of a dominant culture (p. 14–15).

The concept of culture also requires close analysis. In nursing and health care, culture is commonly understood as "a template or blueprint for human behaviour, grounded in the values, beliefs, norms, and practices of a particular group that are learned or shared" (Reimer Kirkham & Anderson, 2002, p. 4). Several nurse researchers have written extensively on the limitations of this perspective, arguing that culture is much more complex[3] than is typically assumed (see, e.g., Allen, 1999; Anderson, 1998; Anderson & Reimer Kirkham, 1999; Culley, 1996; Doane & Varcoe, 2005; Meleis & Im, 1999; Reimer Kirkham et al., 2002). Allen argues that culture cannot be reduced to a set of fixed, identifiable characteristics or traits attributable to members of a particular ethnocultural group. Culture can, however, be understood as a shifting, changing, relational process that is lived within and among groups and

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[3] As Margaret Lock (1993) points out, "culture" is "one of the two or three most complicated words in the English language" (p. 144).

people, and therefore as deeply enmeshed in power relations and in economic, political, and historical contexts (Anderson & Reimer Kirkham; Doane & Varcoe; Stephenson, 1999). The scholars cited above point to the problems that can arise when health-care providers are taught to watch for particular cultural traits or cultural differences, arguing that notions of difference are always set against presumed (dominant) cultural norms. This practice tends to reinforce ideas about "us and them," "normal and different," "typical" or "Other."[4] Despite an increasing number of critiques in nursing and health care, culture continues to be viewed as synonymous with "difference," without a full appreciation of how these differences can reflect widely held stereotypes. Compounded by the propensity to view culture as equivalent to ethnicity or nationality, culture tends to be seen as relevant only to people who differ from the dominant group. It is in this context that ideas about culture have the potential to become problematic in nursing.

Social Determinants of Aboriginal Women's Health

In Canada, the complex history of colonial politics, policies, and practices has resulted in profound social and cultural disruption within many Aboriginal communities, marginalization of many Aboriginal people in terms of the wage economy and mainstream political processes, and the forced economic dependence of many Aboriginal peoples on the nation-state (Kelm, 1998; Waldram, Herring, & Young, 1995). The regulation of Aboriginal peoples' lives through social policies embedded in the *Indian Act,* the restrictions placed on Aboriginal self-government, land claims, and the economic development of Aboriginal communities are vestiges of the colonial past (Armitage, 1995) that, in turn, shape life opportunities, economic conditions, and the overall health and social status of individuals, families, and communities. According to leading scholars in Aboriginal health,

> Despite public recognition of past injustices committed against Aboriginal peoples in this country, marginalization and prejudice remain very much present in the daily lives of many community members. While the effects of this marginalization make themselves manifest in any number of ways, few are more telling than statistics that place

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[4] Othering refers to the projection of assumed cultural characteristics, differences, or identities onto members of particular groups. Othering is also a process through which we construct our own identities in reference to Others (Varcoe & McCormick, in press). By identifying individuals or groups as Other, one magnifies and reinforces projections of apparent differences from oneself (Johnson et al., 2004). As Ahmad (1993) explains, by "defining the Other (usually as inferior) one implicitly defines oneself against that definition (usually as normal or superior)" (p. 18).

> Canada's Aboriginal population far below their non-Aboriginal counterparts in the United Nations Human Development Index. (Dion Stout et al., 2001, p. 12)

The colonial legacy of subordination of Aboriginal peoples has resulted in multiple jeopardy for many Aboriginal women, who face personal and institutional discrimination and disadvantage on the basis of race, gender, and class (Browne & Fiske, 2001; LaRocque, 1996; Native Women's Association of Canada [NWAC], 2002). Despite improvements in recent years, health and social status indicators continue to demonstrate large discrepancies between Aboriginal and other Canadian women (CIHI, 2004; Dion Stout et al., 2001). For example, age-standardized mortality rates from all causes for Aboriginal women are substantially higher than those for other women. Life expectancy for Aboriginal women is 76.2 years, versus 81.0 years for non-Aboriginal women (NWAC). The incidence of low income among Aboriginal women is more than twice that among the general female population (42.7% vs. 20.3%) (Dion Stout et al.), and the economic situation for Aboriginal lone mothers is even more grave (NWAC). The current crisis caused by extremely high rates of HIV among Aboriginal women is one of the most devastating manifestations of the cumulative effects of poverty, dispossession, powerlessness, and despair (Health Canada, 2002; Spittal & Schechter, 2001). These social and health inequities cannot be glossed over as lifestyle or cultural issues; they are manifestations of the complex interplay of historical, social, political, and economic determinants of health status and access to health care.

Colonizing Assumptions About Aboriginal Women

To explain how the marginalization of Aboriginal women was rationalized in the past, scholars are drawing attention to the ways in which colonial images were used to manipulate public opinion. For example, images of Aboriginal women as dissolute, neglectful, and irresponsible helped government officials in the past to justify the extreme levels of poverty and ill health in many Aboriginal communities, creating misrepresentations that "blamed First Nations women for their lot in life and justified state intervention" (Stevenson, 1999, p. 66). Colonizing images of Aboriginal women as irresponsible and incompetent contributed to the "inferiorization of Aboriginal motherhood" and fuelled the widespread practice in the 1960s and 1970s of placing Aboriginal children in non-Aboriginal foster homes (Fiske, 1993, p. 20). More recently, public awareness campaigns portraying fetal alcohol syndrome as a primarily Aboriginal health problem have been criticized for perpetuating the public and professional perception of Aboriginal women as negligent and uncaring (Tait, 2000a, 2000b). Negative images from the past endure today as stereotypes (Eisenberg, 1998; Green, 1995; Gunn Allen, 1995; Newhouse, 2004; Stevenson; Tait, 2000b). As social tensions continue to rise in the competition for diminishing economic resources, misinformation about Aboriginal peoples is becoming even more visible, as issues related to land claims, rights, and entitlements are debated in public venues (Furniss, 1999). An editorial in a major Canadian newspaper serves to illustrate these public discourses:

> It's called a culture of entitlement and a whole lot of Canada's aboriginals have it real bad. Those who suffer from this energy sapping affliction almost always grow lethargic and passive.... Even the label "First Nations" speaks of entitlement, as though all others are second in line... The truth is, however impolitic it may be to say it, pandering to Native Indians has become a virtual industry in this country. (Yaffe, 2002, p. A14)

This is not an isolated diatribe. Furniss (1997/98, 1999), Dunk (1991), Newhouse, and Ponting (1997, 2001) document the extent to which assumptions about Aboriginal peoples as wards of the state are expressed matter of factly in the media and in everyday conversation as popularized public viewpoints. These dominant cultural discourses — generated in the wider social world — can also shape the perspectives of health-care providers, and the knowledge and assumptions they hold about the patients they encounter in the clinical setting.

Research Methods

In this paper I discuss one aspect of the findings of a larger study exploring the sociopolitical context of health-care encounters between nurses and First Nations women. Specifically, it focuses on the wider social discourses that were found to influence nurses' interpretive perspectives. "Interpretive perspectives" refers to the various types of knowledge, assumptions, and experiences that shape nurses' understandings of their patients. Elsewhere, I discuss how these perspectives affected nurses' interactions with patients and their practices with regard to patients (Browne, 2003). Because of the need to limit the scope of the paper, the perspectives of the First Nations patients are also reported elsewhere (Browne).

Using an ethnographic design and in-depth interviewing and participant observation, data were collected over a 9-month period of immersion in a midsized hospital located in a western Canadian city. Aboriginal peoples comprised 9% of the city's population, compared to an average of 3% in other cities in the same province (Statistics Canada, 2003). Because of these demographic characteristics, this particular hospital setting was well suited to the exploration of health-care encounters between nurses and First Nations women.

Theoretical Perspectives Informing the Study

The study was informed by an emerging body of inquiry in nursing scholarship that draws on postcolonial theoretical perspectives (Anderson, 2000, 2002, 2004; Anderson et al., 2003; Browne & Smye, 2002; Browne, Smye, & Varcoe, 2005; Doane & Varcoe, 2005; Reimer Kirkham & Anderson, 2002; Varcoe & McCormick, in press). Postcolonial theories can be understood as forming a body of critical perspectives that share a political and social concern about the legacy of colonialism, and how this legacy shapes relations at the individual, institutional, and societal levels (Young, 2001). As McConaghy (2000) explains, "the term postcolonial does not refer to a period of time, that is, the period of history after colonialism. Rather, the post in postcolonial refers to a notion of both working against and beyond colonialism.... Postcolonial therefore refers to issues of power, rather than time" (p. 268). Of central concern in postcolonial scholarship are analyses that shed light on how conceptions of race, racialization, and culture are constructed in particular sociopolitical contexts and shape contemporary social life, including relations in health care (Anderson, 2004). Exploration of these issues is particularly relevant in the Canadian context, where historically established relations of power, authority, and paternalism continue to shape health-care policies and practices concerning Aboriginal peoples (Adelson, 2005; Browne et al., 2005; Kelm, 1998; O'Neil, 1989; Waldram et al., 1995). In applying postcolonial theoretical perspectives, the goal is to use theory not as "the container into which the data must be poured" (Lather, 1991, p. 62), but rather as an interpretive lens through which to analyze the findings (Sandelowski & Barroso, 2003; Thorne, Reimer Kirkham, & O'Flynn-Magee, 2004).

The Participants

Purposive sampling was used to recruit a total of 35 participants. These included 14 registered nurses (RNs) and two licensed practical nurses (LPNs) who worked at the hospital, 14 First Nations women who were their patients in the hospital, and the Native liaison worker employed at the hospital. The nurses were recruited by inviting those who were assigned to care for First Nations women (in addition to their other patients) to participate in the observations and interviews. After a significant proportion of the data had been collected and analyzed, four key informants with expertise in Aboriginal health were invited to discuss aspects of the data and to provide feedback on the preliminary themes. These included two RNs and a community health representative, all of whom worked in a nearby reserve community, and a health administrator responsible for First Nations health care in the region. Each of the key informants self-identified as First Nations. All of the participants were women.

Among the hospital nurses ($n = 16$), six had been employed at the hospital for between 15 and 25 years, eight for between 5 and 10 years, and two for less than 2 years. Two held baccalaureate degrees, three were in the process of completing BSN degrees, and the remainder were diploma-prepared. All worked either full time or nearly full time. The majority were experienced clinicians: on average, they had 16.5 years of nursing experience (range 2–25 years). Their average age was 43.8 years (range 25–58 years). All but two had lived and worked in this city or in the vicinity for several years (range 3–30+ years). Four self-identified as First Nations and the remainder as Euro-Canadian.[5] To protect anonymity, particularly for the two LPN participants, the term "nurse" is used to refer to both RNs and LPNs except where specific distinctions are required.

Data Collection

The study was approved by a university and hospital ethics board. The nurses and the First Nations women they were assigned to care for provided written informed consent before participating in interviews or the participant observation components. All data were collected by the principal investigator with the exception of data collected in three interviews conducted by two trained research assistants.

Participant observation involved the researcher's accompanying RNs during day and night shifts as they provided care to a variety of patients, including First Nations women. Observations were conducted on medical-surgical, renal, and postpartum units in order to ensure maximum variation, among both nurses and patients, in terms of different areas within the hospital. Participant observation provided the researcher with an opportunity to observe the patterns of interactions between nurses and patients, listen unobtrusively, and engage in dialogue with nurses and patients. Observation was essential to developing insights into the contextual factors that informed nurses' perspectives, the institutional context, and the challenges faced by the nurses as they provided

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[5] Although "white" is the more common colloquial term used in Canada to distinguish non-Aboriginal peoples, Furniss (1999) states that Euro-Canadian is "the accepted term in formal academic discourse to refer to the dominant segment of Canadian society" (p. xi). Extending Furniss's rationale, I draw on Frankenberg's (1993) conceptualization of white (in this case, as synonymous with Euro-Canadian), to signal "a location of structural advantage, of race privilege…a 'standpoint', a place from which white people look at ourselves, at others, and at society" (p. 1).

care to various patients. Observational data were recorded as field notes. Field notes also contained reflexive analyses on how the researcher's professional, social, and ethnocultural positioning may have influenced the research process and the dynamics of her interactions with participants.

Because the data were collected over a period of 9 months, I had numerous opportunities to connect with nurses informally during coffee or lunch breaks or during shift reports. During the observational sessions, I remained in the role of researcher and did not participate as a practising nurse. However, as a clinician I often alerted nurses to changes in patients' status and assisted nurses with non-clinical tasks. In relation to patients, I often brought tea, ice chips, or snacks if permitted, helped to adjust their bedding or their position in bed, or discussed the health-related concerns they raised. In these ways, I assisted the nurses and patients as needed but did not get involved in the practice of clinical nursing per se. Nonetheless, on several occasions nurses asked my opinion as they engaged in clinical decision-making, and I responded based on my clinical expertise.

In ethnographic research, it is important that the researcher reflect on the extent to which his or her presence affects the process of data collection. During the observational sessions in this study, I noted that the nurses did not seem to be spending extra time talking or lingering with patients, or making special efforts to connect with them beyond what was required during routine care, because of the hectic pace and the volume of their work. In other words, the nurses seemed not to alter their pace or manner of interacting with patients or each other on account of my presence. In fact, most of the nurses' encounters with patients occurred during brief, almost fleeting, moments as they rushed from patient to patient. Often, it was when they were not at the bedside — for example, when they were at the nurses' station, at the charting desk, or in medication and supply rooms — that nurses would spend a few moments reflecting on the process of providing care. On a few occasions nurses who felt particularly overburdened and pressed for time asked me to defer the observational session to a subsequent shift. On other occasions they commented on how "easy" it was to have me shadow them. Although it is never possible to definitively determine the authenticity of research participants' behaviours, the use of a variety of data-collection methods (for example, participant observation and individual interviews) provided a more comprehensive portrayal of nurses' encounters with patients than would be possible with any single data-collection method (Silverman, 1998; Thorne et al., 2004).

In-depth interviews were conducted with nurses who participated in observational sessions, in order to explore their experiences and perspectives in relation to the First Nations women they cared for in hospital. The majority of nurses chose to be interviewed on their days off and at a location other than the hospital (e.g., in the researcher's office). The interview guide included open-ended, broad "trigger" questions (intended to stimulate discussion) (Spradley, 1979). First, nurses were asked what it was like to work in the hospital and to describe the range of patients they encountered in their work. As the interview progressed, they were asked to describe their experiences caring for the First Nations women they encountered as patients. Throughout the interview, nurses were asked to ground their discussion in examples and to reflect on situations that they found particularly positive and those that were more challenging. Additional questions were formulated during the interview in response to nurses' accounts. Since the interviews took place some days after the observational sessions, questions specific to the observational sessions were also posed. This created an opportunity to ground the interview in the context of nurses' everyday practice. Follow-up interviews were conducted to clarify and verify information discussed in the initial ones. All interviews were audiotaped and transcribed verbatim.

Data Analysis

An interpretive thematic analysis was completed using processes described for qualitatively derived data (Sandelowski, 1995; Thorne et al., 2004). Coding and analysis was facilitated by the use of NVivo, a computer program for organizing, contrasting, and comparing qualitative data. Consistent with interpretive inquiry, data analysis was an iterative process of moving back and forth between the data as they were collected and coded. As data were continually gathered, interviews and field notes were read repeatedly to identify recurring and contradictory patterns in the data, preliminary concepts and themes, and possible linkages to theory. Concepts and themes were developed and used to categorize and code the data. As more data were collected and coded, categories were collapsed, expanded, modified, and refined. All data were coded by the author; in addition, interview transcripts were independently coded by two trained research assistants in order to identify similarities and differences. Discrepancies in coding served to identify areas for further exploration and led to further refinement of the coding categories. In the final stages, the analysis shifted to a more theoretical level of conceptualizing the ideas and themes expressed in the data (Sandelowski & Barroso, 2003).

Scientific quality and trustworthiness of the analysis were assessed through triangulation of multiple data sources (Thorne et al., 2004). Observational data contributed to the validity of findings by providing a form of triangulation that created a context within which to interpret the interview data — and vice versa. Relevance and credibility of the data were evaluated by reviewing the emerging analysis with several of the hospital nurses and the four key informants, who provided feedback on the ways in which the preliminary themes resonated with their perspectives or experiences. Throughout the study, reflexive analyses were recorded in field notes as a way of critiquing how the researcher's assumptions, values, and perspectives influenced the research process and interpretation of findings (Emerson, Fretz, & Shaw, 1995; Harding, 1987). At all stages of the study, an auditable decision trail of analytical and interpretive pathways was maintained.

Findings

Nurses and other health-care providers are influenced by a variety of theoretical and ideological perspectives garnered through their educational programs, accumulated professional experience, popularized public discourses, and societal experiences. Nurses thus draw upon a range of interpretive perspectives as they provide care to an increasingly diverse spectrum of patients. In this study, three overlapping discourses seemed to be shaping the nurses' interpretive perspectives and their understanding of the First Nations women they encountered: (a) discourses about culture, (b) professional discourses about egalitarianism, and (c) popularized discourses about Aboriginal peoples. While these discourses are discussed separately in the analysis that follows, they were not mutually exclusive; rather, they intersected to form complex and often contradictory interpretive perspectives. Consistent with interpretive inquiry, I interwove literature with the findings in order to form linkages between the empirical data and relevant theoretical perspectives (Sandelowski & Barroso, 2003; Thorne et al., 2004).

Discourses About Culture

The nurses were well aware that attending to issues of culture is an essential component of quality nursing care, and culture figured strongly in many aspects of their discussions. They stressed the importance of developing a better understanding of their patients' cultural backgrounds and saw "cross-cultural training" as a means of improving their practice:

> *[We are] getting better… The more we're learning about different cultures and having the cross-cultural classes in the nursing schools…experience helps; working with different cultures…helps a lot too.*

Several nurses discussed cross-cultural training as a means of developing a non-judgemental approach in their practice:

> *One of the things they teach you in nursing is to be non-judgemental. You can't help somebody if you're busy judging them for what they're doing. It's the same with Native people. You can't help them if you're judgemental in the way you approach them.... And a lot of that is non-verbal, non-spoken.*

A common belief in health care is that more cross-cultural training is needed, to help providers move beyond their judgements about certain patients. The nurses who felt they were not offered enough cross-cultural training opportunities described their work with some First Nations patients as "more challenging." One nurse described a commitment to treating all patients equally despite her sense of having to work from a deficit position in terms of cultural knowledge:

> *Everybody has cultural beliefs and practices that you have to take into consideration. So that's always a challenge — and more of a challenge for me, because I didn't have any training in those things.*

In an attempt to elicit cultural information from patients, nurses used an open-ended item on the hospital's admission form asking about "cultural practices":

> *Whenever a patient comes onto the ward, we do a complete history...and we talk to them about cultural and religious practices and how they feel the hospitalization will impact on that... Most people do respond, and say there are no issues.*

The purpose of the "cultural practices" item is to focus attention on issues of culture, the implication being that cultural information can be efficiently and easily elicited from patients. Consistent with prevailing conceptualizations of culture in health care, such institutional practices reinforce the notion of culture as something readily identifiable and easily addressed during routine health care (Allen, 1999). It is not the intent behind the item that is problematic but, rather, the *effect* of the item in reinforcing the notion of culture as quite narrowly defined in relation to the values, beliefs, and practices that are inherent to particular groups of people. When culture is represented in this way, it tends to be thought of as existing outside of power relations, or outside of people's social or economic circumstances (Doane & Varcoe, 2005). As the findings continued to show, narrow conceptualizations of culture can, paradoxically, reinforce the stereotyping of people who belong to particular ethnocultural groups — in this case Aboriginal patients.

As nurses discussed the diverse patients they encountered in the hospital, including First Nations women, they struggled to speak sensitively about the social problems affecting some of their patients. One nurse grappled to find the appropriate phrasing:

> *I find with Native people, just the way their culture is, I think you get a lot more social things that you need to deal with, a lot of — not necessarily problems but…[pause] What am I thinking of?… [pause] They are very complex socially and you need to look at a lot of things.*

As the interview progressed, this nurse provided some examples of the social issues alluded to above. For example, she commented, "It is in their culture to have a lot of violence, stabbing, alcohol abuse…more than what you see in other cultures." She also reiterated that this "doesn't mean that all Native people are drinking or in violent situations" but that there seemed to be more of those issues in First Nations culture.

Equating social problems with cultural characteristics is not uncommon in health-care discourses. Reflecting a proclivity for culturalist discourses in health care generally, culture is often given as the primary explanation for why certain people or groups experience various health, social, or economic problems (Reimer Kirkham et al., 2002). Culturalist discourses run the risk of shaping the perspectives of health-care providers by conveying the message that social problems such as alcoholism, dependency, and unemployment are largely a reflection of a group's cultural characteristics. They are infused with socially constructed assumptions about cultural essentialism — whereby a group's values, lifestyles, or beliefs are seen as reflecting inherent cultural characteristics. When health-care providers have frequent contact with patients who embody social problems (e.g., alcoholic patients), and when these patients are associated with a particular ethnocultural group, it can be challenging *not* to assume that social problems are culturally based. Because of the relatively narrow conceptualization of culture, the tendency in culturalist discourses is to overlook the broader structural, economic, and historical contexts that shape social and health problems.

