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The Definition of Underserviced:

Policies, Issues, and Relevance

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Executive Summary

The paper begins by clarifying two terms: *shortage* and *underserved*. Provincial and federal programs for underserved areas in Ontario are then described and considered in terms of their relevance to nursing. Policies to address issues of shortage and underserved areas are discussed, followed by recommendations for the future.

The terms *shortage* and *underserved* are two perspectives on the same phenomenon. *Shortage* denotes inadequate numbers and is used when the supply of human resources is insufficient to meet demand (Unruh & Fottler, 2005). It refers to deficits at macro (national) and micro (organizational) levels and is used by the media to discuss shortfalls in nursing supply, particularly in hospitals. *Underserved* (or *underserved*) denotes locations with perceived disparities in access to health care services (Barer, Wood, & Schneider, 1999). It is used to describe deficits in physician services based on physician-to-patient ratios. Communities are not considered underserved for nurses because, unlike family physicians, most nurses do not provide services as independent practitioners. There are practical and methodological problems associated with measuring shortages and designating underserved areas.

Most programs for underserved areas in Ontario are for physicians, but the Ministry of Health and Long-Term Care (MOHLTC) also provides incentives for medical specialists and rehabilitation professionals. Other Initiatives by the Ontario government are aimed at improving access to primary care in underserved areas through involvement of a range of professions and better integration of physician services into the community. Family Health Teams and increased investment in nurse practitioner (NP) educational programs are examples of such strategies.

Since regulated in 1998, NPs have had an established role in underserved areas. It is vital to know whether they are being effectively recruited, retained, and utilized. Many NPs currently work in non-NP roles. However, anecdotal evidence suggests there are as many as a 100 vacancies for NPs in programs funded by the MOHLTC. Details of these vacancies are difficult to establish because aggregated vacancy data from these programs is unavailable. It is important to establish the exact number of vacancies and the reasons for their persistence.

Shortages within professions tend to be generalized rather than discussed in context. This means that the supply problems of smaller sectors (e.g., home care, public health) are not differentiated from those of larger sectors (e.g., acute care), and shortages in rural areas are not differentiated from those in urban centres. Differential shortages by specialty are acknowledged

but not well studied. The advantage of the term underserved is that it directs attention to local variation. Focus on family physicians makes it difficult to assess health care delivery in underserved areas. Information about local shortages among all health care workers is required.

Problems associated with underserved areas include intractable physician shortages and overemphasis on a single type of health care service provider. Primary care characterized by independent physician practice leaves many without access to services. Implementing Family Health Teams may improve this situation, but other interventions may be needed.

Recommendations

Recommendations for health human resource planning for underserved areas are:

- Broaden the scope of underserved to include a range of health care services (e.g., long-term care, home care, public health) rather than restricting it to the services of selected health care professions (e.g., physicians).
- Expand the concept of shortage to identify regional, local, and specialist nursing shortages.
- Take a systemic rather than discipline-based approach to local health care. For example:
 - Create or expand collaborative organizations and networks (e.g., Family Health Teams, community health centres) for health care delivery in underserved areas.
 - Maximize the contribution of all professions with relevant competencies who are available to deliver health care services in local communities.
 - Collect and organize statistical data on health professions and health services to facilitate planning health care delivery in the new Local Health Integration Networks (LHINs).
 - Consolidate data about NP vacancies in a central MOHLTC repository for analysis and action.
- Construct profiles of health care services and delivery within each LHIN, including information on communities and catchment areas, health care organizations, partnerships, and alliances.
- Explore health human resource capacity in the newly established LHINs using the concepts of underserved and shortage. For example, assess which communities within each LHIN are underserved based on how easily residents can access health care services and whether health human resource shortages contribute to access problems.

Introduction

Terms used to describe inadequate supply of health care personnel are often ambiguous and confusing. This paper begins by clarifying two such terms: *shortage* and *underserved*. Provincial and federal programs for underserved areas in Ontario are then described and considered in terms of their relevance to nursing. A discussion of the issues associated with policies addressing shortage and underserved areas follows. The paper concludes with recommendations for change. The importance of making funding decisions based on a clear understanding of relevant concepts and models is emphasized.

Clarification of terms is an important basis for decision making.

Shortage and Underserved: Perspectives on Supply and Demand

The terms *shortage* and *underserved* represent two perspectives on the same phenomenon. *Shortage* indicates that the supply of human resources is insufficient to meet increasing demand (Unruh & Fottler, 2005). The term is used to discuss deficits at both the macro (national) and micro (organizational) level. In contrast, *underserved* (or *underserved*) is commonly used to denote locations where there are perceived disparities in access to health care services (Barer, Wood, & Schneider, 1999).

Shortages occur when there is insufficient supply to meet perceived demand.