Many of the nurses appeared to be strongly influenced by these cultural discourses. For example, a nurse reflecting on a challenging discharge-planning process for a First Nations woman from a reserve community commented: "She didn't take care of any of her own responsibilities [at home]. She didn't look after her own child. Now, I know that is a cultural thing." The tacit linking of maternal irresponsibility[6] with First Nations culture was one of several ways in which culturalist

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[6] Aboriginal and non-Aboriginal scholars argue that historically mediated images of Aboriginal women as irresponsible mothers persist today as popularized stereotypes (Eisenberg, 1998; Green, 1995; Gunn Allen, 1995; Newhouse, 2004; Stevenson, 1999; Tait, 2000b).

discourses manifested in clinical conversations and reflected negative stereotyping. The limitation of a culturalist perspective lies in its tendency to overlook the socio-economic and historical issues (e.g., violence, poverty, intergenerational trauma) that place certain persons at risk. In a similar vein, culturalist discourses that conflate alcoholism with Aboriginal culture, as manifested in some of the nurses' comments that "quite often in this culture, they drink a lot" further mark Aboriginal peoples as stereotyped, cultural Others. Again, there is the tendency to overlook the socio-economic and historical conditions that can give rise to some people's experiences of poverty or substance use. These narrow understandings of culture, which are pervasive in health care, constrained the nurses' analyses of the wider structural, historical, and social contexts that shape people's lives, life opportunities, and access to the resources for health.

Professional Discourses About Egalitarianism

As the nurses discussed the diverse patients they encountered, they reiterated that they were committed to treating all patients equally. Reflecting a widely held professional discourse about the importance of egalitarianism (Canadian Nurses Association, 2002), many concurred with a sentiment expressed by one of their colleagues: "I treat nobody of a different culture any differently. I treat people equally, all the same."

Consistent with "colour blindness" as an appealing and powerful professional discourse, the principles of egalitarianism assume that all people should be — and in most cases are — treated the same regardless of their social, ethnocultural, or gendered location (Henry, Tator, Mattis, & Rees, 2000). Discourses about egalitarianism convey the message that, generally speaking, health-care systems and institutions are fair and treat people equitably. Many of the nurses expressed this idea, commenting that inequities in relation to Aboriginal patients were a "thing of the past... We're all smarter than that now. That is no longer acceptable."

In some cases the interview process itself served as a catalyst for nurses to reflect critically on the ideals of egalitarianism. Provided with an opportunity to reflect on their experiences, some nurses began to question their own level of awareness:

> *Many people, a lot of times, get categorized. That would probably be the only thing... And I find quite frequently people may jump to the conclusion that if someone [a patient] drinks, they categorize Native people as drinking quite frequently. I guess in one way you can call that a little prejudiced.... But other than that, I don't see people being prejudiced in any way.*

Another nurse stated that materials she was studying in an ethics course helped her to think critically about the precepts of egalitarianism. As she discussed her work with some of the First Nations women who were her patients, she drew distinctions between the need to treat all patients equally and the need to tailor services and care to specific groups, to rectify past injustices and present inequities. This level of analysis contrasted with the responses of some other nurses who expressed the view that "here, everyone is treated equally."

Other nurses pointed to more explicit challenges to egalitarianism operating in health-care encounters. One nurse whose interpretive lens was shaped partly by her experiences as a First Nations woman described her sensitivity to seemingly innocuous comments made on the wards:

> *It's really hard for me to talk about [it]. I think to myself, it shouldn't bother me.... There are comments, not directly about one particular patient but comments in a general sense.... I've heard, just as I'm charting, something like, "Oh, they [Aboriginal patients] get all their medications paid for," "no taxes," and things like that.... And I don't respond to those because this is where I work. I don't need this kind of stress.*

It was not only the First Nations nurses who reflected critically on the notion of "equal treatment for all." One nurse described her colleagues' "feelings" (as she sensed them) about their work with First Nations patients:

> *You get your good and your bad. You get a couple who...don't want to know any more. But most of them are professional enough — if they do have those feelings, they go in and do their jobs and leave. I have seen nothing really overt. I have heard a few comments...I know that the feelings are there.*

Several nurses expressed faith in "professionalism" as the mechanism by which their colleagues would manage their "feelings" towards particular patients. To keep one's biases in check — to "not let it show in your work," in the words of one nurse — was often framed as a professional responsibility:

> *Individuals have individual perceptions, individual biases, depending on how you were brought up, what you experienced in life. You have to make up your mind that you're going to try as much as you can to treat everybody equal. And sometimes it becomes hard. You may generalize. I mean, people generalize all the time. So it's a very individual thing, and in nursing you have to be careful.*

The idea that one can achieve egalitarianism by remaining professional serves to place the responsibility firmly on the shoulders of individuals.

However, focusing on biases as individually held opinions obscures the ways in which individual opinions are actually connected to — and reflections of — much wider social discourses. Wider social discourses can and do exert an influence on nurses' interpretive perspectives, despite personal commitments to the ideals of egalitarianism or professionalism.

Popularized Discourses About Aboriginal Peoples

Awareness of how dominant social views can be given expression through seemingly tolerant democratic discourses helps to explain why some nurses can view "all patients as equal" and, at the same time, view some Aboriginal patients as negative stereotypes. For example, discourses about respect and egalitarianism were sometimes discussed in parallel with constructions of Aboriginal people that reflected popularized negative stereotypes. One nurse described her approach to caring for some patients and the challenges she perceived:

> *I don't approach them [Aboriginal patients] any differently.... I look at them as individuals.... Respect, just show them respect. Have an empathetic attitude. But I also don't let them get away with a lot of what they try and get away with. For example, I find drugs and alcohol are real big problems with First Nations.... It's kind of sad.*

Despite the inherent contradictions in this comment, it is apparent that the critical issue is not the individual beliefs expressed but the extent to which the nurse's thinking is *organized* by racialized assumptions. The image of the "drunken Indian" is one of the most enduring colonizing images pervading Canadian society (Furniss, 1999, p. 107). This stereotype cannot be accounted for as an individually based opinion; rather, it has its origins within the domains of public history, which continue to shape Canadian consciousness.

Canadian social discourses that represent Aboriginal peoples as dependent, as "getting everything for free," or as undeserving recipients of government programs are pervasive in the media, in public debates, and in everyday conversation (Furniss, 1999; Newhouse, 2004; Ponting, 1997). The nurses in this study who were concerned that Aboriginal people "get everything paid for" were reflecting social views expressed more widely. In the absence of strategies or opportunities to think critically about these issues, nurses sometimes drew on powerful dominant discourses to form their understanding of the First Nations patients they encountered in the hospital:

> *I just don't think that throwing large sums of money without any direction or any guidance or any programs helps people who have been sidelined for*

> *a long time. They don't have to pay taxes. They don't have to work. That's how they live. And I think the government precipitates that.*

This view bears a striking resemblance to that expressed in the newspaper editorial cited earlier. In the absence of a broad base of knowledge about the economic and historical issues that have contributed to marginalization from the wage economy, or about the necessity for some communities to rely on government subsidies to maintain a basic standard of living, it can be a challenge to see "dependency" as anything other than a cultural way of life. As one nurse said:

> *The government gives them land, pays for their school. What do they have to do? And that filters right on through to when they come in here [the hospital]. They expect you to give because they are used to having it handed to them…. And as a result they don't have a bottom line, maybe the way you and I would have.*

One of the features of popularized assumptions — particularly in relation to ethnocultural groups — is the way in which they feed into the "us/them" binaries so characteristic of these wider social discourses. Popularized assumptions about Aboriginal peoples tend to portray a self-reliant member of the dominant culture on the one hand and a dependent, irresponsible Other on the other hand. Underlying such constructions is the view that people should be able to overcome social problems, become self-sufficient, and assume personal responsibility for their lifestyles.

These wider social perceptions serve as a lens through which patients' individual circumstances are interpreted. In everyday clinical practice, seemingly innocuous comments can resonate with socially constructed messages. A First Nations nurse recounted her experience caring for an indigent First Nations man who had just been admitted to a ward:

> *He was just covered in dirt from head to toe, so we did what we could and made him comfortable. I felt that everybody was working together. Everybody was doing what was required of them. But then, as we were leaving [the room], somebody made a comment… "There is your argument for land claims." And the conversation kind of turned. Maybe there was something about land claims in the newspapers at the time, because the conversation at the nurses' station turned towards that specifically. You know, "this is where all the money is going" and a general attitude about that. I wanted to cry for that man. I said to them, You can't imagine how this man must feel about himself to allow himself to be that neglected. It doesn't just happen overnight. You know, this is a long process of somebody who feels worthless. This man has nothing to do with land claims. Nothing. He's not going to see a dime. Like I said, they provided*

> *the care, absolutely. But it was afterwards that you could tell there were a lot of bad feelings about the treaties and the land claims.*

As alluded to by the nurse, the assumption expressed in relation to this one patient reflected a much wider range of discourses about Aboriginal rights and entitlements in Canada; comments at the nurses' station thus become part and parcel of the public debate about Aboriginal-state relations. As a microcosm of society, the hospital environment reflects the conversations that are taking place among the general public.

Some nurses spoke from personal experience as First Nations women and focused on the process by which dominant social discourses come into being. As one nurse explained:

> *All over the schoolyard you hear it.... There is that immediate difference between them and us. It's about the things that Natives get, and then, all of a sudden, you are not on the same ground as others. And I think I went through that in high school.*

Some of the non-First Nations nurses also discussed how their experiences living and working in First Nations communities made them aware of the social and historical issues shaping the lives of some patients. One nurse spoke of the perspectives she gained while working in community health:

> *A lot of issues came out. A lot of these women had been abused in the past and it was amazing that they had gotten the strength to decide that they were going to get an education, that they were better than just being put down all the time.*

Certainly, life experiences, social positioning, ethnocultural background, educational preparation, and family upbringing will intersect to shape the kinds of knowledge and perspectives that nurses bring to their practice. The most striking feature in the findings from this study, however, was the extent to which culturalist discourses became intertwined with dominant social stereotypes about Aboriginal peoples and were expressed as fact even as they conflicted with professional discourses about egalitarianism. This illustrates the complex and sometimes contradictory ideologies that can underpin nurses' interpretive perspectives.

Discussion

It is increasingly being recognized that relating to patients on the basis of assumptions and stereotypes can jeopardize the delivery of equitable, effective services (Anderson et al., 2003; Browne & Fiske, 2001; Drevdahl, 1999; Meleis & Im, 1999; Papps & Ramsden, 1996; Reimer Kirkham, 2003; Smedley, Stith, & Nelson, 2002; Sohler, Walmsley, Lubetkin, & Geiger, 2003). Nonetheless, a focus on the attitudes or assumptions of *individual* health-care providers overlooks the fact that attitudes and assumptions are deeply entrenched in dominant culture. Assumptions about Aboriginal peoples or any other group of people do not emerge merely from the misinformed opinions of individual nurses. The participants in this study were not espousing individually based values and assumptions, but were reflecting discourses and assumptions embedded in the dominant society and reinforced through media, institutional policies, and everyday practices (Doane & Varcoe, 2005; Furniss, 1999; Newhouse, 2004).

Nor do nurses intentionally take up these wider social discourses. On the contrary: health-care organizations "are filled with individuals who are deeply committed to their professional work, who are regarded as highly skilled practitioners, who believe themselves to be liberal human beings — and yet they unknowingly, unwittingly contribute to...inequality" (Henry et al., 2000, p. 383). Also, the professional discourses in health care that promote the ideals of egalitarianism are rooted in social and political ideologies (Browne, 2001). Liberalism, as a dominant political ideology, assumes that society is essentially fair and equitable. As Browne (2001) and Doane and Varcoe (2005) argue, liberal ideology has a profound impact on the thinking and practice of nurses and other health-care providers. Liberalism tends to steer attention in nursing away from treating racialization and other forms of inequality as relevant to health care. A recommendation arising from this study, therefore, is that strategies be adopted — in basic nursing education and in programs for practising nurses — to help nurses develop more awareness of how their interpretive perspectives are informed and shaped by wider social discourses. This is no small challenge: with few exceptions, the health and nursing literature in Canada has been silent on issues related to marginalizing and racializing practices (Reimer Kirkham, 2003; Varcoe & McCormick, in press). Nonetheless, there is a growing body of critical scholarship to draw upon, and student and practising nurses alike will benefit from engaging critically and reflexively with these issues in the context of everyday clinical practice. Only when such steps are taken will nurses develop the critical-thinking skills they need in order to question assumptions, challenge dominant discourses, and engage in critically reflexive practice.

Findings from this study also highlight the problems that can arise when narrow understandings of culture and culturalist discourses are applied to particular patients and groups. A second recommendation is that theoretical frameworks or conceptual models be developed to help nurses move beyond conceptualizing culture as primarily a matter of lifestyles, behaviours, values, or choices. In Canada there is growing interest in one such model, that of "cultural safety"[7] (Anderson et al., 2003; Doane & Varcoe, 2005; Downey, 2003; Reimer Kirkham et al., 2002; Smye & Browne, 2002). The central tenets of cultural safety have particular relevance in practice and education. Used as a framework for prompting critical analyses, cultural safety would encourage nurses to question popular notions of culture and cultural differences, to be more aware of the dominant social assumptions that misrepresent certain people and groups, and to reflect critically on the wider social discourses that inevitably influence nurses' interpretive perspectives and practices. These areas of exploration could be catalysts for critically reflexive practice.

These kinds of critical analyses will require a greater nursing emphasis on the sociopolitical context of health-care encounters as well as the socio-economic and historical circumstances that shape patients' health status, opportunities for health, and access to resources. Increasingly, university nursing programs in Canada are incorporating critical pedagogies into their curricula. These could be expanded to focus on, for example, issues of political economy, the historical process of colonization in Canada, and the role of our sociopolitical landscape in shaping inequities. However, the real challenge will lie in developing strategies for fostering critical analyses at the frontlines of health care — in the busy clinical settings in which nurses work. This will require an infusion of support for resources, time, and strategies for critically oriented continuing education activities.

Critical reflection on the discourses that shape nurses' interpretive perspectives provides a window onto the factors that contribute to inequitable relations in health care. Only when we engage in ongoing critiques of how nursing is influenced by these discourses will we be able to contribute more fully to social justice in the realm of Aboriginal health.

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[7] Originally developed in the New Zealand context to address persistent health and access inequities affecting Maori populations, cultural safety extends the analytical gaze well beyond notions of cultural sensitivity to power inequities, institutional forms of discrimination, and the dynamics of health-care relations in a postcolonial context (Papps & Ramsden, 1996; Ramsden, 1993, 2000, 2002).

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Happenings

Aboriginal Health Human Resources Initiatives: Towards the Development of a Strategic Framework

Wendy McBride and David Gregory

The Urgent Need for Aboriginal Health Human Resources

Every province and territory in Canada is experiencing a shortage of health human resources (HHR). This shortage is also evident in Aboriginal communities and in the delivery of health services to Aboriginal people in urban centres. The Royal Commission on Aboriginal Peoples (1996) recommended that 10,000 health professionals be educated over the succeeding decade. In September 2004, following their annual meeting, the First Ministers announced a Pan-Canadian Health Human Resources Strategy with four main components: HHR Planning, Inter-professional Education for Collaborative Patient-Centred Practice, Recruitment and Retention, and Aboriginal HHR Issues. The HHR Strategy seeks to create a stable health-care workforce with an appropriate number and mix of health professionals as well as a renewed and revitalized health system that provides care to Canadians when they need it, regardless of their geographical location.

Because of the poor health indicators among Aboriginal peoples compared to the Canadian population at large, and because of particular issues related to the need for both Aboriginal and non-Aboriginal HHR, governments committed $100 million to an Aboriginal Health Human Resources Initiative (AHHRI). Funding for the Strategy was agreed upon (at $20 million annually) for a 5-year period commencing in 2003–04. The purpose of AHHRI is to

> develop and implement a national Aboriginal Health Human Resources Strategy that will meet the needs of Aboriginal people, and respond to the current, new and emerging health services issues and priorities while integrating with the pan-Canadian HHR Strategy. (Health Canada, 2004)

A particular challenge for the initiative is meaningful involvement by Aboriginal organizations and communities in the development of relevant and effective strategies to increase the number of Aboriginal health professionals and para-professionals. Licensed and non-licensed workers include nurses (registered nurses, registered psychiatric nurses, licensed practical nurses), physicians, pharmacists, psychologists, health administrators, community mental health workers, community health representatives, and others concerned with the provision of health-care services to Aboriginal people.

With respect to nursing and the education of Aboriginal people, substantive consultations had been held over the preceding few years. As Executive Director of the Canadian Association of Schools of Nursing (CASN), Wendy McBride had directed projects for the First Nations and Inuit Health Branch (FNIHB) related to the education of nursing staff and acquisition of the clinical skills needed to work in Aboriginal communities. For example, CASN surveyed nursing schools regarding Aboriginal students, curriculum content related to nursing practice in Aboriginal communities, and supports available to Aboriginal students. McBride also chaired or co-chaired two national workshops on Aboriginal nursing education: the Aboriginal Nursing Education National Invitational Symposium (Canadian Association of Schools of Nursing, 2003), and the Aboriginal Nursing Education Symposium (Aboriginal Nurses Association of Canada, 2004).

David Gregory served as co-chair, with Fjola Wasakesikaw, of the 2002 FNIHB-sponsored Task Force on Aboriginal Nursing, which resulted in a comprehensive set of recommendations in the report *Against the Odds* (Health Canada, 2002). The recommendations addressed the need for systemic approaches to increasing the number of Aboriginal nurses in Canada. These collective experiences could be drawn on in developing strategies for the education of health professionals and para-professionals.

Developing a Strategic Framework for AHHRI

As a first step, we interviewed FNIHB staff and reviewed documents prepared within FNIHB and Health Canada related to Aboriginal Health, the First Ministers meeting in September 2004, and presentations by FNIHB staff to Aboriginal national organizations. We also examined recent reports and strategies prepared by the National Aboriginal Health Organization (NAHO), reflecting consultations with the Assembly of First Nations (AFN), the Inuit Tapiriit Kanatami (ITK), and the Métis National Council (MNC), as well as the report on the Canada-Aboriginal Peoples Roundtable. In addition, Gregory attended a 2-day session on Aboriginal HHR held in Winnipeg, organized by the Assembly of Manitoba Chiefs and arising out of the Romanow Joint Working Group.

Following the interviews and the review of documents and presentations, we determined that considerable thinking and planning had been undertaken by FNIHB, other branches within Health Canada, and Aboriginal organizations. There was congruence between the perspectives of government and those of Aboriginal people with regard to the challenges and opportunities presented in addressing the development of Aboriginal HHR. This congruence is reflected in AHHRI's three stated goals (Health Canada, 2004):

- to increase the number of Aboriginal health-care workers in the workforce
- to improve retention of health-care workers in Aboriginal communities, reduce staff turnover, and encourage Aboriginal health-care workers to practise within communities
- to adapt the present health professional curricula to reflect Aboriginal cultural and traditional needs and knowledge, in order to deliver optimal care to Aboriginal clients

It was also evident that "Aboriginal peoples," for AHHRI purposes, must include First Nations, Inuit, and Métis people whether living in isolated, remote, northern, rural, or urban communities. This is important, as there is an increasing trend for Aboriginal people to move among their communities and from more remote and rural areas to urban settings ("Life in the cities for aboriginal Canadians," 2005); therefore, any strategies and actions undertaken by and with Aboriginal people must include all three levels of government as well as Aboriginal governments and institutions.

The approach we took in conceptualizing a strategic framework was to first identify the main components of a strategy and the common commitment to AHHRI. The main components of a strategy are goals, priorities, actions, participants, partners, and resources, while an essential element in ensuring the success of any strategy is commitment. The commitment of Aboriginal organizations to improving the health status of their people and communities, through the development and involvement of their own health-care providers, can be found in the *Report of the Royal Commission on Aboriginal Peoples* (Royal Commission on Aboriginal Peoples, 1996), *Against the Odds: Aboriginal Nursing* (Health Canada, 2002), the reports on the Aboriginal Nursing Education Workshops held in 2003 and 2004 (Aboriginal Nurses Association of Canada, 2004; Canadian Association of Schools of Nursing, 2003), and the *Strategic Framework* presented to FNIHB by NAHO (2005). Commitment by the federal, provincial, and territorial governments is expressed in the Health Accord (Health Canada, 2003), the Pan-Canadian Health Human Resources Strategy (First Ministers, 2004), and the First Ministers and Aboriginal Leaders Meeting (First Ministers, 2004).

National Strategy Session

FNIHB identified the need for a national strategy session in relation to AHHRI. The agenda for this session was planned with a view to allowing maximum time to hear from Aboriginal organizations about priorities and challenges associated with developing HHR. It was also designed to solicit input from the representatives of national Aboriginal organizations with regard to an action framework. The meeting room was arranged as an "inner circle" of participants from the national Aboriginal organizations[1] and an "outer circle" of observers from the federal, provincial, and territorial governments as well as other invited guests.

NAHO was invited to present the strategies it had envisioned for HHR development as a result of its consultations with national Aboriginal organizations. A panel of representatives of five national Aboriginal organizations (AFN, ITK, MNC, CAP, and NWAC) and NAHO was formed to comment on the NAHO strategies and to present the priorities identified by each organization. In addition, three speakers were invited to give presentations on the postsecondary education of Aboriginal students. These were Peter Nunoda, Director, ACCESS, University of Manitoba, speaking on "ACCESS Programs and Best Practices for Aboriginal HHR Development"; David Gregory, Professor, Faculty of Nursing, University of Manitoba, speaking on "Against the Odds: Aboriginal Nursing"; and Lindsay Crowshoe, Assistant Professor, Faculty of Medicine, University of Calgary, speaking on

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[1] The following national Aboriginal organizations participated in the strategy session: Aboriginal Institutes Consortium (AIC), Aboriginal Nurses Association of Canada (ANAC), Aboriginal Telehealth Knowledge Circle, Assembly of First Nations (AFN), Canadian Aboriginal Nutritionists Network (CANN), Congress of Aboriginal Peoples (CAP), Inuit Tapiriit Kanatami (ITK), Labrador Inuit Health Commission (LIHC), Métis National Council (MNC), National Aboriginal Achievement Foundation (NAAF), National Aboriginal Health Organization (NAHO), National Aboriginal Health Organization – Ajuunginiq Centre, National Indian and Inuit Community Health Representatives Organization (NIICHRO), National Native Addictions Partnership Foundation (NNAPF), Native Mental Health Association of Canada (NMHAC), Native Women's Association of Canada (NWAC), and Aboriginal Human Resource Development Council of Canada (AHRDCC). The FNIHB also extended invitations to provincial and territorial governments, the Canadian Institute for Health Research (CIHR), First Nations University of Canada, other federal departments (INAC, HRSDC), and relevant directorates within Health Canada.

"Cultural Competence."

Building on *Against the Odds* (Health Canada, 2002), we encouraged participants to reflect on specific areas requiring investment in future generations. These are points of vulnerability along the path that most future Aboriginal health-care workers will take. The areas were considered in four stages along the continuum of health-care education and practice: Upstream, Transitions, Access and Admission to Education and Practice, and Future Practice. While not exhaustive, these points are illustrative of the changes needed to increase the presence of Aboriginal people in regulated and non-regulated health professions. The four stages are outlined as follows:

- ***Upstream.*** Improving basic education (K–12) with an emphasis on science, mathematics, English, and literacy; high-school completion and the support needed by students from their parents and communities; marketing of health careers to Aboriginal people through role models and recruitment information on health-care education
- ***Transitions: high-school completion and admissibility to colleges and universities.*** Preparatory or transition programs offered by colleges and universities
- ***Access and admission to education and practice.*** Entrance requirements that are receptive to Aboriginal students; preparatory programs and supports; student supports such as those provided through Native ACCESS programs; practicum opportunities for Aboriginal and non-Aboriginal students in Aboriginal communities; mentors, role models, counsellors, and elders; adequate funding support for Aboriginal students during their education; preparation for examinations and licensing requirements; employment search support
- ***Future practice.*** Continued mentoring and advice; continuing education to develop/maintain knowledge; skills upgrading to advance education levels; additional certification to recognize advanced skills and experience; support for laddering to other education levels; healthy, supportive, culturally appropriate workplaces.

The Next Steps

It is anticipated that further discussions will take place in various regions, provinces, and territories over the next year, to engage and involve Aboriginal organizations and communities in actualizing AHHRI. There will be opportunities for academics and researchers to become involved in the support of Aboriginal groups, institutions, and communities. As noted in *An Environmental Scan of Current Views on Health Human Resources in Canada* (El-Jardali & Fooks, 2005), Aboriginal organizations continue to perceive a lack of Aboriginal and non-Aboriginal HHR as well as a need for culturally competent health care. Data are required on supply and demand as well as on the specific needs of different Aboriginal populations, locations, and communities. Nurse academics and researchers are encouraged to become more aware of the needs and aspirations of Aboriginal students, communities, and practitioners, and to become involved in new approaches to nursing education to meet those needs.

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Résumé

Définir le rôle de l'infirmière en génétique : enquête auprès des infirmières canadiennes

**Joan L. Bottorff, Mary McCullum,
Lynda G. Balneaves, Mary Jane Esplen, June Carroll,
Mary Kelly et Stephanie Kieffer**

Cette étude qualitative avait pour but de décrire le rôle de l'infirmière dans la prestation de services cliniques en génétique offerts aux adultes souffrant d'une maladie héréditaire, et de déterminer les facteurs influant sur cette sphère d'exercice au Canada. Les chercheuses ont mené des entrevues téléphoniques semi-structurées auprès de 22 infirmières réparties dans cinq provinces canadiennes, qui occupent toutes une fonction à temps plein ou partiel dans un service de génétique. Par des questions ouvertes, on a cherché à obtenir des descriptions du rôle qu'elles y jouent et des facteurs qui limitent leurs interventions. L'analyse thématique des entrevues révèle qu'en plus de la consultation génétique, les infirmières assument un large éventail de rôles et de responsabilités qui font directement appel à leurs connaissances en soins infirmiers (p. ex. évaluation du patient, promotion de la santé). À cet égard, posséder une formation en soins infirmiers, savoir travailler au sein d'une équipe multidisciplinaire et la pratique du mentorat constituent des atouts. Parmi les difficultés à surmonter, on souligne l'ambiguïté du rôle, un manque de reconnaissance du savoir-faire de l'infirmière, une offre limitée en matière de formation spécialisée en génétique, l'isolement et l'instabilité des postes en ce domaine. Les auteures formulent des recommandations à l'appui du développement de cette sphère d'exercice. Face à l'intégration de la génétique au sein du système de santé, il faudra coordonner les énergies des principales intéressées à l'échelle nationale afin d'obtenir les ressources qui permettront d'exploiter à bon escient le savoir-faire des infirmières.

Mots clés : services en génétique, formation en soins infirmiers, rôle de l'infirmière, consultation génétique

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Establishing Roles in Genetic Nursing: Interviews With Canadian Nurses

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The purpose of this qualitative study was to describe nurses' roles in providing clinical genetic services related to adult onset hereditary disease and factors that influence genetic nursing practice in Canada. The study involved semi-structured telephone interviews with 22 nurses from 5 Canadian provinces with full-time or part-time roles in providing genetic services. The interviews included open-ended questions to elicit descriptions of genetic nursing roles and factors that support and limit opportunities in genetic nursing practice. Thematic analysis of the transcribed interviews revealed that, in addition to genetic counselling, the nurses reported a wide range of roles and responsibilities related to the provision of genetic services that drew directly on their nursing background (e.g., patient assessment, health promotion). Factors identified as supporting genetic nursing roles included nursing background, being part of a multidisciplinary team, and receiving mentorship. Challenges in establishing roles in genetic nursing were related to role ambiguity, lack of recognition of nursing expertise, limited availability of genetics education, isolation, and instability of nursing positions. Recommendations to support the development and expansion of genetic nursing practice were identified. A coordinated national effort among all stakeholders is needed to provide the resources necessary to support the appropriate and effective use of nursing expertise as genetics is integrated into the Canadian health-care system.

Keywords: genetic services, nursing education, nurses' roles, genetic counselling

Introduction

Nurses have a long history of caring for individuals and families affected by genetic conditions. Although community health and pediatric nurses were among the first to incorporate genetic knowledge into nursing practice in Canada and other countries (Lea, Anderson, & Monsen, 1998), with recent developments in medical genetics the roles and responsibilities of all health-care providers are being redefined. For example, as a result of growing attention to the genetics of adult onset hereditary diseases (e.g., cancer, Alzheimer disease), nurses in many practice settings are more frequently called upon to address questions from patients or family members about the risk for familial diseases (Lea, Williams, Jenkins, Jones, & Calzone, 2000; Peterson, Rieger, Marani, deMoor, & Gritz, 2001). Although anecdotal evidence suggests that nurses are taking on more specialized roles in the provision of genetic services for adult onset hereditary disease, few empirical studies describing these roles have been conducted.

International developments with regard to nursing roles in the provision of genetic services have begun to be described (Feetham, 2004). Nurses in the United States have been leaders in the development of genetic nursing. For example, American oncology nurses have acknowledged the essential role of genetics in their understanding of cancer and the provision of comprehensive patient care. Specific levels of nursing practice in cancer genetics have been described and work is ongoing to support their implementation (Oncology Nursing Society, 2000). Some nurses are establishing roles on specialized genetics multidisciplinary teams, while others are addressing genetics in the context of primary health care (Lea, 2000; Peterson et al., 2001). Organizations such as the International Society of Nurses in Genetics (ISONG), the American Nurses Association, and the Association of Genetic Nurses and Counsellors (in the United Kingdom) have developed standards of practice for both basic and advanced nursing roles in genetic services (Association of Genetic Nurses and Counsellors Education Working Group, 2002; International Society of Nurses in Genetics and American Nurses Association, 1998; Oncology Nursing Society, 2000).

In Canada there has been limited discussion of the role of nurses in providing genetic services. While there is anecdotal evidence that nurses are already delivering genetic services, we were able to locate only one Canadian survey addressing this topic (Bottorff, Blaine, et al., 2005). Participants in this national survey included 975 nurses. The findings indicate that nurses believe they play important roles in the provision of genetic services for adult onset hereditary disease. The respondents strongly supported nursing roles related to risk assessment, providing education related to adult onset hereditary disease and genetic testing, providing supportive counselling to address emotional reactions to perceived risk, and supporting individuals and families in carrying out management plans. However, Canadian nursing organizations do not appear to have identified genetics as a priority within the scope of professional nursing practice. In addition, there are few, if any, Canadian nursing education programs or courses that focus on preparing nurses to provide genetic services.

Considering the lack of attention to nursing roles in the provision of genetic services in Canada, the purpose of this descriptive exploratory study was to describe the roles of Canadian nurses whose clinical practice involves the provision of genetic services related to adult onset hereditary disease, including factors that support and limit opportunities for genetic nursing practice.

Methods

A descriptive qualitative approach was used to guide data collection and analysis (Sandelowski, 2000). Following approval by the University of British Columbia ethics review board for behavioural research, we recruited nurses who provided any kind of genetic service related to adult onset hereditary disease (e.g., education, counselling, psychological support, risk assessment, screening) to individuals, families, or communities. Notices about the study were sent to provincial centres providing genetic services, national and provincial professional nursing groups, and the Canadian Association of Genetic Counsellors (CAGC). We also placed recruitment notices on e-mail distribution lists and Web sites and in professional journals and newsletters, and we distributed invitations at relevant nursing and genetics conferences. To ensure a broad range of perspectives and to ensure that the sample was as representative as possible, we asked participants to identify other nurses who could be invited to participate in the study. We attempted to recruit nurses from all provinces, from rural and urban settings, and from a range of practice settings. Nurses who provided genetic services as a part of their job were included as well as nurses for whom it was a full-time responsibility.

Following informed consent, a semi-structured telephone interview was conducted with each participant by a trained interviewer. The interview included a series of open-ended questions designed to elicit descriptions of the nurse's current role in genetics, the context in which the role evolved, factors that supported and limited her or his nursing practice related to genetics, necessary knowledge and skills, opinions about the future of genetic nursing practice, and suggestions for genetics education programs for nurses. Participants were also asked to provide copies of their job descriptions.

The telephone interviews were audiotaped, transcribed verbatim, and checked for accuracy. The investigative team reviewed initial interviews independently and then met to reach consensus on important themes (Miles & Huberman, 1994). The identified themes were used to develop a coding framework and the data were coded using NVivo, a computer program to facilitate textual analysis. Data retrieved under each code were reviewed in detail, role descriptions were compared and contrasted, areas of agreement and disagreement were explored, and key findings were summarized incorporating representative quotations. In addition to standard procedures for protecting participant anonymity, the nurses' roles are described in broad terms only, with no reference to their institution or region.

Findings

Description of Participants

Twenty-two nurses from five Canadian provinces were interviewed (see Table 1). The sample represented a range of years of experience in nursing and in providing genetic services. Almost one third of the participants had played a role in genetic nursing for 20 years or more. Over half of the participants described adult onset hereditary disease as the primary focus of their current clinical role. The majority worked as part of a multidisciplinary team. Others who spent the majority of their time providing genetic services were in nurse educator or research positions or had been hired as coordinator or manager of a clinic providing genetic services.

Table 1 *Characteristics of Respondents (*N *= 22)*

Age (years)	Mean = 48.3 (Range 29–63)
Highest level of education in nursing	
Diploma	6
Bachelor's degree	13
Master's degree	3
Highest level of education outside of nursing	
None	13
College diploma/certificate	2
Bachelor's degree	2
Master's degree	5
Genetics education (number of "yes" responses)	
No formal education in genetics	9
Genetics content in undergraduate/ graduate programs	4
Continuing education programs	5
Number of years of practice in nursing	Mean = 23.6 (Range = 5–38)
Number of years in genetic nursing	Mean = 11.6 (Range = 0.5–25)
Current work location (multiple responses)	
Metropolitan/central city	13
Metropolitan/suburbs	4
Small/mid-sized city	1
Rural community/town	9

The nurses described a wide variety of ways in which they had moved into the role of providing genetic services. Some had been asked to set up a new genetics clinic, step into a newly created position, or accept a genetic counselling position when no MSc-trained genetic counsellor was available. In addition, nurses who were providing some genetic services (e.g., in relation to prenatal genetics) described having extended their scope of practice to meet the needs of individuals and families at risk for adult onset hereditary disease. In the absence of formal programs to support nurses in making these transitions, the mentorship of medical geneticists, physicians, nursing leaders, and members of multidisciplinary teams was viewed as a critical factor in the development of nursing roles. The nurses reported that as they developed their genetics knowledge and skills, their responsibilities and degree of autonomy increased.

Roles and Responsibilities

The nursing roles described by participants were clustered into five focus areas representing the scope of genetic nursing practice: genetic counselling, community genetics, genetics education, clinic coordination, and genetics research. The role clusters were found across settings and included overlapping responsibilities, as shown in Table 2. The majority of the nurses reported that one of their main responsibilities was genetic counselling; this group included some nurses with the job title of genetic counsellor. In attempting to convey the unique nursing perspective brought to genetic counselling, the participants described their approach as "holistic" and "compassionate." Although some identified limitations in their genetics knowledge, they believed that their nursing background prepared them to counsel on genetic disorders within the complexity of individual and family life:

> *I think that nurses are probably trained to take a psychosocial history and better assess for anxiety or depression and things like that simply because of their training.... One of the strengths of nurses is that we are able to do more of a holistic assessment...the person has a genetic disorder, but that's just the diagnosis.*

Although some nurses appeared proud to be working as genetic counsellors, others were uncomfortable with this job title because it did not acknowledge their nursing skills:

> *Do I ignore my nursing function when I'm working as a genetic counsellor? And the answer to that is no... I have never been given the title or any acknowledgement of my nursing role in genetics.... It would be very nice if my title could reflect the nursing role...for example, Advanced Practice Nurse in Cancer Genetics, which is what I am actually doing.*

Table 2 ***Nursing Roles by Cluster***

Role Cluster	**Setting**	**Responsibilities**
Genetic counselling (*n* = 7)	Hospital or regional clinics, general genetics or cancer genetics	Conduct genetics assessment and counselling, communicate risk information, provide screening recommendations, offer genetic testing and address related issues, provide emotional support, take health history, offer health education, coordinate care, educate professionals in genetics, coordinate clinic and perform administrative functions, coordinate research
Community genetics (*n* = 3)	Public health units	Provide genetics education, engage in health promotion, provide emotional support, assess family history, make referrals and connect patient to genetic services, coordinate follow-up care
Genetics education (*n* = 5)	Specialty clinics (e.g., adult metabolic, cancer); primary care clinic	Provide patient assessment and genetics education, provide professional genetics education, clarify risk assessment and provide follow-up counselling, facilitate support groups, engage in program planning
Clinic coordination (*n* = 4)	Specialty and general genetics clinics	Assess patient health and prepare patients for clinic visits, provide patient education and support, provide and coordinate follow-up care, coordinate referrals and team services, perform administrative functions, coordinate research
Genetics research (*n* = 3)	Centres with research programs in clinical genetics	Assist with conduct of research programs, construct pedigrees and family history, provide risk assessment, coordinate referrals, organize screening

In addition to genetic counselling, participants described a wide range of responsibilities that drew on their nursing background (e.g., patient assessment, health promotion). There was also evidence of new roles emerging for nurses. Some participants described nurse educator positions, with nurses working collaboratively alongside genetic counsellors in specialized clinical roles (e.g., in a cancer genetics program) or as part of multidisciplinary teams in specialized clinics (e.g., in a metabolic disorders clinic). One nurse working in a primary care setting described the need for genetics to be integrated into her practice so she could provide education to patients and families identified as at risk for adult onset hereditary disease. A number of participants described the potential for advanced practice nurses to provide genetic services in various clinical specialties. However, the participants identified many factors that challenged as well as supported their ability, at present and in the future, to fulfil such roles.

Factors Supporting the Development of Genetic Nursing Roles

The participants expressed enthusiasm for their work in genetics and were excited about their roles. One nurse exclaimed, "I love my job, that's for sure." Factors identified as supporting their genetic nursing roles included their nursing background, being part of a multidisciplinary team, and receiving mentorship.

Nursing background. Participants described nursing education and experience as invaluable in carrying out genetic nursing responsibilities. A nursing background equipped them to provide genetic services with an appreciation for the emotional, psychological, and social impact of disorders on individuals and families and gave them the skills to plan and manage patient care. Nursing knowledge was also cited as an asset in developing programs to provide genetic services, supporting patients' successful navigation of health-care services, and communicating effectively within multidisciplinary teams. A nursing background was also said to be helpful in genetics roles because of the positive public image of nurses: "People know what a nurse is and they've probably had some good experiences with nurses, whereas I'm not sure they really know what to expect from a genetic counsellor."

Multidisciplinary teamwork. Fifteen of the 22 nurses were members of a multidisciplinary team and another five described their work as a combination of independent and collaborative practice. Participants commented on the benefits of teamwork in terms of ready access to a broad knowledge base and the opportunity for professional collaboration and support:

> *Well, certainly in terms of explaining basic genetics, I can explain that to anyone probably in my sleep, but if something unusual shows up on a genetic test…that is the benefit of working in a multidisciplinary team — if you don't know the answer maybe somebody else does.*

The complementary roles within the multidisciplinary team were also recognized as supporting genetic nursing practice. Nurses who acknowledged that role overlap was the reality of a team approach often spoke of its benefits: "We definitely do have overlap in all our roles…depending on how busy one person is…we're all willing to step in and help each other out, so it's very collaborative and supportive."

Mentorship was a key factor supporting the nurses, whether they were in established genetic nursing roles or were involved in developing new roles. For example, geneticists provided the education and training in genetics that some nurses needed: "The doctor I work with is a huge mentor…. She's considered an expert in so many of these diseases…. She always takes the time to discuss things with me." Other nurses identified mentors with diverse backgrounds. Although the nurses appreciated the mentorship they received, some lamented the fact that they did not have access to the mentorship of expert genetic nurses.

Challenges to Nurses Providing Genetic Services

All the participants discussed the more difficult aspects of their roles. Five major challenges were identified by nurses as they described their work in providing genetic services for adult onset hereditary disease: role ambiguity, lack of recognition of nursing expertise, limited genetic education, isolation, and instability of nursing positions.

Role ambiguity was a common theme for those nurses with primary responsibility for providing genetic services: "I sometimes feel like a bit of a lost discipline, kind of caught between genetic counselling and nursing"; "I would have to say I'm always working as a registered nurse. However, my primary function is genetic counselling…. Am I doing nursing or am I doing genetic counselling or am I doing both?" Some nurses expressed the belief that when nursing is removed from genetic counselling, something meaningful and significant in the role is lost. One nurse was adamant that genetic nurses with nursing degrees should not call themselves genetic counsellors. She believed the title of genetic counsellor should be reserved for those with specific credentials. This reflects the current trend to limit the title to those who have completed MSc genetic counselling programs.

Ambiguity was heightened when the title of genetic counsellor was applied inconsistently. Several nurses reported being hired into genetic counselling positions that required an MSc even though they lacked this qualification. Another nurse's job title was modified from "community genetics counsellor" to "community genetics nurse" without any corresponding change in responsibilities. The titles that the nurses held were, therefore, not insignificant and reflected the contested nature of nursing roles in the provision of genetic services.

Nurses described territorial issues that sometimes resulted in conflict. Some related these issues to the similarity of the work done by dedicated genetic counsellors and nurses providing genetic counselling. Others believed genetic counsellors were protective of their role and did not appreciate nurses' knowledge and expertise in genetics. One nurse with 22 years of nursing experience in genetic services stated:

> *I don't want to paint them all [MSc-prepared genetic counsellors] with that brush, because some of the best resources for me...have been some of the people that have come out of the master's program.... But then they are coming out with that feeling that we are only nurses and getting them to work comfortably with us sometimes is difficult.... They say, "You are only a nurse...I don't feel you should be doing this."*

The animosity that sometimes resulted between nurses and MSc-prepared genetic counsellors was described by one nurse as "an us and them thing" and by another as "a bit of discrimination." Interestingly, one nurse observed, "The nurses who have gone [on] to become genetic counsellors are the ones who have actually given us the most noise about it."

Lack of recognition of nursing expertise. Several nurses spoke of the challenges they faced in establishing themselves as nurses providing genetic services. One nurse compared the worlds of genetics and nursing as different cultures: "As long as you're working within that genetics world, everything's okay and they can understand, but as soon as you start introducing nursing concepts...that's where I find the understanding and tolerance breaks down." While some of the nurses believed their nursing background was "played down" or unrecognized in the delivery of genetic services, ironically their responsibilities appeared to demand a strong nursing background. One nurse boldly stated, "If you are in genetics they almost presume that you are not a nurse."

One nurse sought guidance because she was concerned that providing surveillance guidelines and risk-assessment information might fall outside the scope of nursing practice: "So we did go to the College of Nurses and asked about liability and what scope of practice might be. So we did get some reassurance...[that] we are within our own boundaries."

Limited genetics education. A number of the nurses candidly acknowledged that their lack of formal education in medical genetics was a challenge. None of the 22 participants had a degree in genetic counselling, although eight held other graduate degrees (in nursing, education, administration, and sociology). They were frustrated at the lack of specific courses in genetics and nursing programs with a genetics focus or specialty. The difficulty of keeping pace with the rapid expansion of genetics knowledge, regardless of educational background, was also highlighted. In the absence of genetics education opportunities, the nurses looked for other ways to extend their knowledge and skills:

> *You have to very much educate yourself. You need to get that basic knowledge that is just at the fingertips of somebody who's been through a master's program. And it's doable…you [just] have to work a little bit harder at it.*

One nurse was enrolled in a PhD program but still felt she could never learn enough about genetics: "I still don't know everything I need to know about genetics…and the issue with this is — and it may sound very bitter — but I think at the end of the day I'll be a nurse who's trying to play at genetics."

Isolation. Isolation was a significant challenge for the participants. Those who worked in rural or remote settings experienced isolation from expert resources due to their geographic location. Others worked in situations where they were the only nurse on a multidisciplinary team or where they were the "specialist" in providing genetic services (e.g., community genetics nurse). A nurse who worked in a clinic described the situation:

> *I'd say [the] number one challenge and problem is the isolation. I work within a multidisciplinary team and everyone's fantastic…but as a nurse there's not a lot of people in the field, and I tried to establish a listserv about a year ago to share ideas and resources, but there's nobody else working in the same kind of [setting] as I do.*

The lack of professional contact with nurses doing similar work hindered the participants' efforts to share knowledge and experiences with other nurses, to advocate for or organize education programs, and to build a genetics nursing specialty in Canada.