Most nurses are employees of service providers, such as hospitals, who pay them to deliver services. Nurse-to-patient ratios are sometimes used in international comparisons of nurse supply (International Council of Nurses, n.d.; Wharrad & Robinson, 1999). However, a shortfall in the supply of nurses is usually referred to as a shortage. Because nurses do not usually work as independent practitioners in communities, the term underserved is rarely used in relation to nurses. In contrast, it is used in to describe deficiencies in physician services available to populations in designated geographical areas.

Shortage commonly refers to deficits in nursing supply.

Underserved is used in relation to physician services.

How Are Shortages Understood?

There are practical and methodological problems with identifying and quantifying actual shortages. The term has different meanings in different contexts. It may refer to patient needs, the capacity to carry out required work, or the extent to which funded vacancies are filled. Discussions of national and regional shortages usually do not distinguish these aspects. In organizations, self-reported shortage status, vacancy rates, turnover rates,

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and the number of active full-time equivalent (FTE) staff adjusted for inpatient volume and staff can all be used to assess shortage (Grumbach, Ash, Seago, Spetz, & Coffman, 2005). Where statistics are used as a basis of estimation, limitations of databases, including their lack of consistency, cause problems. Since there is no consensus on the definition of vacancy, shortage is not uniformly measured across health care organizations. In some organizations, internal and external turnover (i.e., moving to another organization versus moving to a new job inside the organization) is not differentiated (Baumann, Fisher, Blythe, & Oreschina, 2003). Data on the supply of other health care professions is likewise limited. Because statistics at the regional and provincial level are aggregated from individual organizations, they are likely to be unreliable (Baumann & Oreschina, 2005).

There is no commonly accepted methodology to calculate shortages.

In theoretical discussions, shortages are described as the gap between supply and demand. Both demand and supply factors are considered to contribute to any shortage situation (Unruh & Fottler, 2005). Beyond this, shortages are interpreted differently depending on the approach to human resource planning adopted. O'Brien Pallas, Birch, and Tomblin Murphy (2001) note that human resource planning does not exist separate from the social context. They isolate three approaches to planning: needs-based (based on the needs of the population), utilization-based (current utilization is used as a baseline to calculate future requirements), and effective-demand based (economic considerations are added to the needs-based approach). The starting point of the latter approach is to estimate the future size of the economy for which health care services are to be funded. Given the divergence of these approaches, it is evident that shortage can be interpreted in alternative ways. In most of the literature dealing with shortages in the nation's health care professions, shortage is usually defined loosely if at all.

Both demand and supply factors contribute to shortage. Beyond this, shortages are interpreted differently depending on the approach to human resource planning adopted.

In the workplace, nursing shortages are evident to workers and management because of their impact on work arrangements. Symptoms associated with nursing shortage include difficulty in covering shifts, excessive overtime, and numbers of unfilled vacancies. Physician shortages are evidenced by difficulties in finding family physicians, high

Symptoms of shortage are excessive overtime, understaffing, and unfilled vacancies.

utilization of emergency departments, and increased waiting times for surgical procedures. It is important to examine how factors other than supply and demand are implicated in perceptions of shortage. For example, lack of funds for positions, inefficient staffing practices, maldistribution of personnel, and difficulties in recruitment in specialty areas can contribute to assessments of shortage.

Currently, various measures exist to address nursing shortage. These include government initiatives such as support for a 70:30 full-time to part-time staffing ratio and a range of recruitment and retention plans by individual hospitals (Registered Nurses Association of Ontario, 2005). In response to policies to deal with shortage, the numbers of registered nurses (RNs) employed in nursing in Ontario increased by 8.9% between 1999 and 2003, and higher full-time rates are increasing the nursing capacity of the health care system as a whole (Canadian Institute for Health Information [CIHI], 2004). High levels of retirement are predicted in the future as baby boomers leave the workforce. More work is needed to identify the various meanings of shortage and to address their implications for this demographic shift.

The number of RNs employed in Ontario increased by 8.9% over a four-year period.

Underserved Areas

In Canada, accessibility is one of the key principles guiding the provision of health services. Section 12 of the Canada Health Act specifies:

The health care insurance plan of a province must provide for insured health services in uniform terms and conditions and reasonable access by insured persons to insured health services unprecluded or unimpeded either directly or indirectly by charges or other means. (Health Canada, 1999)

An underserved area could be described as a region in which people lack reasonable access to health care services. However, while the Act provides an overview of what services should be provided, it does not specify criteria or standards for reasonable access. Resolving local differences in the quality and quantity of health care services is a challenge. There are no clear criteria for identifying an underserved area. In the absence of standards, each jurisdiction uses its own guidelines (Barer et al., 1999; National Ad Hoc Working Group on Physician Resource Planning, 1995).