Instability of nursing positions. Without clear acknowledgement of nursing in either job titles or job qualifications, some participants believed that the specialized roles nurses had established in genetics were under threat. Several nurses stated that new genetic counselling positions had been designated as non-nursing; as a consequence nurses working in existing positions perceived themselves as a "dying breed" because future vacancies would be filled by MSc-trained genetic counsellors. One nurse who had been involved in genetics for over 30 years lamented the shift away from nurses providing important genetic services: "Every time there's something exciting and different happening in nursing, it gets taken over by another profession."

Other dynamics also contributed to the perceived instability of nursing roles in genetics. In some instances, health-care restructuring or dependence on grant funding threatened nursing positions. In one region the nurses reported the closure of clinical programs in genetics and the laying off of nurses. In another region a participant feared that nursing positions in genetics would not be continued when incumbents left their jobs. In a climate of lean health-care budgets, many nurses acknowledged that funding for professional development was no longer tenable and that this adversely affected their role stability.

In other situations, nurses reported that administrators advocated for nursing positions in genetics. One nurse proudly described how the medical director of her clinic "fought" for her position when it was slated for cutting. Another nurse highlighted the importance of support from the nursing leadership in her organization: "Our program director was also a nurse who developed this whole program… As long as there's a nurse manager we'll be able to expand the role of nurses in genetics here."

The potential loss of nursing involvement in genetics was viewed as disadvantageous to both nursing and genetic services. The most experienced nurse genetic counsellor among the participants spoke dramatically about the future: "I believe that we are really losing some of the core and the heart of genetic counselling by losing nurses in the field."

Professional Membership and Certification

Professional membership and the need for certification were identified as both potential facilitators of and challenges to the establishment of nursing roles in genetics. Some nurses expressed the belief that membership in an organization such as the CAGC is immensely beneficial, while others emphasized the importance of achieving certification in genetics and still others argued that genetics nurses in Canada need their own association and certification process. Membership in the CAGC was perceived as offering opportunities for continuing education (e.g., through annual conferences) and as a means for nurses to gain the recognition they seek from the genetics community.

The advantages of certification in genetics were referred to repeatedly in the interviews. The nurses expressed the belief that without this credential they were judged as under-qualified by MSc-prepared genetic counsellors. One nurse who was certified through the CAGC examination process explained:

> *There was always this perception that you were doing what you were doing but you didn't have the credentials to do it.... If nurses across the country could eventually write the certification exam and pass, then obviously we have the ability.*

Another nurse said that certification would enhance her confidence in providing genetic services: "I wish I had my certification because...it wouldn't help me with families, but I would be more sure of myself as far as the actual genetic information."

Although two of the seven nurses whose primary function was genetic counselling held CAGC certification, credentialing by non-nursing organizations was not the route favoured by other participants. For example, one participant was pursuing ISONG certification. Some participants expressed the view that nurses should seek to strengthen their skills and knowledge from within the nursing profession rather than look to outside associations:

> *I guess when I was hired into this position I thought that I needed my certification in genetic counselling. Then I sat back and thought about it, and no, I'm not getting that. I'm a registered nurse. I'm licensed and I'm going to build the genetics in nursing rather than dismiss what I have and become a certified genetic counsellor. They're different but complementary.*

Recommendations by Participants

When asked to share their recommendations for expanding genetic nursing roles, most of the participants focused on education. Although most recommended that genetics content be incorporated into undergraduate nursing programs, the extent to which and manner by which this might occur were not congruent across interviews. Two nurses stated that undergraduate nursing students should learn about patterns of inheritance and develop the skills necessary to assess family history. The participants tended to see the specialty areas of nursing and postgraduate programs as the ideal intervention points for intensive genetics training. Several suggested a 1-year certificate or diploma program for nurse practitioners in genetics, or an additional specialty year, following baccalaureate nursing education, focused on genetics. Others expressed the view that the requirement for nurses should simply be master's-level training in genetic counselling. Some participants insisted on the need for nursing specialties (oncology, cardiology, pediatrics, etc.) to integrate genetics, rather than the creation of entirely new genetics-based programs. One nurse stated: "I don't see any need for us to develop a cancer genetics nursing certification program, but [we do need] to acknowledge the component of genetics within oncology nursing certification." Another nurse, referring to a successful project in the United States, recommended the introduction of intensive summer programs in genetics in Canada.

When asked to predict future genetic nursing roles, almost half the participants said they believed that educating individuals and families in genetics would become a major responsibility for nurses. Other predictions offered by the participants included increasing opportunities to provide genetic services related to risk identification, taking family histories, and making referrals to connect patients with genetic resources. The participants envisioned nurses as primary care providers in genetic services and as coordinators of screening and/or case management programs. Over one third of the participants targeted genetic counselling as a nursing responsibility in the future. However, they did not agree on how the role might be recognized or credentialed. A smaller number of participants suggested that efforts should focus on nursing roles that complement rather than duplicate the responsibilities of genetic counsellors.

Discussion

This is the first study of Canadian nursing roles in genetic services for adult onset hereditary disease. The findings add to the small body of research conducted in other countries documenting emerging roles for nurses in the field of genetics. The findings reflect wide gaps in nursing education related to genetics. Many of the participants had grown with the field, entering genetics over 20 years ago, when genetic knowledge was far less developed than it is today. These nurses had accumulated vast knowledge and experience, and they recognized that other nurses would have difficulty stepping into their jobs. This concern is mirrored in a recent national survey of Canadian nurses (Bottorff, Blaine, et al., 2005). Survey findings indicate that while nurses endorse nursing roles in the provision of genetic services for adult onset hereditary disease, they lack the confidence and training necessary to fulfil these roles. The integration of genetics into health care will stimulate the further evolution of nursing roles, as well as the related development of a coherent approach to defining levels of genetic nursing practice and the preparation required for specific expanded roles. Frameworks for differentiating elementary, specialist, and advanced practice nursing roles may prove useful (Bottorff, McCullum, et al., 2005; Daly & Carnwell, 2003).

Experts claim that the absence of genetic nursing education has led to increased dependence on other disciplines (e.g., medical genetics) for genetics education, the adoption of standards of practice that are not based on nursing models of care, the undervaluing of nurses' roles in genetics, and constraints on the provision of primary care by nurses

(Anderson, 1996; Jenkins, 1997; Kirk, 1999). The findings of our research provide some support for these concerns. The nurses we interviewed lacked opportunities for genetics education and, without genetics credentials, were often seen as ill qualified to provide genetic services. In addition, their nursing expertise was often unrecognized in genetic service delivery. This may have been linked to their dependence on mentors from outside of nursing, because they usually worked in isolation from other nurse experts.

Nurses' educational needs related to the provision of genetic services have been linked to the absence or near absence of genetics content at all educational levels, and there have been urgent calls for changes to nursing education (Anderson, Monsen, Prows, Tinley, & Jenkins, 2000; Bottorff, McCullum, et al., 2005; Gottlieb, 1998; Kirk, 2004; Lashley, 2001; Peterson et al., 2001). Educational opportunities at the undergraduate and graduate levels are needed, to raise awareness about the implications of genetic discoveries for health care and to support nurses as they incorporate genetics into their practice. Continuing education for practising nurses and faculty members is also required. Genetic nurse scholars have pointed out that competencies to be considered for genetic nursing practice represent not an extension of professional practice but, rather, a reinterpretation of existing competencies "through a genetic lens" (Kirk, 2004). Because many of the nurses we interviewed were members of a multidisciplinary team, there may be advantages, as has been suggested elsewhere, to nurses becoming involved in inter-professional genetics education, in order to build collaborative working relationships (Jenkins, 2002; Jenkins, Dimond, & Steinberg, 2001).

The importance of integrating psychosocial and emotional support into genetic services has been acknowledged by Ontario's Provincial Advisory Committee on New Predictive Genetic Technologies (2001). The participants in our study indicated that they possessed the skills necessary to provide psychosocial support in complex family situations. Such nurses are well positioned to use their expertise to address this need. As genetic services expand and place increasing demands on the limited genetic counselling resources, there will be additional opportunities for nurses to provide the psychosocial support required by patients and families.

The role ambiguity that some participants described cannot be ignored. These nurses struggled with their nursing identity when they were providing genetic counselling and other genetic services. Jenkins (2000) suggests that role ambiguity may be a factor in the profession's reluctance to recognize genetics as integral to nursing practice. She cautions that nurses, in concert with other health-care specialists, will continue to be challenged to define genetic roles. In our study, mentorship by non-nurses, professional isolation, and inconsistent job titles and qualifications appeared to contribute to the participants' lack of clarity about nursing roles. Although some participants described collegial and effective working relationships with genetic counsellors, for others the relationship was strained by perceived role overlap and inequalities. Unlike in the United Kingdom, where the majority of genetic counsellors are nurses, in Canada and the United States genetic counselling has developed as a sub-speciality outside of nursing. With the evolution of two disciplines providing genetic counselling, the need for collaboration between nursing and genetic counselling is obvious. A decade ago, nurses writing in the *Journal of Genetic Counseling* attempted to clarify the unique and complementary roles of genetic nurses and genetic counsellors (Lea, Williams, & Tinley, 1994). Currently, efforts are underway in the United States and the United Kingdom to further delineate genetic nursing roles and competencies (International Society of Nurses in Genetics, 2003; Kirk, McDonald, Longley, & Anstey, 2003). Our findings suggest that similar initiatives are urgently needed in Canada, to support genetic nursing practice and to inform other health professionals about nurses' contributions to genetic services.

Although credentialing in genetics may be one way to support nurses whose work is focused on the provision of genetic services, there was no consensus among our participants on the most effective model. Few of the participants sought or held a genetics credential. However, most participants were at mid- to late career and may not have had opportunities to pursue a certification process. Furthermore, beginning in 2009, nurses without an MSc in genetic counselling will be ineligible for certification through the Canadian Association of Genetic Counsellors. There will be no Canadian options to obtain a nursing genetics credential. Although some of our participants wished to have a nursing credential in genetics, none had pursued non-Canadian alternatives such as the newly developed professional portfolio evaluation process offered by the ISONG (Cook, Kase, Middelton, & Monsen, 2003). At the recent Canadian Planning Forum on Nursing in the Genomic Era, participants pointed to the urgency of establishing a process for nurses to obtain genetics credentials (Bottorff et al., 2004). Until a Canadian option is developed, nurses need assurances that non-Canadian genetics credentials will be recognized.

Interestingly, despite being Canadian pioneers in genetics nursing, our participants did not describe themselves as taking on leadership responsibilities to advance the profile of nursing in genetics. Few seemed to be aware of standards for genetic nursing practice developed in other countries and how such resources might support them in their roles. Barriers to the development of nursing leadership in genetics suggested by our findings include a lack of resources to support networking, working across a wide range of clinical specialties associated with adult onset hereditary disease, and the instability of nursing positions. However, the passion and enthusiasm expressed by our participants suggests that there is tremendous potential to develop a strong voice for genetic nursing in Canada.

The findings of this study should be considered in light of several limitations. Despite concerted recruitment efforts, the participants may not have been fully representative of nurses who provide genetic services in Canada. Some nurses working as genetic counsellors may not have responded to our recruitment efforts targeting nurses. In addition, nurses working in specialty clinics and primary care may not have recognized the genetic component to their work. Finally, not all provinces were represented in the sample. However, the consistency of the themes expressed by the participants indicates that our findings represent the perspectives of nurses who incorporate genetics into their practice.

In summary, this study clearly indicates that nurses are providing a variety of genetic services for adult onset hereditary disease in Canada. With the continuing developments in medical genetics, it is predicted that genetics will become a part of every nurse's role in all settings (Cook, 2003; Jenkins & Collins, 2003). A coordinated national effort by professional nursing organizations, educational institutions, health-care agencies, and all levels of government is needed to support the appropriate and effective use of nurses' skills, knowledge, and expertise as genetics is integrated into the Canadian health-care system.

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Résumé

Analyse critique de l'évolution du rôle de l'infirmière praticienne au Canada

Lorna de Witt et Jenny Ploeg

Cet article propose une analyse critique de l'évolution du rôle de l'infirmière praticienne (IP) au Canada, en prenant pour exemple la province de l'Ontario. Il repose sur deux modèles théoriques choisis dans le but de mettre en évidence son développement historique et de dégager des pistes pour l'avenir. L'évolution du rôle d'IP comporte deux stades essentiels : le lancement et l'interruption (du début des années 1970 au milieu des années 1980); l'établissement et l'impasse (début des années 1990 à aujourd'hui). Parmi les obstacles actuels à la pleine intégration des IP en soins primaires, on souligne l'absence de plan de financement réaliste et stable, les contraintes limitant l'étendue de la sphère d'exercice, les tensions professionnelles entre médecins et IP et la piètre connaissance qu'ont le public et les professionnels du rôle en question. Pour surmonter ces obstacles, les infirmières praticiennes devront plaider leur cause, exercer des pressions et sensibiliser la population.

Mots clés : infirmière praticienne, histoire de la profession infirmière, soins primaires

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Critical Analysis of the Evolution of a Canadian Nurse Practitioner Role

Lorna de Witt and Jenny Ploeg

The purpose of this paper is to critically analyze the evolution of a nurse practitioner (NP) role in Canada using the province of Ontario as an example. Two theoretical models are used to highlight the historical development of this role and provide direction for further NP role development. The evolution of the NP role encompasses 2 critical phases: initiation and discontinuation (early 1970s to mid-1980s) and establishment and impasse (early 1990s to the present). Current barriers to the full integration of NPs within primary health care include the lack of a workable and stable funding plan for NPs, restrictions on scope of practice, work-related tensions between physicians and NPs, and lack of public and professional awareness of the role. Nurses can address these barriers through advocacy, lobbying, and public education.

Keywords: nurse practitioners, history of nursing, professional role, primary health care

In the early 1970s a physician shortage limited access to primary health care in the Canadian province of Ontario (Angus & Bourgeault, 1999; LeFort & Kergin, 1978; Mitchell, Pinelli, Patterson, & Southwell, 1993). The nursing profession seized the opportunity to fill this service gap through the education and establishment of a new class of nurses called nurse practitioners (NPs) (Angus & Bourgeault; LeFort & Kergin; Mitchell et al.). Although research evidence justified the NP role in health care, government funding of NP programs was discontinued in 1983 (Angus & Bourgeault; LeFort & Kergin; Mitchell et al.). Remarkably, in 1998 the Ontario legislature established Primary Health Care NPs as a new class of Registered Nurse (College of Nurses of Ontario [CNO], 2000b).

This paper examines the movement within the Canadian nursing profession towards implementation of an NP role using Ontario as an example. Two theoretical models are used to provide critical insight into the development of the role. Abbott's (1988) socio-historical theory of professional development situates professions within an interdependent system characterized by competition and conflict against a broad cultural, political, and economic context. The resulting analysis reveals tensions opposing the NP movement and the distinctive nature of their resolu-

Table 1 *Conceptualization of the Nurse Practitioner Role*

Role Component	**First Critical Phase: Initiation and Discontinuation (early 1970s–mid-1980s)**	**Second Critical Phase: Establishment and Impasse (early 1990s–present)**				
Title	Nurse Practitioner	Primary Health Care (PHC) Nurse Practitioner	Acute Care Nurse Practitioner	Neonatal Nurse Practitioner	Specialty Nurse Practitioner	Family Nurse Practitioner
Legislative protection of title	None	Yes	None	None	None	None
Protected title	None	RN (Extended Class) or RN (EC)	None	None	None	None
Regulatory body	College of Nurses of Ontario	CNO	CNO	CNO	CNO	CNO
Registration class	General	Extended Class	General	General	General	General
Independent authority to initiate three additional controlled acts	Not applicable. The *Regulated Health Professions Act* (1991) was not in effect during this phase.	Yes	No	No	No	No

Source: Adapted from Dacres & Clarke (2003).

tion. Freidson's (2001) theory extends Abbott's framework by crystallizing these tensions within a model of three competing ideologies. Superimposing ideologies of consumerism, managerialism, and professionalism, as defined by Freidson, upon the socio-historical analysis evokes a new understanding of the past. Lessons learned from this analysis of the evolution of the NP role provide insights with regard to development of the NP role in other provinces.

The evolution of the NP role encompasses two phases. The first, characterized by initiation and discontinuation of the role, extends from the early 1970s to the mid-1980s. The second, characterized by establishment of the role and an impasse in its evolutionary momentum, extends from the early 1990s to the present.

A conceptualization of the NP role by critical phase is summarized in Table 1. Presently, only Primary Health Care NPs are eligible for registration with the College of Nurses of Ontario's Extended Class (CNO, 2000b; Dacres & Clarke, 2003). The following application of Abbott's (1988) theory provides a critical analysis of the evolution of the primary health care NP role in Ontario.

Socio-historical Analysis: Tensions and Their Resolution

Abbott's (1988) theory situates professions within an interdependent system. Each profession functions within boundaries known as jurisdictions. These jurisdictions are perpetually in conflict, triggered by events called system disturbances.

System Disturbances

Abbott's (1988) theory accentuates two complex socio-historical events that merged to become triggers for the initial system disturbance between medicine and nursing, leading to the initiation of the NP role: implementation of universal publicly funded medical insurance (Torrance, 1998), and a perceived physician shortage (Angus & Bourgeault, 1999; Canadian Institute for Health Information [CIHI], 2001; Haines, 1993; LeFort & Kergin, 1978; Mitchell et al., 1993). Table 2 shows the relationship between each system disturbance and critical phase.

The implementation of universal publicly funded medical insurance challenged successive Canadian provincial and federal governments (Torrance, 1998). The *Hospital Insurance and Diagnostic Services Act* (1957) protected the public's right to insurance coverage for hospital care, including physician services (Madore, 2001; Torrance). By 1972 all existing provincial and territorial health insurance plans provided universal coverage for insured physician services, in both hospital and

Table 2 ***System Disturbances Influencing Evolution of the NP Role***

System Disturbances (Abbott, 1988)	**First Critical Phase (early 1970s–mid-1980s)**	**Second Critical Phase (early 1990s–present)**
Completion of the implementation of universal publicly funded medical insurance (Torrance, 1998)	✓	
Perceived physician shortage (Angus & Bourgeault, 1999; CIHI, 2001; Haines, 1993; LeFort & Kergin, 1978; Mitchell et al., 1993)	✓	
Increased complexity and acuity of patients admitted to Ontario hospitals (Sidani et al., 2000)		✓
Decrease in number of medical residents in Ontario hospitals (Bajnok & Wright, 1993; Sidani et al., 2000)		✓

community settings (Torrance). In 1972 recommendations for the NP role were put forward in a national report (Boudreau, 1972). Universal medical insurance vastly increased the potential workload of physicians in the form of a mass sheltered labour market (Abbott, 1988; Coburn, 1993; Freidson, 2001).

The second event that triggered the initial system disturbance was a concurrent nationwide physician shortage (Angus & Bourgeault, 1999; CIHI, 2001; Haines, 1993; LeFort & Kergin, 1978; Mitchell et al., 1993). This shortage occurred in the context of the World Health Organization's efforts to address mounting concern over the gap between the availability of health human resources and population health needs in both developed and developing countries (Gordon, 1971). Population characteristics such as a marked increase in birth and immigration rates and a shift from rural to urban living contributed to this concern in Ontario (Spaulding & Spitzer, 1972). A trend towards medical specialization added to the physician shortage (Haines). In Ontario, between 1961 and 1971, the proportion of family physicians and general practitioners dropped by 6% (Spaulding & Spitzer). Furthermore, such doctors were in shorter supply in northern compared with southern areas of the province during this decade (Spaulding & Spitzer).

The combination of two factors resulted in excess jurisdiction causing a system vacancy: a potential marked increase in physicians' workload resulting from universal medical insurance, and a potential decrease in physicians' output (an insufficient number of physicians to do the work) (Abbott, 1988). This rendered the jurisdictional boundary of medicine within the health-care system vulnerable to what Abbott calls an "invasion" by nursing. The door was open to the utilization of NPs.

Increasing the number of practitioners in a profession is an effective strategy for blocking jurisdictional encroachment (Abbott, 1988). However, the structural demographic rigidity of medicine's lengthy education program prolongs the time between the identification and alleviation of a system disturbance (Abbott). In 1967 an Expert Committee of the World Health Organization issued a report concerning the training and use of medical assistants to address the physician shortage (Gordon, 1971). Programs in six countries, including a program for medical corpsmen in the US Army, were studied (Gordon). Canadian governments and health professionals looked for alternative ways to address the system disturbance (Abbott; Haines, 1993).

Canada considered two health-care roles that were being developed in the United States, the physician assistant and the nurse practitioner (Haines, 1993). Ultimately the NP role was chosen (Haines). The Committee on Nurse Practitioners, a national body consisting of representatives of both medicine and nursing, gave NP pilot and demonstration projects its highest priority (Angus & Bourgeault, 1999; Boudreau, 1972; Haines; Mousseau, & Hall, 1997). In 1972 six Canadian universities initiated programs to prepare NPs for primary health care in isolated, far northern outposts and remote communities, and in 1976 they added urban family practice (LeFort & Kergin, 1978; Mitchell et al., 1993; Robertson, 1973). In 1973 physician under-service was evident in Canada's far north, in areas within some large cities, and in remote communities in every province (Robertson).

The year 1993 saw the convergence of new system disturbances that had been gaining momentum within the health-care system: increased complexity and acuity of conditions among patients admitted to hospital, and a decrease in the number of medical residents (see Table 2). These disturbances altered the balance of work between medicine and nursing (Abbott, 1988) in Ontario hospitals (Bajnok & Wright, 1993; Sidani et al., 2000).