In Ontario, the term underserved refers to maldistribution of family physicians in the community. A physician-to-patient ratio below an agreed threshold designates a community as underserved (Barer et al., 1999; Gupta, Zurn, Diallo, & Dal Poz, 2003; Pong & Pitblado, 2001). Population census data is frequently used to monitor geographical imbalances in the physician workforce (Gupta et al., 2003) and is an important planning tool (Barer et al., 1999; National Ad Hoc Working Group on Physician Resource Planning, 1995).

In Ontario, underserved refers to maldistribution of family physicians in the community.

As with the term shortage, conceptual and methodological problems are associated with assessing underserved areas. Limiting the term to connote underserved for physicians overlooks other services, and there are problems with identifying underserved areas using physician-to-patient ratios. Ratios allow for broad comparison, but there are methodological difficulties with their use. The technique has never been validated for any health care profession and it fails to account for:

Conceptual and methodological problems are associated with underserved.

- The influence of socio-environmental characteristics;
- Variation in patient demography/epidemiology;
- Accessibility of services in and beyond the unit of analysis;
- Physician characteristics (e.g., differences in hours worked); and
- The potential for specialist or disciplinary substitution (e.g., presence of a nurse practitioner) (Pong & Pitblado, 2001, 2002).

Limiting underserved to physicians leads to other services being overlooked.

Birch (2002) notes that, “the output of services from a given population of providers will depend on many things, not just on the size and other characteristics of the providers themselves.” For example, a serious problem with using ratios is that many physicians do not work full-time equivalent (FTE) hours. Barer et al. (1999) and Pong and Pitblado (2001) conclude that due to the complexity of local variables, estimating an appropriate distribution of physicians is ultimately a subjective judgment rather than a statistical one.

Due to the complexity of local variables, estimating an appropriate distribution of physicians is difficult.

Programs for Underserved Areas in Ontario

The purpose of identifying underserved areas is to provide remedial action to improve access to services or enhance the quality of existing services. Inducements are usually offered to individual physicians to

relocate to or remain in underserved areas. Barer et al. (1999) observe that the incentives offered are relatively standard across Canada and include:

- Subsidized incomes or guaranteed minimum income contracts for physicians practicing in rural/remote/isolated areas;
- Return of service subsidies and grants;
- Funded rural area locum programs;
- Specific funding for rural area on-call coverage;
- Student loans, grants, and bursaries tied to return of service commitments; and
- Funding to allow rural/remote physicians to take advantage of continuing education and skills upgrading opportunities.

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Health care services in Ontario are provided by the provincial government, the federal government, and First Nations Health Authorities. The Ministry of Health and Long-Term Care (MOHLTC) uses the term underserved area to refer to communities throughout the province considered to have too few physicians (MOHLTC, 2005a). In addition, it designates Northern Ontario (the territorial districts of Algoma, Cochrane, Kenora, Manitoulin, Nipissing, Parry Sound, Rainy River, Sudbury, Thunder Bay, and Timiskaming) as underserved for medical specialists and rehabilitation professionals (MOHLTC, 2005b, 2005c). Federal government publications refer to remote, isolated, and semi-isolated communities. They do not use the term underserved area.

Federal government publications refer to remote, isolated, and semi-isolated communities rather than underserved areas.

Provincial Policies and Programs

The MOHLTC considers a physician-to-population ratio less than 1:1,380, as recommended by the Council of Faculties of Medicine, the major criterion for underserved designation. Additional criteria relate to the population of the community and its catchment areas, accessibility and distance to the nearest service point, socioeconomic characteristics, previous recruitment efforts, potential demands on the physician's time, the presence of other physicians (numbers and types), and whether sufficient resources and are in place to support a full-time physician. Once categorized as underserved for physicians, communities retain their designation until they achieve their full complement of physicians

Communities remain underserved until they achieve their full complement of physicians.

(MOHLTC, 2005a). A problem with the calculation of physician ratios is that they may not represent a true FTE equivalence. A physician is counted as 1 FTE regardless of the hours he or she works. This has serious ramifications for communities in which physicians work limited hours. Data on communities in Ontario currently designated as underserved are summarized in Appendix 1.

With the exception of a program to finance patient travel subsidies, proposals focus on local shortages in certain health care professions. The Underserved Area Program (UAP) for Physicians, Medical Specialists, and Rehabilitation Professionals (MOHLTC, 2005a, 2005b, 2005c, 2006), the province's main initiative, identifies jurisdictions where these professions are underrepresented. Although the major emphasis of the UAP is on general practitioners/family physicians, it also focuses on medical specialists and rehabilitation professionals in Northern Ontario. The UAP recognizes that because medical specialists and rehabilitation professionals work in hospitals rather than the community, calculations based on practitioner-to-population ratio are not appropriate. The program attempts to rectify the situation by encouraging medical specialists and rehabilitation professionals to relocate to designated areas or apply for specific posts. To gain access to the incentive grant, medical specialists and rehabilitation professionals must be located to an eligible northern community with a MOHLTC funded vacant position. Provincial programs for underserved areas in Ontario are shown in Appendix 2.