NPs were poised to "invade" medicine's jurisdiction. However, according to Abbott (1988), multiple external forces simultaneously merge with the complex events that trigger a system disturbance through opposing pressures with the potential to alter the jurisdictional boundaries between the professions. These external forces, summarized in

Table 3, gained momentum during the two critical phases in the evolution of the NP role, exerting a profound impact on its outcome.

External Forces

Although a physician shortage was forecast in the late 1960s and early 1970s, the forecast was based on the mistaken assumption that the birth rate among the baby boom cohort would remain constant; in fact, there was an oversupply of physicians (Angus & Bourgeault, 1999; CIHI, 2001; Mitchell et al., 1993). The demand for NPs was found to be closely linked to the decision of physicians to employ them in their solo or group practices (Imai, 1974). However, the Ontario ministry of health did not provide direct funding for NP salaries, and remuneration of NPs from physicians' salaries became a financial disincentive (King, 1978; Mitchell et al.; Spitzer et al., 1974). While sympathetic to the NP role (Angus & Bourgeault), the president of the Ontario College of Family Physicians registered the dissatisfaction of the College's members in an open letter published in *The Canadian Nurse*:

> On the part of the private physician — many enjoyed the new expanded role of the nurse and the new relationship. However, after some years of experience it became evident that, by and large, physicians who had nurse practitioners were not doing as well financially. Our provincial Ministries of Health did not provide the necessary funding mechanism so that the nurse could earn her keep so to speak and at the same time the physician not suffer a loss.
>
> In Ontario, for example, an OHIP [Ontario Health Insurance Plan] card could not be forwarded for collection unless the physician also personally reviewed each and every case with the nurse and patient.... In more recent years both the medical and nursing professions have witnessed a catching up and surpassing of the manpower needs in their respective professions. In a large way this has diminished the need for the development of the nurse practitioner.
>
> I still think there is a very important role for such a person in situations such as the Sioux Lookout Zone of Northern Ontario. (King, p. 21)

Towards the end of the initiation and discontinuation phase, the nature of the conflict between medicine and nursing shifted, from one of excess jurisdiction to a direct attack by the nursing profession on medicine's monopoly, on the grounds that it was providing an equivalent service (Abbott, 1988). A key strategy used by an invading profession in seizing a heartland area in this type of conflict is to provide more effective service (Abbott). Rigorous research demonstrated positive care outcomes for NPs and justified their role in health care (Sackett et al., 1974; Spitzer et al., 1974). The Nurse Practitioners' Association of

Ontario (NPAO), founded in 1973, lobbied government officials and conducted media interviews to promote the NP role (NPAO, 2004a), but it was no match for the powerful medical profession (Haines, 1993; LeFort & Kergin, 1978; Mitchell et al., 1993). Physicians lobbied the government to discontinue the NP education programs, and the last program was discontinued in 1983, marking the end of the first phase in the evolution of the NP role (Angus & Bourgeault, 1999; Haines; Mitchell et al.).

Little is known about the activities of NPs in the years between the first and second phases. Discontinuation of the education programs, combined with the absence of NP registration and certification in Canada and Ontario, interfered with statistical data collection concerning their location and clinical practice (Patterson, Pinelli, & Markham, 1997). One author estimates that 250 NPs continued to practise in community health centres and northern outpost nursing stations in Ontario from the mid-1980s into the 1990s (NPAO, 2004b). Another suggests that during those years NPs practised in three employment settings in Ontario: in physicians' private practices; in agencies providing salaries rather than fee-for-service payments to all health professionals, including physicians; and in their own private practices (van der Horst, 1992).

The valued right to universal access to medically necessary physician and hospital services was protected by the *Canada Health Act* (1984). Prior to this legislation, a series of changes in the federal funding of provincial health insurance plans led to extra billing and direct patient billing by physicians in some provinces, including Ontario, thus threatening the principle of universal access to medical care (Madore, 2001). The *Canada Health Act* penalizes provinces that do not comply with its terms, by withholding federal transfer payments in whole or in part (Madore).

At the beginning of the second critical phase in the evolution of the NP role, the oversupply of physicians masked the geographical disproportion of family doctors that had developed in Ontario (Angus & Bourgeault, 1999; Chan, 1999; Haines, 1993; Mitchell et al., 1993). Health-care under-service, further threatening the value of access, spread from northern to rural southern Ontario, establishing additional jurisdictional battlefronts for NPs (Abbott, 1988; Chan; Haines; Mitchell et al.).

During the first phase, the *Declaration of Alma-Ata* (World Health Organization [WHO], 1978) presented a new vision for primary health care, recognizing the role of social and economic influences upon health attainment (Ogilvie & Reutter, 2003) and respecting the autonomy of each nation regarding the provision of primary health care (Ogilvie & Reutter; WHO, 1978). Since that time, the definition of primary health

Table 3 ***External Forces Influencing Evolution of the NP Role***

External Force	**First Critical Phase: Initiation and Discontinuation (early 1970s–mid-1980s)**	**Second Critical Phase: Establishment and Impasse (early 1990s–present)**	**Effect of External Force on Relative Jurisdictional Strength (Abbott, 1988) of Medicine and Nursing**
Physician supply	Perceived shortage to oversupply (Angus & Bourgeault, 1999; CIHI, 2001; LeFort & Kergin, 1978; Mitchell et al., 1993; Robertson, 1973)	Poor distribution, creating under-service (Angus & Bourgeault, 1999; Chan, 1999; Haines, 1993; LeFort & Kergin, 1978; Mitchell et al., 1993)	Medicine *strengthened* Nursing weakened
Slowly changing cultural values	Universal access to health care (*Canada Health Act,* 1984)	Universal access to health care (*Canada Health Act,*1984) Health-care cost containment (Angus & Bourgeault, 1999; Haines, 1993; Madore, 2001; Mhatre & Deber, 1998; Mousseau & Hall, 1997)	Medicine weakened Nursing *strengthened*
Health-policy shifts	Primary *medical* care ➝ Primary *health* care (Mhatre & Deber, 1998; Mousseau & Hall, 1997; Ogilvie & Reutter, 2003; WHO, 1978)		Medicine weakened Nursing *strengthened*

Fiscal pressures	Extra billing (Madore, 2001) Direct patient charges for physician services (Madore, 2001) Physician loss of income (King, 1978; Mitchell et al., 1993; Spitzer et al., 1974)	Rising health-care costs (Madore, 2001; Mhatre & Deber, 1998) Economic recession (Haines, 1993; Mhatre & Deber, 1998) Reduction in federal health transfer payments (Madore, 2001; Mhatre & Deber, 1998)	Medicine weakened Nursing *strengthened*
Public input	Beginning of increased public role	Significantly increased public role	Medicine weakened Nursing *strengthened*
Legislative changes	*Canada Health Act* (1984)	*Regulated Health Professions Act* (1991) and *Nursing Act* (1991), both enacted in 1993 (CNO, 2000b) *Expanded Nursing Services for Patients Act* (1997), proclaimed in 1998 and amending the *Nursing Act* (1991) (CNO, 2000b)	Medicine weakened Nursing *strengthened*

care and its influence in shaping federal and provincial health policy have been extensively debated in Canada (Ogilvie & Reutter): "In the development of health initiatives, government provides the vision, goal, and direction for promoting the health of its people through public policy" (Mousseau & Hall, 1997, p. 187). During the second phase, slowly developing changes converged in an environment of fiscal pressures and health-care cost containment and reform (Angus & Bourgeault, 1999; Haines, 1993; Mousseau & Hall) that culminated in a health-policy fit with the NP role. For example, a gradual policy shift towards primary health care (Angus & Bourgeault; Mhatre & Deber, 1998; Mousseau & Hall; Ogilvie & Reutter; WHO) guided the Ontario government's reintroduction of the NP role in primary health care community settings (Mousseau & Hall). While this government initiative facilitated evolution of the role, according to Abbott state power is also a limiting factor in the exertion of professional power. Lobbying efforts by provincial nursing associations, such as the NPAO, for concurrent implementation of the NP role in secondary and tertiary care settings (NPAO, 2004a) have been unsuccessful.

Analysis of Ontario health-policy reforms from 1987 to 1991, immediately prior to the second critical phase, reveals a shift in emphasis from curing illness to promoting health and preventing disease, as well as a shift from institutional to community-based care (Mhatre & Deber, 1998). Abbott contends that dominant professions gradually and publicly define cultural values based on the successful outcomes of their own work. For example, before the advent of primary health care, health was synonymous with visiting the doctor. Abbott (1988) calls this *consummatory legitimacy*. The shift towards primary health care challenged this notion, because access to health was no longer linked solely to access to cure (Mhatre & Deber). Changes in Ontario legislation further eroded consummatory legitimacy by allowing the public to achieve health by accessing the health-care system directly through NPs.

Public collaboration with professionals in health-care decision-making and policy formation (Coburn, 1993; Mhatre & Deber, 1998) increased throughout the second critical phase, facilitated by the *Regulated Health Professions Act, 1991* (RHPA), enacted in 1993 (CNO, 2000c). The public assumed a prominent role in the regulation and governance of the professions, including medicine and nursing. The governing councils of professional colleges (CNO, 2000a) almost doubled their lay representation, from 25% to nearly 50% (Coburn; Steinecke, 2003). A new Health Professions Regulatory Advisory Council, composed entirely of lay members of the public, was created (Angus & Bourgeault, 1999; Coburn; RHPA, 1991; Steinecke). The RHPA weakened medicine's jurisdiction by preventing any single profession from monopolizing health care

(Angus & Bourgeault; Coburn). Instead of a profession's having authority over whole areas of work, key tasks were organized into specific acts (Angus & Bourgeault; CNO, 2000c, 2000d; Coburn). In 1998 primary health care NPs secured the legal authority to *independently* initiate three controlled acts that were previously monopolized by medicine — diagnosis, prescription, and treatment (CNO, 2000c, 2000d; Coburn), thus directly attacking what Abbott (1988) calls a profession's "cognitive cultural heartland."

Another value that gradually gained prominence in Canada during the second phase was health-care cost containment (Angus & Bourgeault, 1999; Mousseau & Hall, 1997). During the 1980s, economic recession gripped Canada and the federal government focused on reducing its massive deficit (Haines, 1993; Mhatre & Deber, 1998). Cost containment moved to the forefront of public consciousness. Canadian consumers questioned the way that the tax dollars they contributed to health insurance programs were being used (Madore, 2001).

Continuously rising health-care costs accounted for an increasing proportion of provincial budgets, concurrent with a reduction in federal transfer payments to the provinces (Mhatre & Deber, 1998). A policy trend towards capping physicians' salaries and developing alternatives to fee-for-service payment of physicians emerged in Ontario (Mhatre & Deber). Physician strikes and service withdrawals in the mid-1980s and the 1990s, the beginning of the phase of establishment and impasse, contributed to the public's perception of the medical profession as a significant barrier to the achievement of cost-effective health care (Angus & Bourgeault, 1999; Coburn, 1993).

Table 3 summarizes the complex external forces that emerged between the first and second critical phases. The resulting tensions shaped the relative jurisdictional strength of medicine and nursing during the evolution of the NP role in Ontario. Slowly changing cultural values underpinned a policy shift from primary *medical* care to primary *health* care, increased public participation in health-care regulation and governance, and focused public attention on economic accountability. The enactment of new legislation institutionalized these changes by protecting universal access to health care and changing professional regulation. The momentum of these external forces peaked during the establishment and impasse phase, weakening the jurisdiction of medicine and strengthening that of nursing. External forces provide the context of a jurisdictional contest. We now turn to the nature of the jurisdictional claim in and of itself.

The Jurisdictional Claim and Settlement

Jurisdictional claims are a profession's way of asking society for the exclusive right to control the performance of certain tasks (Abbott, 1988). Abbott locates jurisdictional claims in three arenas: public, legal, and workplace.

According to Abbott (1988), the public's perception of a given profession is that of a homogeneous group represented by an archetype. In nursing, that archetype is the nurse working in a hospital. Although the percentage of nurses working in a hospital or a similar institution in Ontario decreased greatly between 1972 (80%) and 1998 (59.2%), a clear majority of nurses worked in such a setting during both critical phases (CNO, 2002; Statistics Canada, 1974). However, commencing in 1972, NPs were prepared for employment in less traditional settings, such as outpost and under-served areas and urban family practices (LeFort & Kergin, 1978; Mitchell et al., 1993). Lack of public recognition of and demand for NPs is a significant factor in the failure of the role during the first phase (Angus & Bourgeault, 1999; Haines, 1993; Mitchell et al.).

The strategy of sharing professional insights and terminology to attract public support facilitates the process of changing a profession's public image (Abbott, 1988). In 1994 the Ontario government appointed a publicity and public relations committee to raise the profile of NPs (Angus & Bourgeault, 1999; Mousseau & Hall, 1997). Medicine's public profile, meanwhile, became tarnished. The contrasting images reached a peak in 1996, when physicians withdrew their services and the provincial government announced its intention to introduce NP legislation (Angus & Bourgeault).

Abbott (1988) maintains that changes in the public arena build pressure in the legal arena, which encompasses both laws and administrative structures. Although the literature offers no explanation for the absence of legislation legitimating the NP role during the first critical phase, this absence is viewed as a key contributor to the demise of the role in 1983 (Angus & Bourgeault, 1999; Haines, 1993; Mitchell et al., 1993). However, a minister of health with a personal interest in NPs is credited with receptivity to lobbying efforts of provincial nursing associations, beginning in 1993, and the subsequent establishment of new nursing leadership positions within the ministry (Angus & Bourgeault), thus strengthening nursing's jurisdictional claims during the second phase. The recommendations of two reports were instrumental in the establishment of NP legislation in 1998 (Haines; Mitchell et al.). The first was commissioned by the Canadian Nurses Association in anticipation of renewed government interest in the NP role (Mousseau & Hall, 1997). The second, a needs assessment for NPs in Ontario, was prepared by

McMaster University at the request of the ministry of health's Nursing Coordinator (Mousseau & Hall).

Although a given professional role is legitimized in the public and legal arenas, according to Abbott (1988), its realization occurs in the workplace arena. Abbott maintains that there are large discrepancies between public and workplace realities in the system of professions. Abbott's theory that dominant professions successfully conceal the extent of workplace assimilation of professional knowledge through consummatory legitimacy supports the notion that only doctors can fulfil certain functions. This concealed discrepancy weakened nursing's jurisdictional claim in the first critical phase. In the second critical phase, nursing confronted the issue in an increasingly outspoken manner. "Nurses are giving notice that they are tired of the nonsense of doing something, prescribing, treating, sending the patient home," declared the provincial Nursing Coordinator, "and then the next morning walking pieces of paper down the hall for the doctor to sign" (Birenbaum, 1994, p. 77).

Abbott (1988) calls the process of resolving jurisdictional conflict *jurisdictional settlement*. Thus the settlement of the jurisdictional contest in the initiation and discontinuation phase was a return to the *subordination* of nursing to medicine. The settlement of the establishment and impasse phase is a hybrid of two types of settlement: *client differentiation* and *advisory jurisdiction* (Abbott). NPs diagnose and treat clients with common conditions within their scope of practice (CNO, 2003; Ontario Medical Association [OMA], 2002). Physicians who work with NPs report a relative increase in the acuity and severity of client conditions in their own workload (OMA). Since the level of acuity distinguishes clients who are seen by doctors from those who are seen by NPs, a settlement by client differentiation is apparent (Abbott). However, an elaborate set of guidelines for collaboration and consultation with and/or referral to physicians is outlined in the standards of practice for RN(EC)s (CNO, 2003). The nuance of medicine's advisory capacity creates the hybrid in this client settlement. The need for an intra-organizational division of labour between the two professions reveals a dialectical tension between respecting the independence of the NP and the expectation of mandatory consultation with and referral to the physician (CNO, 2003; OMA).

This analysis has thus far considered the external forces affecting the claim and the claim itself. It will now address the contribution of internal professional characteristics to the NP movement.

Internal Differentiation

Differentiation within the medical profession weakened medicine's jurisdiction in primary health care. In the 1960s medical school graduates began to develop an interest in specializing and general practice became stigmatized (Haines, 1993; Mitchell et al., 1993; Robertson, 1973). Between 1992 and 2000 the proportion of graduates beginning their careers as general or family practitioners declined by almost 50% (CIHI, 2003).

The trend towards medical specialization is an example of what Abbott (1988) terms *professional regression*. Since a profession is based upon a valued body of knowledge, an internal hierarchy develops, thus conferring higher status upon those peers who work most closely with this knowledge. Family physicians hold a frontline position with low intraprofessional status.

Application of Abbott's (1988) theory also reveals an increase in differentiation within the nursing profession in Ontario during the establishment and impasse phase. For example, the RN(EC) class was created specifically for primary health care NPs who have successfully completed an approved primary health care program and registration examination (CNO, 2003; Dacres & Clarke, 2003). Furthermore, as demonstrated in Table 1, the number of NP titles reflecting specialty practice areas, including some acute-care settings (Dacres & Clarke), also increased during this phase. A trend towards increasing specialization within the NP role is thus evident.

Abbott's (1988) theory offers a useful and illuminating framework for the historical development of the NP role. By framing its evolution in sociological terms, we can discover critical explanations of the *past*. However, this framework is limited in its ability to account for *present-day* developments in the role. The evolution of the NP role has reached an impasse, because there are a number of barriers to full integration of NPs in the current health-care system (Ontario Ministry of Health and Long-Term Care [OMHLTC], 2003). We can narrow the gap in our understanding of these barriers by building upon the socio-historical analysis using Freidson's (2001) theory of ideal-typical models of organizing and controlling work.

Competing Logics of Work: Reframing the Tensions

Freidson (2001) situates the professions within the broader context of the sociology of work. Freidson proposes three ideal-typical models, or logics, that organize and control work: *free labour markets*, *rational-legal bureaucracies,* and *professionalism*. Each logic characterizes work in a unique way. The logics create tensions or pressures that compete with each other in the world of work. The logics are summarized in Table 4.

The emphasis on freedom of discretion in controlling work is a hallmark of ideal-typical professionalism (Freidson, 2001). Whereas the

Table 4 *Overview of Freidson's (2001) Ideal-Typical Model of Work*

Ideal-Typical Model	Principles	Controlling Power	Ideology	Opposing Pressure
Free labour market	Competition	The consumer	Consumerism	Populous generalism
Rational-legal bureaucracy	Efficiency through standardization	Administrative hierarchy	Managerialism	Elite generalism
Professionalism	Monopoly	The occupation	Professionalism	Freedom of discretion in controlling work

logics of free labour markets and rational-legal bureaucracies are well defined in Western culture, the logic of professionalism is not. These logics hold the key to understanding the impasse in further development of the NP role.

The logic of *professionalism* places a greater value on commitment to performance than on monetary gain (Freidson, 2001). The notions of independence of judgement and freedom of action form the basis of the professional ideological claim to and privilege of control over discretionary specialized work. The opposing generalist logics of *consumerism* and *managerialism* limit the amount of control that occupations have over the work they do.

Resistance to specialized knowledge and skill is realized by the logic of *consumerism,* in the form of what Freidson (2001) calls *populist generalism*. Consumers claim that general everyday knowledge is superior to, and capable of evaluating and directing, special expertise. Populist generalism is Freidson's explanation for the logic underpinning increased public participation in and legislative reforms to professional regulation in Ontario. Correspondingly, *elite generalism* is associated with the ideology or logic of *managerialism*. Bureaucrats claim to possess an advanced but general knowledge that is superior to the knowledge of both consumers (generalists) and professionals (specialists) because of their ability to organize work more rationally and efficiently.

Freidson (2001) locates a source of power within each of his logics. In professionalism, for example, the occupation holds the power of exclusive jurisdiction and control over work. However, these sources of power are constrained by forces, such as the state, that he terms contingencies. The main coercive power of the state is the law.

During both critical phases in the evolution of the NP role, medical professionalism faced mounting pressures linked to populist and elite generalism: changes in professional regulation; the implementation of state-administered universal health insurance with negotiated fee schedules; and an emphasis on cost containment, efficiency, and rationalization of health care (Angus & Bourgeault, 1999; Coburn, 1993; Leicht & Fennell, 2001; Madore, 2001; Mhatre & Deber, 1998; Mousseau & Hall, 1997; Torrance, 1998). The medical profession struggled to control the terms and conditions of its work (Hafferty & Light, 1995; Leicht & Fennell). Medicine became regarded as self-serving rather than as having a transcendent value, because when the medical profession defended itself against salary encroachments, monopoly of practice became confused with monopoly of wealth (Freidson, 2001). Moreover, the NP role struck deep into the professional soul of medicine, targeting the core of its economic privilege — the exclusive right to diagnose, prescribe, and treat (Freidson).

Nursing professionalism, in contrast, was affected by elite and populist generalism in a way that facilitated the establishment of what became the RN(EC) role during the second phase (Freidson, 2001). For example, nursing adopted the ideology of populist generalism. A subcommittee that included representatives of professional nursing associations, the nurses' union, and the College of Nurses of Ontario was formed to increase public awareness and understanding of the NP role (Mousseau & Hall, 1997). This strategy contributed to the successful establishment of the role (Angus & Bourgeault, 1999). Moreover, research evidence justifying the NP role fit with the elite generalist valuing of safe and effective care (Horrocks, Anderson, & Salisbury, 2002).

Current barriers to the full integration of NPs in primary health care include lack of public and professional awareness of the role, exclusion of NPs from the fee-for-service funding model of health care, and tensions concerning the distribution and expectations of work between physicians and RN(EC)s (OMHLTC, 2003). Situating these barriers within Freidson's (2001) three competing logics is key to recognizing the professional strategies that are needed as the third critical phase — full versus incomplete realization of the NP role — carries its evolution into the future.

Discussion and Implications

This critical analysis of the evolution of the nurse practitioner role contributes to our understanding of the inherent issues and gives direction for the formulation of proactive strategies that will position nurses for further development of the role in Ontario and other provinces. The analysis explicates the slowly but continuously changing nature of public values and the crucial role of the public in health-care policy-making. The public is an influential ally for nurses in lobbying the government for changes that will overcome the barriers to full realization of the NP role. Nurses must be vigilant in monitoring further changes in public values, seizing every opportunity to work *with* the ideology of consumerism (Freidson, 2001). Renewed nursing leadership in the public arena (Abbott, 1988), to market the NP role by strengthening public valuing of and expectations for its present use in health care, is essential. The inclusion of marketing skills in NP education programs may facilitate this strategy.

The power of the law evident in this critical analysis reinforces the need for nursing leadership in the legal arena (Abbott, 1988). The fee-for-service model of health-care funding in Ontario persists as a significant barrier to full realization of the NP role (OMHLTC, 2003). Professional nursing organizations have a responsibility to work *with* the ideology of managerialism (Freidson, 2001), lobbying the government for changes to the system of funding.

This critical analysis also illustrates that changing public values and legislation takes time — 20 to 50 years, according to Abbott (1988). Evolution of the NP role in Ontario has so far taken more than 30 years. Therefore, a patient, persistent, professional strategy that sustains the vision of full realization of the NP role for successive cohorts of nurses is required. Additionally, it may be more pragmatic to approach lobbying for legislative changes across the spectrum of nursing practice areas one setting at a time, in order to achieve full realization of the role.

The workplace is a critical arena for full realization of the NP role (Abbott, 1988). Lessons learned from this analysis of the NP movement forecast that issues of salary and control over work will test nursing professionalism against the competing ideology of managerialism (Freidson, 2001). The workplace will be a pivotal context for research aimed at resolving sensitive issues, such as work distribution, time allocation, and role expectations (OMHLTC, 2003). Finally, professional nursing organizations have an essential part to play in promoting optimal work-environment policies that will enhance the NP role.

Situating these intraorganizational issues within the broader context of work, beyond the perimeter of health care, provides a new perspective that raises new questions. What are the optimum terms and conditions of NP work? Which organizational models of primary health care delivery ensure full realization of the NP role? What community characteristics enhance these successful models?

Conclusion

This critical analysis has shown that the evolution of the nurse practitioner role in Ontario provides an insightful example of the movement within Canadian nursing towards implementation of such roles. Socio-historical analysis (Abbott, 1988) evokes sensitivity to phases in the momentum of this movement, characterized by dialectical tensions working for and against continued development of the NP role. Reframing the tensions within Freidson's (2001) competing ideologies carries the evolution forward. Organizing identified barriers within this framework provides clear direction for proactive strategies in the form of nursing leadership within regulatory, policy, education, and research initiatives to ensure full realization of the role. The evolution of the NP role in Ontario would thus become a model for successful implementation in other provinces.

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Résumé

Comparaison de l'utilisation des services de santé chez les pensionnaires des centres de soins de longue durée, les bénéficiaires de soins à domicile et les personnes âgées en bonne santé

Donna Wilson et Corrine Truman

En règle générale, la recherche semble confirmer la crainte selon laquelle l'utilisation des services de santé s'intensifie avec l'âge. Or la plupart des analyses sur le sujet se limitent à l'étude d'un seul service de santé au lieu de plusieurs, à l'utilisation des services de santé sur une période ne dépassant pas un an ou à leur fréquentation pendant les années 1970 ou 1980. Il y aurait donc lieu d'entreprendre des études exhaustives qui permettraient de mieux éclairer le choix des orientations et la prise de décisions. La présente étude compare trois groupes de personnes âgées : les pensionnaires des centres hospitaliers de soins de longue durée (CHSLD), les bénéficiaires de soins à domicile et les personnes âgées qui ne reçoivent aucuns soins. Les auteures ont analysé un échantillon représentatif de données individuelles et anonymes provenant des sources suivantes : données d'hospitalisation; données de centres de soins ambulatoires (chirurgie d'un jour, service de consultations externes et salle d'urgence); et données sur les services dispensés par les médecins, recueillies sur une période de deux ans par le ministère de la Santé de la province canadienne de l'Alberta. Ces données ont été analysées au moyen de tests statistiques descriptifs et comparatifs contenus dans le logiciel SPSS. Il ressort que les pensionnaires de CHSLD sont les moins susceptibles de recourir aux services de santé, à l'exception de ceux du médecin et du centre où ils séjournent. Par ailleurs, malgré les craintes à l'effet que l'on ait stigmatisé ou rationné les pensionnaires des CHSLD en ce qui concerne l'accès aux soins tertiaires, les résultats indiquent qu'ils ne sont pas désavantagés sur le plan des services hospitaliers, notamment en ce qui concerne le type ou la gamme de services offerts. Ces observations et d'autres résultats à ce sujet permettent de conclure que les CHSLD remplissent bien leur rôle à l'égard de la prise en charge de la santé et des besoins de santé des personnes les plus âgées de la société. Ils soulèvent aussi certaines questions concernant le caractère adéquat du système de soins à domicile et les soins de santé offerts aux personnes âgées en bonne santé.

Mots clés : utilisation des services de santé, soins de longue durée, personnes âgées, soins hospitaliers

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Comparing the Health Services Utilization of Long-Term-Care Residents, Home-Care Recipients, and the Well Elderly

Donna Wilson and Corrine Truman

Research has typically supported the concern that health services utilization increases with aging. Yet most health services utilization studies have focused on the use of 1 as opposed to all health services, the use of health services over 1 year as opposed to a longer period, and the use of health services during the 1970s or 1980s. Current, comprehensive utilization studies are needed in order to better inform health policy and health services decision-making. This study was designed to compare the health services utilization of 3 groups of seniors: those residing in long-term-care (LTC) facilities, those receiving home care, and those neither institutionalized nor receiving home care. Individual-anonymous and population-based inpatient hospital data, ambulatory care (day surgery, outpatient clinic, and emergency room) data, and physician services data collected by the health ministry of the Canadian province of Alberta over a 2-year period were analyzed using descriptive and comparative statistical tests available in the SPSS computer program. With the exception of physician and LTC services, LTC residents were the least likely to use health services. Furthermore, and despite concerns that LTC residents may be stigmatized or rationed with regard to access to tertiary care, the data indicate that LTC residents are not disadvantaged in terms of type or scope of hospital services. These and other findings suggest an appreciation for LTC in managing both the health and the care needs of the oldest seniors. The findings also raise concerns about the adequacy of formal home care and of the health care received by the well elderly.

Keywords: health services utilization, long-term care, continuing care, gerontology/geriatrics, aging, seniors, hospital

Virtually all published health services utilization research has supported the concern that utilization increases with age (Anderson, Pulcins, Barer, Evans, & Hertzman, 1990; Barer et al., 1989; Black, Roos, Havens, & MacWilliam, 1995; Desmeules, Huang, & Mao, 1993; Hertzman & Hayes, 1985; Roos, Montgomery, & Roos, 1987; Roos, Shapiro, & Tate, 1989; Shapiro & Tate, 1989; Stokes & Lindsay, 1996). Yet research focusing on health services utilization by the elderly has generally examined only the use of one as opposed to all health services, the use of health services over 1 year instead of a longer period, and the use of health services during the 1970s or 1980s (Beringer & Flanagan, 1999; Ellencweig, Stark, Pagliccia, McCashin, & Tourigny, 1990; Hertzman et al., 1990; Kayser-Jones, Wiener, & Barbaccia, 1989; Shapiro, 1983; Shapiro, Tate, & Roos, 1987; Stark & Gutman, 1986; Williams, Fries, & Mehr, 1996). Recent health-care and health system developments, such as the shift to community-based care, may have considerably altered utilization patterns. Comprehensive new utilization studies are thus needed, to inform decision-making on health policy and health services.

To this end, a study was undertaken to describe and compare total health services utilization for three groups of senior citizens: (1) those who reside in nursing homes and other long-term-care (LTC) facilities, (2) those who receive home care, and (3) all other persons aged 65 and over who are not institutionalized and do not receive home care. As LTC residents are thought to comprise the oldest and most ill subpopulation in any modern society (Bridges-Webb, Britt, & Driver, 1987; DeCoster, Roos, & Bogdanoci, 1995; Lee, Kovner, Mezey, & Ko, 2001; Raina, Dukeshire, Lindsay, & Chambers, 1998; Roos, Havens, & Black, 1993; Rosenberg & Moore, 1997; Tully & Mohl, 1995), their health services utilization would be expected to be the highest among the three groups of seniors.

Design and Methods

The Canadian province of Alberta has a comprehensive set of population health service databases. Following receipt of research ethics approval from the University of Alberta, the Ministry of Health and Wellness was asked to provide the two most recent years of complete health services utilization data for three subpopulations of seniors. A 2-year time-frame was considered optimal, as the health of seniors can vary considerably from year to year and 2 years is the most common length of stay in Alberta LTC facilities. To protect the identity of subjects yet preserve researcher access to individual health services utilization data, the Ministry assigned each subject a unique anonymous number that matched the person's health services utilization. The three subpopulations were: (1) all persons aged 65 or older who had resided in a nursing home or auxiliary hospital continuously from April 1, 1997, through March 31, 1999 (N = 4,774); (2) all persons aged 65 or older who had been registered with Alberta's home-care program as having received formal home-care services over the same 2-year period (N = 7,029); and (3) a 10% sample of all other persons aged 65 or older on April 1, 1997, who were not institutionalized or receiving ongoing home care during the same 2-year period (n = 30,000). A 10% sample was sufficient for power specifications and for minimizing management difficulties associated with large databases.

Comprehensive health services data, but limited sociodemographic data, for all 41,803 subjects were obtained from five Ministry of Health and Wellness databases: Canadian Institute for Health Information Discharge Abstract Database (CIHI DAD), containing inpatient hospital services data collected on all separations from acute-care hospitals in Alberta, with separations involving both an admission and one or more overnight stays; Ambulatory Care Classification System (ACCS) Database, containing ambulatory-care data collected on all persons who receive health services in day surgery departments, outpatient departments, ambulatory clinics, and emergency rooms in Alberta; Alberta Physician Claims Assessment Database, containing physician services data collected for all billed physician services provided in any setting in Alberta; Alberta Home Care Information System Database, containing formal data collected on all services provided through Alberta's home-care program to registered home-care clients; and Alberta Long-Term-Care Resident Classification Database, containing client and care needs data routinely collected each fall on all persons residing in all 157 nursing homes and auxiliary hospitals in Alberta.

Data cleaning and programming was carried out prior to data analysis, as is necessary with large population datasets. During this process, minimal missing data (< 1%) were noted for all variables. The unique anonymous number assigned to each subject by the Ministry was used to link each individual's data for the 2-year period across all five databases. The SPSS computer program (Version 11.5) was used to analyze the data. Given the nature of the study, data analysis involved descriptive (measures of central tendency) and comparative (chi square, *t* test, and ANOVA) statistics, with univariate and bivariate tests chosen on the basis of level of variables and study purpose. As the study involved three distinct subpopulations, no age or gender standardization of groups was undertaken. Furthermore, as an initial comparison of health services utilization data for the first and second year revealed minimal differences, the 2 years of utilization data were combined into one dataset, with comparisons focused on utilization differences between the three subpopulations as opposed to over time. Another dataset was then created, this one containing aggregated health service utilization volume data for each person. For instance, if an individual was admitted to an emergency room once in the first year and twice in the second year, data programming ensured that the number 3 appeared in a corresponding column in the aggregate dataset. Each line of data in the aggregate dataset was meant to contain an individual's anonymous identification number, sociodemographic data as of April 1, 1997, and a series of aggregated utilization data (i.e., number of admissions to hospital, total number of days in hospital, number of admissions to day surgery departments, number of day procedures performed, number of emergency room visits, etc.). The data-analysis plan for all datasets was essentially twofold: (1) a descriptive-comparative analysis of aggregated health services utilization data for all subjects as divided into the three population groups; and (2) descriptive-comparative analyses of health services utilization by individual subjects making up the three subpopulations, with these analyses focused on each distinct health service.

Results

Following a discussion of the sociodemographic and health status findings, the results are reported in two sections: (a) aggregate health services utilization comparisons, and (b) distinct health service utilization comparisons.

Sociodemographics and Health Status

The sociodemographic data confirmed that all subjects were 65 years of age or older, with almost identical age ranges for all three groups (65 to 104 or 105). Yet, on average, LTC residents and home-care recipients were considerably older (83.0 and 81.0, respectively) than the other elderly (72.8). The home-care group had the highest proportion of females (76.9%), followed by the LTC group (74.3%) and the other elderly group (54.9%). Although a larger proportion of all subjects (55.5%) lived in one of Alberta's two large urban centres (the cities of Edmonton and Calgary, home to two million of the province's three million inhabitants), home-care recipients more often lived outside these two centres (52.6%). In contrast, a higher proportion of LTC residents (57.6%) and the other elderly (57.0%) lived in these centres.

Unfortunately, the health status of the 41,803 individuals could not be compared. The three subpopulation groups could vary considerably with regard to health status and thus health-care needs. No health status information was available for the other seniors, aside from the fact that their use of health services could be understood as illustrating their general health state. The health of home-care recipients was described to a limited degree through their classification of care needs in the data contained in the 1997 Home Care Information System Database. Almost all (98.1%) of the 7,026 home-care recipients were classified as "long term," indicating that their health problems were irreversible and severe enough to warrant ongoing home care. The remainder were classified as "short term," a classification for persons who are expected to need only 4 or 6 weeks of home care.

The health of the LTC residents could also be described through routinely collected LTC resident classification data for autumn 1997:

1. Ability to perform Activities of Daily Living (ADL). The average classification score for each LTC subject on all four ADL activities (eating, toileting, transferring, and dressing) was 4.2 (range 1–5, median 5, mode 5, SD 1.1). A score of 5 would indicate total dependency.
2. Behaviours of Daily Living (BDL) Requiring Intervention. The average composite score for 16 BDL concerns (wandering, hoarding or rummaging, aggressive or angry behaviour, agitated behaviour, suspicious behaviour, indiscriminate ingestion of foreign substances, inappropriate smoking, inappropriate sexual behaviour, inappropriate drug or alcohol use, resists or refuses care, is sad or depressed, demands attention, is suicidal, is anxious, has potential for injury, and ineffective coping) was 2.85 (range 1–4, median 3, mode 3, SD 0.7). A score of 4 would indicate severe behavioural problems requiring intervention.
3. Continuing Care Level (CCL). The average composite score of five concerns (urinary incontinence, bowel incontinence, not oriented to facility, not oriented to staff, reduced memory of instructions) was 2.0 (range 0–3, median 2, mode 3, SD 1.0). A score of 3 would indicate major concerns requiring much continuing care intervention.
4. Composite Care Requirement (CCR). This composite score, devised by the Ministry of Health and Wellness, was based on each subject's ADL, BDL, and CCL scores. The average CCR score for all LTC residents was 5.35 (range 1–7, median 6, mode 6, SD 1.35). A CCR score of 1, 2, or 3 would indicate minimal need for institutionally based care, while a CCR score of 5, 6, or 7 supports the use of institutionally based continuing care.

Aggregated Health Services Utilization

Considerable group-based differences in health services utilization were found when the aggregated health services volume data were analyzed. As illustrated in Table 1, home-care recipients were twice as likely as LTC residents to be admitted to hospital, have ambulatory procedures performed, or visit emergency rooms within the 2-year span. The other seniors also were more often hospitalized, accessed outpatient and day surgery units more often, and visited emergency rooms more often during the 2 years than the LTC residents.

Table 1 ***Health Services Utilization Rates (Individually Aggregated Volume Data)***

Utilization Over 2 Years Combined	**LTC Residents *N* (%)**	**Home-Care Recipients *N* (%)**	**Other Elderly Sample *N* (%)**
	4,774 (100)	7,029 (100)	30,000 (100)
Admitted to hospital 1 or more times	958 (20.1)	3,880 (55.2)	6,565 (21.9)
Had 1 or more ambulatory procedures completed	2,042 (42.8)	5,173 (73.6)	14,121 (47.1)
Had 1 or more emergency room visits	1,662 (34.8)	4,992 (70.1)	11,014 (36.7)
Had 1 or more physician services	4,573 (95.8)	6,926 (98.6)	28,772 (95.9)

With two exceptions — physician services utilization and LTC facility utilization — LTC residents had lower average rates of health service utilization (Table 2). Notably, LTC residents had the lowest average number of admissions to hospital, inpatient days in hospital, ambulatory procedures performed, and emergency room visits. In contrast, LTC residents received more physician services, with this difference also reflected in a higher average cost of physician services over the 2 years.

(Non-aggregated) Individual Health Services Utilization

As shown in Table 3, the utilization data for each health service illustrate some of the same group-based utilization patterns. More specifically, home-care recipients had the highest average number of days in hospital, while the other elderly had the highest number of procedures performed, on average, as hospital inpatients. The data also illustrate that LTC residents had the highest average cost weight of care per inpatient hospital episode (cost weight of care is an index figure that reflects both the intensity of treatments and length of stay), saw the most physicians, on average, when admitted to hospital or to an ambulatory-care setting, had the highest average number of procedures performed when admitted to an ambulatory-care (outpatient, day surgery, or emergency room) setting, and had the highest proportion of medical specialists among their care providers.

Table 2 ***Health Services Utilization Comparisons (Individually Aggregated Volume Data)***

Utilization Over 2 Years Combined	**LTC Residents 4,771**	**Home-Care Recipients 7,026**	**Other Elderly Sample 30,000**	**Statistical Test (2-sided)**
Hospital admissions – mean (*SD*) – range	.29 (0.7) 0–9	1.46 (2.21) 0–31	.37 (.93) 0–19	*F* = 2365.7 *df* = 2 ⋆*p* = .000
Hospital inpatient days – mean (*SD*) – range	2.59 (8.73) 0–198	16.38 (29.63) 0–442	2.77 (9.51) 0–349	*F* = 2449.0 *df* = 2 ⋆*p* = .000
Number of ambulatory procedures – mean (*SD*) – range	1.47 (4.47) 0–59	4.24 (12.20) 0–316	1.74 (5.87) 0–322	*F* = 366.2 *df* = 2 ⋆*p* = .000
Emergency room visits – mean (*SD*) – range	.74 (2.14) 0–61	3.12 (5.94) 0–253	1.08 (3.43) 0—227	*F* = 867.1 *df* = 2 ⋆*p* = .000
Number of physician procedures – mean (*SD*) – range	44.82 (36.16) 0–339	21.29 (19.24) 0–282	18.18 (15.81) 0–323	*F* = 3738.5 *df* = 2 ⋆*p* = .000
Physician service fee ($) – mean (*SD*) – range	892.7 (681.7) 0–13593.5	633.6 (693.3) 0–13435.7	504.7 (469.85) 0–14903.1	*F* =1111.7 *df* = 2 ⋆*p* = .000

⋆significant *p* value

Table 3 ***Health Services Utilization, Each Health Service Compared by Population Subgroup***

Health Service Utilisation Over 2 Years	**LTC Residents**	**Home-Care Recipients**	**Other Elderly Sample**	**Statistical Test (2-sided)**
Total hospital separations (N)	1,383	10,251	11,121	–
Cost weight of care per care episode – mean (*SD*) – range	1.11 (1.00) .15–19.83	1.01 (1.08) .15–30.77	1.02 (1.12) .12–27.03	*F* =5.025 *df* = 2 ⋆*p* = .007

Continued on page 146

Table 3 (cont'd)

Health Service Utilization Over 2 Years	**LTC Residents**	**Home-Care Recipients**	**Other Elderly Sample**	**Statistical Test (2-sided)**
Days in hospital per care episode – mean (*SD*) – range	9.13 (10.28) 1–106	11.40 (14.64) 1–392	7.54 (9.36) 1–399	$F=273.1$ $df=2$ ★$p=.000$
Number of procedures per care episode – mean (*SD*) – range	.81 (1.21) 0–10	.63 (1.23) 0–10	1.15 (1.58) 0–10	$F=360.0$ $df=2$ ★$p=.000$
Physicians seen per care episode – mean (*SD*) – range	1.65 (.87) 1–8	1.58 (.98) 1–8	1.53 (.89) 1–8	$F=13.5$ $df=2$ ★$p=.000$
At least one physician per care episode was a specialist (*N*) – true (%) – false (%)	1,383 886 (64.1) 497 (35.9)	10,251 4809 (46.9) 5442 (53.1)	11,121 8033 (72.2) 3088 (27.8)	$\chi^2=767.1$ $df=2$ ★$p=.000$
Total ambulatory care services **(N)**	3,764	20,950	40,558	–
Number of procedures performed per episode – mean (*SD*) – range	1.68 (1.18) 1–10	1.56 (.95) 1–10	1.53 (.92) 1–10	$F=43.3$ $df=2$ ★$p=.000$
Number of physicians seen per care episode – mean (*SD*) – range	1.08 (.31) 1–4	1.08 (.29) 1–5	1.06 (.24) 1–4	$F=9.913$ $df=2$ ★$p=.000$
Physician was a specialist at each care episode – true – (%) – false – (%)	558 (14.8) 3,206 (85.2)	1,997 (9.5) 18,953 (90.5)	5,034 (12.4) 35,524 (87.6)	$F=75.8$ $df=2$ ★$p=.000$
Total physician services provided **(N)**	252,598	236,583	714,072	–
Amount paid per care episode – mean (*SD*) – range	24.23 (40.50) 1.02–2607.57	48.60 (83.88) 1.38–3504.38	44.82 (97.18) 1.38–5758.78	$F=6481.5$ $df=2$ ★$p=.000$
★ significant p value				

Discussion and Implications

The senior citizens who lived in LTC facilities were the oldest of the three subpopulations in the 2 years investigated, and, as expected, they had considerable health- and dependency-related care needs. They were therefore expected to be the highest users of hospital services. Instead, the findings clearly show that LTC residents were the least likely of the three groups to use hospital-based inpatient and ambulatory services. More specifically, they were the least likely to be hospitalized, to spend numerous days in hospital, to go to an emergency room, or to receive other ambulatory/outpatient services. It should be stressed that LTC residents do not receive any formal home care. These LTC residents, however, received more physician services than the home-care recipients and other elderly, although the physician services they received were at a lower average cost per service. Physician fee-for-service payments are based largely on the complexity of care required, the degree of specialization needed to address the presenting health concern, and the amount of time needed to provide each service. A low average cost would therefore reflect routine physician services as opposed to major assessments or treatments. Indeed, the nurse managers of LTC facilities in Alberta expect family physicians to see residents on a monthly basis whether the person is ill or not. At these monthly visits, the care plan and all medications are routinely reviewed by the nursing team and the physician. Additional physician services are secured when LTC facility nurses telephone the physician to report a change in the resident's condition, with telephone orders often constituting a low-cost physician service.

These findings are at considerable odds with popular opinion about the effect of aging on health services utilization. The results of previous research also indicate that aging is a significant factor in health services utilization (Anderson et al., 1990; Barer et al., 1989; Black et al., 1995; Desmeules et al., 1993; Hertzman & Hayes, 1985; Roos et al., 1987; Roos et al., 1989; Shapiro & Tate, 1989; Stokes & Lindsay, 1996). Although a 2-year data span, the use of late-1990s data, and the use of comprehensive population-level health services data lend credibility to the present findings, the study was confined to one Canadian province. Alberta could have unique health services delivery and utilization patterns, particularly as 50% of all acute-care beds were permanently closed in response to a series of government funding reductions from mid-1993 through mid-1995 (Alibhair, Saunders, Johnston, & Bay, 2001). As rising health services utilization with population aging is a national if not international concern (Commission on the Future of Health Care in Canada, 2002; Wiener, Estes, Goldenson, & Goldberg, 2001), replication studies are warranted.

The findings of lower hospital and ambulatory or tertiary-level health services utilization by LTC residents could be viewed as a consequence of age- or facility-based stigmatization and discrimination. However, the present study found that, compared to the other two groups, when LTC residents were hospitalized or when they accessed other health services they received the same or even a higher level of acute and treatment-oriented care. In short, the findings do not support the concern that LTC residents are prohibited from obtaining acute diagnostic or treatment-oriented care.

As population-level databases have few sociodemographic or other variables for explanatory purposes, a series of meetings with LTC and home-care nurses, LTC and home-care administrators, and physicians was held to discuss the findings of this study. At these meetings, a number of factors were identified that may help to explain why LTC residents have lower tertiary-care utilization. One of the main factors, despite much concern about the quality of care provided in nursing homes and other LTC facilities (Hughes & Lapane, 2002; Munroe, 1990), is that LTC facilities provide a number of services designed to maintain or improve health, prevent health problems, and identify emerging health problems (Feldman & Kane, 2003). These services include 24-hour, 7-day-a-week nursing care, 24-hour RN coverage, initial and then monthly multidisciplinary care planning, routine monthly medical care and additional rapid medical care in response to telephone calls, direct medication administration, annual flu vaccinations, fall-prevention programs, individualized safety precautions when needed, frequent in-house and external social events, bowel routines, and regular meals or meal substitutes. LTC facilities also have oxygen and intravenous fluids available, and they arrange transportation for residents who need to access other health services. Another key feature of LTC is advanced-care planning in relation to the use of cardiopulmonary resuscitation and other life supports. Although the present study was not designed to establish this fact, the lower use of hospitals, day surgery, outpatient clinics, and emergency rooms by institutionalized seniors could be an outcome of comprehensive care planning and provision of primary care. Further research is needed, however, to describe LTC services and validate outcomes of facility-based LTC. This research is particularly relevant given the current trend towards deinstitutionalizing LTC residents and not institutionalizing candidates for facility-based LTC (Brody, Simon, & Stadler, 1997; Challis, Darton, Hughes, Stewart, & Weiner, 2001; Wiener et al., 2001).

Home-care recipients were found to be the highest users of all health services with the exception of LTC. This utilization pattern may illustrate, as reported by others (Bowles, Naylor, & Foust, 2002; Jette, Tennstedt, & Crawford, 1995), that home care is provided in insufficient quantity to effectively manage illnesses or maintain the health of persons who have health problems and care needs such that they require ongoing formal home support. Although the present study could not establish whether the health status of LTC residents and home-care recipients varied, it did find similar average ages and age ranges. Other research has found home-care recipients and LTC residents to be similar in both age and health status (Bridges-Webb et al., 1987; Madigan, Schott, & Matthews, 2001; Shugarman, Fries, & James, 1999). Considering the many potential benefits of formal home care, one might wonder why the home-care recipients in the present study were such high users of health services. Indeed, over half of all home-care recipients were admitted to hospital one or more times during the 2 years, as compared to only one in five LTC residents or other elderly. Other measures also clearly illustrate high use among home-care recipients; over 70% made one or more emergency room visits and had one or more ambulatory procedures performed in the 2 years. In addition, home-care recipients were hospitalized an average of 16.4 days in the 2 years (as compared to 2 or 3 days for the other groups), with each hospital stay also significantly longer (11.4 days) than the average stay for LTC residents and the other elderly (9.1 and 7.5 days, respectively).

Beyond learning from various care providers that home care is rationed in Alberta (as it is across much if not all of Canada) in terms of total number of clients and the amount of care that can be provided per client, no other sources of information were available to explain why home-care recipients were the highest users of most health services. For this reason, it is relevant to consider possible issues for further research. One issue is the outcomes associated with the extensive use of nursing aides as direct home-care providers (Wilson et al., 2005). RN case coordinators may be too few in number to assess clients and develop plans that effectively maintain or improve their health. It is also possible that more direct-care RNs or RN training of nursing aides is needed, so that emerging health problems can be detected early and the need for hospital care reduced. Nurse practitioners are infrequently employed in home care even though their knowledge of health promotion and illness surveillance and their skill in medication monitoring and prescribing have been shown to be very beneficial for chronically ill persons (Leveille et al., 1998; Running & Walker, 1999). Still other research and program evaluations could be undertaken to determine whether care delivered to home-care recipients is based on a traditional medical model such that it is largely intermittent and illness-oriented while care delivered to LTC residents is based on a primary care, continuity of care, and/or health promotion model.

Another surprising finding is a higher level of tertiary-care utilization by the seniors who were not institutionalized nor receiving home care. This finding raises many of the same questions addressed above with regard to home care. Also, one must wonder whether community-based seniors have appropriate health-care programming (Wiener et al., 2001). These seniors, too, may be receiving primarily episodic, illness-oriented care as opposed to more proactive health-maintenance services. A number of researchers have identified the potential for health promotion among seniors (Bowles, Naylor, & Foust, 2003; DeCoster, Roos, & Carriere, 1997). Still others report that health services utilization is related far less to age than to discontinuity of care and unmet health-care needs (Bergman et al., 1997; Kayser-Jones, Wiener, & Barbaccia, 1989).

Although the community-based seniors in this study were found to be younger on average than the home-care and LTC recipients, a large proportion of community-based seniors have been found to have one or more chronic illnesses (Montbriand, 2004). A small but largely unknown proportion is likely to be in considerable need of ongoing assistance. Family caregiving is a common form of senior care (Pinquart & Sorenson, 2002), which raises the issue of whether informal caregiver burnout is a reason for emergency room visits and hospitalizations by seniors who are not receiving formal home care, institutionally based daycare, or LTC support. Still other researchers ask whether health services utilization is a function less of age than the severity of the illness and the individual physician's choice of treatments to address it (Johansen, Nair, & Bond, 1994; Wilson & Truman, 2002). Perhaps advanced-care planning for community-based seniors, such as that entailed in living wills, should be made a focus of community nurse advocacy.

Conclusion

This population-based study found that, in one province of Canada, elderly LTC residents were less likely to use hospital care, outpatient care, day surgery, and emergency room care than home-care recipients and other seniors. Yet when LTC residents were hospitalized or receiving other ambulatory services, they were not disadvantaged in terms of receiving acute tertiary-level care. These findings raise the possibility that lower use of expensive and limited tertiary care could be an outcome of programs and services in LTC facilities that approximate a primary care model. In addition to having their daily care needs addressed, LTC residents may be benefiting from early identification of and attention to emerging health problems and proactive approaches to existing or potential problems. This raises concerns about the current trend towards deinstitutionalizing LTC residents and not institutionalizing candidates for facility-based LTC. The present results indicate that, if adequate home support is not available, this trend could be a case of "penny wise and pound foolish."

The results of this study should be of interest to nurses in most health-care sectors, since the study crosses many sectors and thus many aspects of nursing, regardless of nurses' particular roles and functions within the health-care system. LTC and home-care nurses in particular are encouraged to use the findings for planning and policy purposes. At the very least, the results should stimulate discussion and research on care options for the elderly. Investigations that evaluate current care options for seniors, and identify effective methods for reducing health services utilization through enhanced health and well-being, are particularly needed if we are to ensure an optimal future for the elderly. For far too long, illness has been considered a natural outcome of aging. Furthermore, care options have been tailored to this prevailing paradigm.

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Résumé

Les données manquantes : introduction aux concepts de base à l'intention du chercheur novice

Maher M. El-Masri et Susan M. Fox-Wasylyshyn

Les données manquantes posent un problème fréquent en recherche; s'il n'est pas traité correctement, il peut fausser les conclusions concernant une population. Il existe un ensemble de méthodes statistiques permettant d'interpréter les données manquantes, certaines simples, et d'autres complexes, sur le plan théorique et mathématique. Le présent article propose une vue d'ensemble du problème des données manquantes à l'intention des chercheurs débutants. Les auteurs expliquent les modèles de données manquantes, discutent des questions qu'elles soulèvent et présentent certaines méthodes de traitement courantes. Parmi les techniques abordées, on compte la suppression dans la liste (*listwise suppression*), la suppression par paires (*pairwise suppression*), la substitution moyenne par cas, par échantillon ou par groupe, l'imputation par régression et la maximisation de l'estimation.

Mots clés : données manquantes, modèles de données manquantes, suppression, imputation, substitution moyenne

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Best Practices in Research Methods

Missing Data: An Introductory Conceptual Overview for the Novice Researcher

Maher M. El-Masri and Susan M. Fox-Wasylyshyn

Missing data is a common issue in research that, if improperly handled, can lead to inaccurate conclusions about populations. A variety of statistical techniques are available to treat missing data. Some of these are simple while others are conceptually and mathematically complex. The purpose of this paper is to provide the novice researcher with an introductory conceptual overview of the issue of missing data. The authors discuss patterns of missing data, common missing-data handling techniques, and issues associated with missing data. Techniques discussed include listwise deletion, pairwise deletion, case mean substitution, sample mean substitution, group mean substitution, regression imputation, and estimation maximization.

Key words: missing data, patterns of missingness, deletion, imputation, case mean substitution, group mean substitution

Introduction

Missing data is a common issue in research, and it can lead to inaccurate conclusions about populations if improperly handled. Missing data is a problem because analysis of incomplete or improperly imputed data sets threatens the external validity of the findings by yielding non-generalizable results. The problem of missing data is often attributed to either design issues or extraneous factors (Kline, 1998). Missing data attributed to design issues is often intentional, as when the investigator administers only a section of a long questionnaire due to time constraints, or when an inexpensive measure is used for the whole sample and a more expensive measure is used with a randomly selected smaller group. However, undesirable design-related "missingness" can also be attributed to preventable factors such as lengthy questionnaires, unclear instructions, and the use of high-level language. Missing data attributed to extraneous factors relate specifically to the respondent, and are often beyond the control of the investigator.

A variety of statistical techniques are available to treat missing data. Some of these techniques are simple while others are conceptually and mathematically complex. The purpose of this paper is to provide the novice researcher with a conceptual overview of the issue of missing data. The focus of this introductory paper will be *patterns of missing data* and simple *missing data handling techniques* such as sample mean substitution, group mean substitution, case mean substitution, pairwise deletion, listwise deletion, regression imputation, and estimation maximization. Techniques such as hot-deck imputation, maximum likelihood, and multiple imputation are relatively complex and are not readily available in traditional statistical software packages. Therefore, these techniques are beyond the scope of this paper. With the exception of mean substitution, the techniques described in this paper are appropriate for treating missing data measured at nominal, ordinal, and interval levels. Sample and group mean substitution can be applied to treat missingness only in variables that are measured at the interval level. However, case mean substitution can be used to impute ordinal missing data such as when item values are missing in a psychometric Likert-type scale.

The Issue

The issue of missing data is not a trivial one. The majority of statistical analyses can be conducted only on complete data sets (Allison, 2000; Rubin, 1987) — that is, cases with missing data on even one variable will be dropped from computer analyses. This leads to reduced sample size, compromises statistical power, and could affect the accuracy of parameter estimates (Patrician, 2002). Listwise deletion of missing data affects statistical power in two ways. First, in multivariate analysis, deleting a relatively large number of cases that have missing data on a given variable may mask the true relationship between this variable and the remaining variables, which could render the whole analysis invalid (Patrician). Second, deletion of a large number of cases with missing values on one or more variables may lead to a significant reduction in sample size, thus compromising statistical power (Patrician; Roth & Switzer, 1995). When data are missing in a systematic pattern, it is assumed that there are differences between respondents and non-respondents with regard to the variables on which data are missing. This is because systematic missing data are often the result of respondents' choosing to withhold certain types of information. The inability to account for systematically missed data in deletion procedures leads to misrepresentation of the true characteristics of the sample. Therefore, limiting the analysis to cases with complete information may lead to non-response bias, and may produce inaccurate parameter estimates (Barnard & Meng, 1999; Tabachnick &

Fidell, 2001), which ultimately limit the generalizability of the findings (Cohen & Cohen, 1983; Huisman, 1998).

Extent of Missing Data

When faced with missing data, the researcher should first determine the extent and pattern of missingness (Kline, 1998; Tabachnick & Fidell, 2001). Several authors recommend deleting variables, rather than cases, when the amount of missing data on the variables is large. Tabachnick and Fidell suggest that if missing values are limited to a few variables and those variables are not critical to the analysis or are highly correlated with other complete variables, it is best to delete these variables from the analysis, as they may not carry any clinically significant data. Although several authors recommend deleting a variable with a large amount of missing data, there is no consensus among them with regard to what constitutes a large amount of missingness. Cohen and Cohen (1983) suggest that up to 10% missing data on a variable is not large and that the variable should therefore be retained for analysis. Raymond and Roberts (1987) recommend a more liberal estimate, suggesting that a variable should be deleted when 40% or more of the data are missing. Tabachnick and Fidell and Kline suggest that the pattern of missing data is more important than the extent of missingness. Tabachnick and Fidell classify patterns of missing data as either random or systematic (also known as non-random or non-ignorable), and suggest that systematic missing data pose a greater threat to the generalizability of findings than randomly missing data.

Patterns of Missing Data

Treatment of missing data is dependent on the pattern of missingness, which essentially determines the potential generalizability of research findings. It is therefore important that the investigator determine the pattern of missingness prior to deciding which missing data technique will be employed. The patterns of missing data can be classified into three categories: missing completely at random (MCAR), missing at random (MAR), and systematic (Heitjan, 1997; Kline, 1998; Patrician, 2002). By identifying the pattern of missingness, investigators can better determine the probability that missing data are dependent on the values of available data (i.e., observed values).

When the probability of missing data on one variable is independent of the values of that variable and of the values of the other variables in the data set, the data are assumed to be MCAR (Heitjan, 1997; Patrician, 2002). Suppose, for example, that a group of obese women are enrolled in a study to examine the impact of weight reduction on self-esteem. During the first session, participants are classified as having borderline, moderate, or severe obesity. The pattern of missingness is assumed to be MCAR if follow-up data on weight reduction are missing only because some participants could not attend a given session for reasons such as illness or inability to secure transportation. This is because the missing value is not related to the participants' weight loss or to any other variables in the data set. However, if the probability of non-response is independent of the participant's weight loss but is related to the values of one or more of the other variables in the data set, the data are considered to be MAR (Kline, 1998; Little & Rubin, 1987). In other words, when data are MAR, missingness is not attributed to the value of the variable on which data are missing but is related to values of other variable(s) in the data set (University of Texas Statistical Services, 2000). For example, the pattern of missingness would be MAR if participants who were diagnosed as severely obese in the first session decide not to attend a follow-up session because they are embarrassed at being the largest members of the group, regardless of whether they have lost weight. In this case, the missingness is not related to the weight loss itself but is related to the initial classification of severe obesity. Both MCAR and MAR assume that missing data are not related to participants' true scores on the variable with missing data. However, the definition of MCAR carries a stronger assumption that missing data are truly random (Kline; Patrician).

If there is a probability that missing data on a variable are dependent on the value of the missing variable itself, then the pattern of missingness is said to be systematic. In this case, the missing data are dependent not on other variables in the data set but on the missing value itself (Heitjan, 1997). Using the aforementioned example, if participants who had no weight loss decided not to attend the second session because they did not see a benefit in participating, then missingness on follow-up measures of weight reduction is related to the missing value itself (weight loss) and is said to be systematic. This is because the missing value is explainable *only* by the variable on which the data are missing (weight loss) (University of Texas Statistical Services, 2000). Unlike in the case of random patterns of missing data, systematically missing data are not due to chance, but are intentional. Eliminating cases with missing data may result in non-generalizable findings when missingness is systematic (Kline, 1998).

Determining the Pattern of Missing Data

Knowledge concerning the pattern of missing data helps the investigator to determine the most appropriate approach to dealing with missingness. This is especially important when the pattern is systematic, because, if not treated appropriately, such a pattern tends to yield biased parameter estimates and invalid results. However, the process of determining the pattern of missing data can be a difficult one. Although there are several techniques available to help the researcher examine the data in order to determine the nature of the missingness (Cohen & Cohen, 1983; Orme & Reis, 1991), frequently the data provide little information that can be used in identifying patterns (Heitjan, 1997; Rubin, 1987). Although these techniques allow investigators to rule out MCAR, they cannot confirm that this is the cause of missingness. Assume, for example, that a researcher examines the data and finds no systematic explanation for missingness in a data set. In this case, there may be a tendency to infer that the missing data are MCAR. However, it is quite possible that the values of missing items are related only to the values themselves, or to other variables that are not included in the data set. These two possibilities cannot be tested because they are unknown and/or inaccessible to the researcher (Huisman, 1998). In addition, direct testing for the MAR assumption is not possible because investigators have no access to the missing values (Allison, 2000). Investigators are thus advised to make every effort to prevent the occurrence of missing data and to familiarize themselves with their study population such that they can anticipate the types of respondents who will omit certain data and develop strategies to facilitate prediction of the missing values (Kline, 1998; Patrician, 2002). For instance, respondents' postal codes may serve as a proxy to help the investigator estimate the social class or income of respondents who did not provide data on those variables.

Although it is tempting to assume that missing data are attributable to random factors and that they will have no impact on the generalizability of the findings, the researcher should test this assumption, especially if the amount of missing data is large. One way to examine data for evidence of systematic missingness is to create a missing data dummy variable that will be treated as the dependent variable in a predictive logistic regression model that includes the remaining variables in the data set as independent variables, to determine which of the variables predicts the presence of missing data on that variable (Acock, 1997; Hair, Anderson, Tathman, & Black, 1998; Huisman, 1998; Little & Rubin, 1987; University of Texas Statistical Services, 2000). Thus, other variables in the data set can be used to explain missing data and to provide information that can be used to mitigate the bias caused by missing data and to identify the pattern of missingness. Suppose, for example, that a study on job satisfaction collected data on level of education, type of profession, age, and income, but some respondents failed to report their income. The investigator may decide to create a missing data variable (coded as reported income = 1, no report of income = 0), which can be entered as the dependent variable in a logistic predictive regression model to examine whether this variable can be predicted by level of education, profession, and/or age. If the presence of missing data on this variable is predicted by other variables, then data cannot be MCAR. When this approach to determining the pattern of missing data is used, the missing data variable (i.e., report vs. no report of income) could be included in the main analysis of job satisfaction, because it may provide important information concerning the attributes of the respondents in relation to their income and its relation to job satisfaction.

A second method of examining the pattern of missingness involves computation of *t*-tests to compare respondents and non-respondents on an item or measure. In this method, the sample is split into into two groups, those who responded to the variable in question and those who did not. Differences in the means of the observed values of the other measures in the data set are then tested (Acock, 1997; Huisman, 1998). Significant differences between respondents and non-respondents with respect to other observed variables indicate that the data cannot be MCAR (Huisman). In this approach, however, the sample size must be considered, because statistical significance is very sensitive to sample size. The absence of statistical difference with a small sample size might not necessarily mean that missingness was random.

In a third approach to examining the pattern of missingness, the missing data are incorporated as an independent dummy variable into a multiple regression model (Orme & Reis, 1991). The missing data variable is entered hierarchically into the regression equation such that the complete observations are entered in step one and the missing data variable is entered in step two. This approach partials out the effect of variables with complete observations from the relationship between the missing data variable and the outcome variable. In general, the degree of association between the missing data variable and the dependent variable indicates the degree to which data are missing on a non-random basis in relation to the dependent variable (Orme & Reis). However, Orme and Reis caution that a zero correlation between a missing data variable and the dependent variable indicates only that the missing data are unrelated to the dependent variable; it does not indicate that the obtained values on the predictor variables are a random subset of the sampled values. This approach thus provides a way to rule out other possibilities, but it cannot confirm the assumption that data are MCAR. Its main advantage is that it allows the investigator to examine the pattern of missing data while at the same time treating missing data. In addition, it allows for inclusion of the entire sample in the data analysis, and thus preserves statistical power, which may be compromised if a large number of respondents with missing data were to be eliminated. Finally, it reduces bias in the parameter estimates (Orme & Reis) that may result from deletion if missingness is systematic. Incorporating missing data as a dummy code in the analysis, as described above, is not recommended when it results in a severely uneven split (90–10) between the two levels of the variable (reported vs. not reported). This is because the variance of the missing data variable will be quite small, which will constrain its correlation with other variables. In addition, when the same respondents have missing data on more than one variable, this approach may yield high correlations (multicollinearity) with the other missing data variables. Multicollinearity among the dummy variables for missing data may lead to data redundancy, which can subsequently impede any meaningful interpretation of the possible causes of missing data.

Techniques for Handling Missing Data

The techniques for handling missing data can be classified into deletion techniques and imputation techniques (Kline, 1998; Little & Rubin, 1987). With deletion techniques, cases with missing data are excluded from statistical calculations. With imputation techniques, in contrast, an estimate of each missing datum is calculated and the missing data points are replaced, or *imputed*, by their estimates. In the imputation techniques discussed in this paper, each missing datum is replaced with a single estimate. A more complex imputation procedure that is beyond the scope of this paper is *multiple imputation,* which involves the creation of multiple estimates of each data point. The choice of missing data handling technique can affect the amount of dispersion around true scores, and therefore affect the degree of bias in the final results (Roth & Switzer, 1995). Thus, the choice should be based on the amount and pattern of missing data.

Deletion Techniques

Listwise deletion eliminates a case when any of its variables or items has a missing data point, regardless of whether that particular data point is being used in the analysis (Kline, 1998; Patrician, 2002; Tabachnick & Fidell, 2001). In other words, it restricts the analysis to those cases with complete data. To illustrate, assume an investigator wishes to conduct an analysis using the variables self-care, self-care agency, health, and well-being. Listwise deletion would result in elimination of an entire case if it has missing data on any of these variables, regardless of whether the variable was used in the analysis. This strategy is the default function on many statistical programs, such as SPSS and SAS. The primary advantage of listwise deletion is that it allows for all analyses to be conducted on the same number of cases (Kline), and not on an overlap of different samples, as is the case with pairwise deletion. However, deletion of all cases with missing data may result in the loss of a large number of cases. Hence, one of the main criticisms of listwise deletion is that the reduction in sample size can substantially diminish statistical power (Kline; Little & Rubin, 1987; Raymond & Roberts, 1987; Roth, 1994; Tabachnick & Fidell).

Another problem associated with listwise deletion is bias. Listwise deletion assumes that data are MCAR. If data are MCAR, deleting cases with missing data does not pose a problem with bias, because the remaining cases with complete data are essentially a random subsample of the original sample (Tabachnick & Fidell, 2001) and will result in unbiased population values (Little & Rubin, 1987). However, when data are not MCAR, listwise deletion may inflate or deflate parameter estimates and lead to biased results. This is because respondents with missing data are likely to be different in some way from respondents who provide complete information. Therefore, respondents contributing to statistical analyses may be unrepresentative of the target population (Little & Rubin; Patrician, 2002; Schafer & Olsen, 1998).

When data are MCAR, listwise deletion often yields unbiased parameter estimates but may result in larger standard errors due to the decrease in sample size (Patrician, 2002). Thus, listwise deletion should be used only when the amount of missing data is small (Roth & Switzer, 1999) and is assumed to be randomly scattered (Tabachnick & Fidell, 2001). Hertel (1976) recommends that listwise deletion not be used if it leads to loss of more than 15% of cases. However, Roth (1994) considers listwise deletion to be appropriate only if less than 5% of the data are missing and if the data are MCAR.

Pairwise deletion, also known as *available case analysis,* eliminates a case only when that case has missing data on the variables that are under analysis. However, that case will be included in other analyses that do not involve the variables on which data are missing (Roth, 1994). Using the example discussed earlier, if a case was missing a score on the variable *self-care,* it would be excluded from analyses involving *self-care*. However, the case could still contribute data towards analyses that involve other variables in the data set such as *self-care agency, health,* and *well-being* — if the case had no missing data for any of these variables. Thus, although pairwise deletion results in loss of data, it preserves sample size and statistical power (Roth, 1994; Tabachnick & Fidell, 2001).

Pairwise deletion is based on the assumption that estimates of linear models are functions of the first and second moments (i.e., mean and standard deviation) of any pair of variables. According to this assumption, either of these moments can be estimated using all cases with complete data on each variable or pair of variables (Allison, 2003). Thus, pairwise deletion involves the creation of a correlation matrix in which each correlation is calculated using only those cases that contain complete data points for both variables being correlated. Multiple regression analysis could then be computed on the resulting correlation matrix of nonmissing data (Orme & Reis, 1991; Patrician, 2002). Given that cases with missing data contribute to the calculation of some correlations but not to others, pairwise deletion produces a correlation matrix with correlations that are based on slightly different subjects and/or different numbers of subjects (Cohen & Cohen, 1983; Patrician). Thus, pairwise deletion may result in a series of analyses that represent different overlapping samples that may be representative of slightly different populations. This problem often complicates interpretation of correlations and somewhat impedes generalization to a specific population (Raymond & Roberts, 1987). In addition, it is difficult to determine the appropriate sample size on which to base reporting of statistical tests. An additional problem with pairwise deletion is that it can result in mutually inconsistent correlations that would be impossible to obtain with a complete data set (Cohen & Cohen). With complete data, the correlation between any two variables is constrained by their correlation with a third variable. This constraint may not hold true when pairwise deletion is used. Further, use of mutually inconsistent bivariate correlations can yield multiple regression coefficients that are less than zero or greater than one, both of which are theoretically impossible (Cohen & Cohen).

Allison (2000) suggests that when data are MCAR, pairwise deletion yields unbiased parameter estimates of sample means, variances, and correlation coefficients, because available pairs of scores are a random subset of the pairs of scores for the entire sample. Roth (1994) indicates that if data are MCAR, pairwise deletion is an appropriate technique if the proportion of missing data does not exceed 20%.

Imputation Strategies

Imputation entails the calculation of an estimate of each missing datum based on the values of other variables or the making of a reasonable guess to complete the data set. Data analysis is then carried out on a complete data set that includes both actual and imputed data (Little & Rubin, 1987). In general, imputation strategies are superior to deletion strategies, because they retain sample size and therefore maintain statistical power. In addition, some imputation strategies do not require that data be MCAR, an assumption that is often difficult to confirm (Raymond, 1986).

Case mean substitution entails the replacing of a missing data point with the mean for that case on the items that have complete data for that case (Raymond, 1986). It is applicable for missing data on psychometric measures in which all items are indicators of a higher-level abstract concept, because psychometric measures are deliberately constructed such that each item is correlated with the remaining items in the measure. Hence, case mean substitution is based on the assumption that, for any given case, the score for one item is closely related to the scores of the remaining items. The main advantage of case mean substitution is that it acknowledges differences across respondents by using data provided by the individual to estimate missing data for that individual, rather than using data provided by other respondents. For example, assume there are missing data on three items of a 20-item psychometric instrument that measures depression via Likert-type items; in this scenario, the mean of the 17 remaining items would be calculated and assigned to each of the missing values for that case.

Roth, Switzer, and Switzer (1999) examined the impact of several imputation techniques (listwise deletion, case mean substitution, item mean substitution, and regression) on correlation and regression coefficients using data sets that had missing data on 20% of the items, in both random and systematic patterns. They conclude that case mean substitution is the most robust approach to handling missing data in psychometric measures. Further, Downey and King (1998) found that, when data were MCAR, case mean substitution reproduced a fairly robust alpha if up to 30% of the items were missing, but found about 5% inflation in the alpha when 70% of the items were missing. In addition, they report that correlations between true and estimated scores were greater than 0.95 when (a) the number of missing items did not exceed 60%, or (b) the number of respondents with missing data did not exceed 15%. These findings suggest that case mean substitution is a robust imputation technique for psychometric data as long as the extent of missingness does not exceed 30%.

Sample mean substitution is one of the most commonly used imputation techniques (Acock, 1997; Raymond & Roberts, 1987). It entails the substitution of the missing value on a variable with the sample mean of available data for that variable (Acock; Kline, 1998; Tabachnick & Fidell, 2001). For example, a missing score for a case on the variable *self-care* would be assigned the sample mean value of *self-care* that was obtained from all other cases that provided scores on this variable. This approach assumes that the best guess of a score for a normally distributed variable is the mean (Acock). It also assumes that missing and available data are normally distributed because they are assumed to be random subsets of the total sample. The mean for available data is therefore assumed to represent an unbiased estimate of the mean for the total sample (Hertel, 1976). If the variable with missing data is not normally distributed (i.e., skewed), median substitution may be more accurate than mean substitution (Acock).

Although sample mean substitution is easy to compute and although it preserves data, it tends to decrease variance-covariance between the variable with missing data and the other variables (Acock, 1997; Raymond & Roberts, 1987; Roth, 1994; Tabachnick & Fidell, 2001). Because of its insensitivity to the response pattern of an individual subject, sample mean substitution also ignores response bias (Kline, 1998; Patrician, 2002). If data are not MCAR, attenuation of variance could reduce estimates of standardized coefficients (such as R^2, β in regression analysis), increase standard errors, and reduce true estimates of *t* values (Acock). However, since *t* values are also dependent on sample size, sample mean substitution may artificially inflate the *t* value, because it retains cases with missing data by replacing their missing data with invariant values that do not accurately represent the true scores of missing values (Acock). The main advantage of sample mean substitution is that it is a conservative approach in which the mean for the distribution as a whole does not change (Tabachnick & Fidell). Nonetheless, this does not outweigh the aforementioned disadvantages, because the ascribed mean value is more likely closer to the available values of other respondents than to the real missing value. The use of sample mean substitution should therefore be restricted to situations in which data are assumed to be MCAR and the extent of missingness is very small (Roth, 1994).

Group mean substitution ascribes the group mean value to missing data points within that group, based on the assumption of within-group homogeneity. Therefore, this technique is applicable only to analyses involving grouped data, such as *t* test comparisons, ANOVA, and logistic regression analysis. Group mean substitution is believed to yield more accurate estimates of missing data than sample mean substitution because it minimizes the risk of attenuation of between-group variance that occurs when an overall sample mean is used to replace missing values (Acock, 1997; Tabachnick & Fidell, 2001). In other words, this approach assumes that scores for different groups (levels) of a given variable are heterogeneous, and that scores for subjects within a group are *homogenous* (Acock). Suppose, for instance, that stroke patients and healthy individuals are compared on *self-care abiliites*, and that some data are missing on this, a continuous variable. Using group mean substitution, missing data on self-care abilities could be estimated by dividing the sample into two groups based on their health state (healthy versus stroke). Cases from the healthy group who are missing data on self-care abilities would then be assigned the healthy group mean value of the self-care abilities variable and vice versa. A significant disadvantage of group mean substitution is that the assumption of within-group homogeneity may be violated if the within-group variance is relatively large. In this case, group mean substitution may yield parameter estimates that are not different from those produced by sample mean substitution (Tabachnick & Fidell).

Regression-based imputation uses knowledge of other variables to predict the values of missing data on a given variable. This technique entails the creation of a dummy code for missing data and treating it as a dependent variable. The values of the missing data are then estimated using the logistic regression equation that results from regressing other variables with complete observations on the missing data dummy code. This approach is based on the principle that if the missing data variables can be predicted by the other variables in the data set, then the resulting regression equation could be used to predict missing values for incomplete cases (Hair et al., 1998; Patrician, 2002; Tabachnick & Fidell, 2001). If more than one variable in the data set has missing data, a prediction equation will be needed for each missing data variable, which can be a very tedious and complicated process.

The main advantage of regression-based imputation is that it strives to methodologically estimate the missing data and thus is a relatively objective technique (Tabachnick & Fidell, 2001). Use of regression-based imputation yields reasonable estimates of means, particularly when normality assumptions are plausible. However, the covariance matrix that results from a data set with imputed values tends to underestimate the true variances and covariances, because regression techniques project the value of missing data onto the regression line, thus decreasing deviation about the line. The extent of underestimation resulting from regression imputation is, however, less than that which results from mean substitution techniques (Little & Rubin, 1987). Empirical studies indicate that regression methods are more accurate than the previously described approaches to dealing with missing data (Raymond & Roberts, 1987). Raymond and Roberts suggest that regression methods are most useful when data are 10% to 40% incomplete and the variables are at least moderately correlated. When correlations between variables are low, regression will not perform much better than mean substitution or pairwise deletion. Roth (1994) suggests that regression methods are appropriate when 6% to 20% of data are MCAR, up to 15% of data are MAR, or up to 10% of data are missing in a systematic pattern.

Despite its strength as an empirical imputation technique, regression-based imputation has several disadvantages. It can lead to over-prediction of the missing data if the explained variance (R^2) in the missing data variable was inflated due to multicollinearity (Acock, 1997; Cohen & Cohen, 1983). Also, the scores may fit together better than they should because the predicted missing value is likely to be more consistent with the variables that predicted it than with the actual value of the missing score (Tabachnick & Fidell, 2001). A third disadvantage stems from the fact that the variables used to predict the missing variable(s) may not be good predictors and may therefore lead to inaccurate estimation of the missing value(s). One way to minimize inflation or underestimation of estimates is to use only the best predictor or set of predictors in the regression model (Acock). In addition, researchers using regression methods to estimate missing values are cautioned not to include the dependent variable of the study in the prediction equation that will be used to estimate missing data, because this may artificially inflate the R^2 (Raymond & Roberts, 1987).

Expectation maximization (EM) algorithm uses an iterative procedure in order to produce the best parameter estimates. It begins with an estimation of missing data based on assumed values for the parameters. The actual data and missing estimates are then used to update the parameter estimates, which are, in turn, used to re-estimate missing data. The process continues until there is convergence in the parameter estimates (Roth, 1994; Schafer & Olsen, 1998), which indicates that more iterations will not produce any significant change in parameter estimates (University of Texas Statistical Services, 2000). EM is considered superior to the aforementioned techniques because it produces unbiased parameter estimates when data are MCAR and less biased parameters when data are MAR or systematic (Acock, 1997). Despite its complex mathematical and conceptual foundations (Roth, 1994), EM can be easily carried out using several software packages such as SPSS under the missing data analysis option.

Summary

This paper provides an overview of commonly recommended approaches to handling missing data. Despite the interesting features of each of these techniques, the most effective way of handling missing data is to prevent its occurrence. However, when missing data becomes a problem, it is essential for the researcher to determine the pattern of missingness and choose the proper approach to handling missing data. Almost all of the missing data techniques discussed in this paper have advantages and disadvantages. Some techniques, such as deletion procedures and mean substitution, are technically simple but empirically weak. Others are technically challenging but tend to yield more robust estimates. Because the validity of research results may be dependent on the investigator's approach to handling missing data, we recommend that nurse researchers inform their readers about how the problem of missing data was addressed. This practice serves to highlight the rigour and validity of nursing research.

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Book Review

Evidence-Based Nursing: A Guide to Clinical Practice

Alba DiCenso, Gordon Guyatt, and Donna Ciliska
St. Louis: Mosby, 2004. 600 pp.
ISBN 0-32302-591-9

Reviewed by David S. Thompson

This 600-page reference guide is designed to assist nurses from various backgrounds in better understanding and using the health-care literature. Based on the *Users' Guide to the Medical Literature: A Manual for Evidence-Based Clinical Practice,* edited by Gordon Guyatt and Drummond Rennie, *Evidence-Based Nursing (EBN)* is written specifically for nurses and students engaged in practice, research, and education.

Like the medical version, the *EBN* is divided into 36 chapters presented in two sections, in this case The Basics: Using the Nursing Literature and Beyond the Basics: Using and Teaching the Principles of Evidence-Based Nursing. The authors have enhanced the usefulness of the book as a reference manual by separating the chapters of part 2 into six units.

The purpose of part 1 is twofold: to cover what every nurse and nursing student should know about using the health-care literature, and to present a curriculum for basic and continuing education. This material is presented in 11 chapters: 1 Introduction to Evidence-Based Nursing, 2 Finding the Evidence, 3 Health Care Interventions and Harm: An Introduction, 4 Health Care Interventions, 5 Harm, 6 Diagnosis, 7 Prognosis, 8 Qualitative Research, 9 Summarizing the Evidence Through Systematic Reviews, 10 Moving from Evidence to Action Using Clinical Practice, and 11 Changing Nursing Practice in an Organization.

Although each chapter in the book is meant to be self-contained, presentation of the material in part 1 is logical, allowing the reader to move sequentially through the chapters. Part 1 begins with an introduction to the evidence and ends with a discussion of the process of changing nursing practice, comprehensively covering all aspects in between. Chapter 11, while perhaps simplistic from a practical viewpoint, is one of three chapters (1, 11, and 17) that do not appear in Guyatt and Rennie's medical reference but were included here because of their pertinence to the nursing profession.

The authors appear to have adopted a minimalist approach to chapter content, in order to avoid redundancy and provide adequate reference to concepts that readers may wish to review in more detail. This reader especially appreciated their provision of references to previous chapters where a concept is first described and subsequent ones where it is discussed in more detail. For example, in their presentation of material on the assessment of study results in chapter 5 (Harm), the authors discuss the application of *relative risk* and *odds ratio* and refer to the chapters (4 and 27) where these concepts are first discussed and then further elaborated. Novices and experts alike will appreciate this feature, as it allows for a tailored approach to learning based on skill level and gives the book an interactive feel.

DiCenso et al. introduce the majority of chapters using a clinical scenario, which they then repeatedly reference throughout the chapter. The use of scenarios helps to familiarize the reader with the process of evidence-based practice, as well as providing interesting and relevant findings for practice. However, this reader found it troublesome that all of the clinical scenarios pertain to nurses working in highly autonomous and specialized roles such as nurse practitioners, nurse educators, and community health nurses. Given that part 1 is intended to cover "what every nursing student and practicing nurse should know," and given that the majority of nurses work at the bedside in a hospital, negating the role of the bedside nurse in these clinical scenarios detracts from the overall applicability of the book. Guyatt and Rennie, in their medical guide, appear to favour the generalist in their scenarios. This would be a welcome approach for the next edition of *EBN;* it would surely extend, or at least challenge, the application of evidence-based practice to bedside nursing.

Of particular enjoyment to this reader was the discussion, in chapter 1, on misconceptions about evidence-based nursing. This not only is a prime example of how DiCenso et al. diligently tailored the content of *EBN* to reflect the needs and principles of the nursing profession, but also introduces the reader to the philosophical underpinnings from which they approached the task of writing the book. Thankfully, they go beyond rhetorical treatment of these issues, providing concrete examples of misconceptions throughout the succeeding chapters (see, for example, the direct application of a theoretical framework for adopting an evidence-based change in an organization presented in chapter 8, which is devoted entirely to qualitative research, and chapter 11).

Overall, part 1 of *EBN* delivers what the authors promise: a basic guide to enable nurses to frame their clinical questions, search the appropriate literature, evaluate research findings, and apply evidence to practice in a manner that benefits patient outcomes and strengthens the nursing profession.

We then see a shift from the basic to the advanced, the authors stating that part 2 is for nurses who wish to attain a higher level of proficiency in using the literature, whether it is through clinical practice, education, administration, or research. Essentially, part 2 advances the concepts presented in part 1. The material is covered in 25 chapters divided into six units: *I Health Care Interventions* 12 Quality of Life, 13 Surrogate Outcomes, 14 Surprising Results of Randomized Controlled Trials, 15 The Principle of Intention to Treat, 16 When to Believe a Subgroup Analysis; *II Health Services Research* 17 Health Services Interventions, 18 Economic Evaluation, 19 Computer Decision Support Systems; *III Diagnosis* 20 Clinical Manifestations of Disease, 21 Differential Diagnosis, 22 Clinical Predication; *IV Summarizing the Evidence Through Systematic Reviews* 23 Publication Bias, 24 Evaluating Differences in Study Results, 25 Fixed-Effects and Random-Effects Models; *V Understanding the Results* 26 Bias and Random Error, 27 Measures of Association, 28 Hypothesis Testing, 29 Confidence Intervals, 30 Measuring Agreement Beyond Chance, 31 Regression and Correlation; *VI Moving from Evidence to Action* 32 Number Needed to Treat, 33 Applying Results to Individual Patients, 34 Incorporating Values, 35 Interpreting Levels of Evidence and Grades of Health Care Recommendations, and 36 Recommendations About Screening.

As with part 1, these chapters are largely self-contained and provide ample chapter references for the reader to review concepts presented elsewhere in the book. However, because the material in part 2 is more complex, this reader would have appreciated external references, perhaps labelled "recommended further reading," to assist readers in clarifying certain concepts. For example, although the authors describe regression analysis in chapter 31, many readers will require additional resources. A short section recommending texts or Web sites would be a welcome addition to the next edition and would likely increase the usability of the book as a text for basic or continuing education.

Part 2 will be much appreciated by nurse practitioners and other nurses who routinely diagnose and treat patients based on research findings. Units I, III, V, and VI will be of particular interest to clinicians. Administrators will find unit II most applicable to their work, and unit IV is a must for anyone conducting or reading systematic reviews. Again, clinical scenarios are used in most chapters to introduce and reinforce the content, but what this reader found most helpful in part 2 was the summaries at the end of the chapters, titled How Can I Apply the Results to Patient Care? (in chapter 17, How Can I Apply the Results to Health Services Decision Making?). Part 1 also includes this feature. It helps to contextualize complex material and illustrates the practical use of the concepts.

The authors have included an interactive CD-ROM that can be installed on a personal computer. The viewer can then peruse the chapters as well as use interactive calculations and worksheets. This user appreciated the in-text citations, which, once clicked on, provide the reference and abstract in a second window. Unfortunately one must instal the program in order to view the content. This may prohibit nurses from using the CD-ROM at work, since most workplace computers will not support installation of new applications without administrative approval. A Web-based version of the CD-ROM would have resolved this problem.

In light of initiatives such as the Canadian Nurses Association's National Nursing Portal Project, aimed at providing nurses with access to the latest health-care literature, *EBN* is a timely addition to the evidence-based movement in nursing and is likely to be a valued resource for nurses and students alike. Additionally, *EBN* would make an excellent unit or clinic reference for employers committed to supporting evidence-based nursing practice.

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