The Ministry of Health and Long-Term Care's UAP offers incentives to physicians, medical specialists, and rehabilitation specialists.

Nurses in Remote and Isolated Areas

In the absence of physicians, nurses are the gatekeepers of the health care system. While communities are not described as underserved for nurses, policies related to the underserved concept affect nurse employment. Nurses are hired to work in remote and isolated areas that cannot support physicians. In 22 remote and northern communities unable to support full-time resident general and family practitioners, primary health care is provided through UAP nursing stations or medical clinics. These sites are generally staffed by nurses or nurse practitioners (NPs) who receive allowances for working there. Local agencies (e.g., hospitals, public health units) usually administer the stations or units. They are supported by

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There are 22 UAP stations and clinics staffed by nursing personnel in remote and northern communities.

physicians involved in the Physician Outreach Program (MOHLTC, 2002b).

North Network

NORTH Network is a membership-based program of Sunnybrook and Women's College Health Sciences Centre (SWCHSC) in Toronto. NORTH Network's telemedicine service provides rural and remote Ontario communities with access to medical services, including specialist consultations and distance education for health care providers, community groups, and organizations. NORTH receives funding primarily from the MOHLTC. However, it has received growth funding from more than 90 organizations <http://www.northnetwork.com/about/fags.shtml>.

Other Health Care Services

In addition to the provincial government, the federal government and First Nations Health Authorities provide health care services to remote and isolated communities where physicians do not practice. Their absence may explain why underserved is not used in relation to these areas even though they lack many health services.

Federal Government Programs

Canada provides services through the First Nations and Inuit Health Branch (FNIHB) to First Nations communities to which transfer of health care has not been completed. Community health centres provide basic health care and facilitate entry to the wider health care system when necessary. Within the branch, the Office of Nursing Services manages the recruitment and retention of community health nurses; provides support for the delivery of nursing services; analyzes nursing trends and strategic leadership; has responsibility for nursing practice, standards, and competency; and oversees nursing education and staff development (Health Canada FNIHB, 2002).

There is a chronic shortage of nurses in northern regions as evidenced by the number of vacancies for positions in nursing stations (Fletcher, 2001). Health Canada offers a recruitment bonus of \$4500 and a retention bonus of \$375 per month after 12 months employment to full-time community health nurses in isolated or remote areas. Nurses are paid a monthly allowance of \$500 when working in an expanded scope of practice and

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receive an education allowance based on their highest relevant qualification (Health Canada FNIHB, 2003a). They are also granted one paid trip out of the community in addition to the paid trip(s) allowed under the Isolated Post Allowance Program (Health Canada FNIHB, 2003a). A primary care program is mandatory education for nurses working in an expanded scope of practice. Recruits receive a full salary while attending the program in return for a one-year commitment to work in a First Nations community (Health Canada FNIHB, 2003b).

First Nations Health Authorities

Transfer of health services from Medical Services, Health and Welfare Canada to First Nations and Inuit communities began in 1989 (Health Canada FNIHB, 2001). Currently, there are eight First Nations Health Authorities in Ontario and another nine with pre-transfer listing (Aboriginal Recruitment Coordination Office, n.d., a & b). The previous Zone Hospital in Moose Factory has been fully transferred to First Nations control and is now called Weeneebayko Health Ahtuskaywin. The services provided by First Nations organizations are community oriented and nurses play a major role. The Wabun Tribal Council Health Services, for example, includes a community health nursing program, patient transportation program, diabetes strategy, crisis team coordination, and long-term care (Wabun Tribal Council Health Services, n.d.).

Transfer of health services to First Nations and Inuit communities began in 1989.

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New Initiatives

In addition to the UAP initiatives described above, new provincial programs to assist underserved areas have been developed. Aimed at improving access to primary care services, they call for the involvement of other professionals and greater integration of physician services in the community.

There are a variety of new programs to assist underserved areas, including a new medical school and Family Health Teams.

Northern Ontario School of Medicine

In Northern Ontario, a long-term strategy to address the problem of physician shortfall and improve the health of community members has been initiated. The Northern Ontario School of Medicine, a joint venture of Laurentian and Lakehead University, will have a number of teaching and research sites distributed across the region (http://www.normed.ca/about_us/glance.htm).

Programs to Address Regional Deficits in Health Care

Initiatives to address regional imbalances in medical services have been undertaken, including regional cancer centres and outreach programs such as the Community Oncology Clinic Network associated with the Northeastern Ontario Regional Cancer Centre (Pong et al., 2000).

Family Health Networks

In 2001, the Ontario Family Health Network (OFHN) was announced. The initiative sought to make the most use of limited physician resources via the creation of voluntary Family Health Networks subsidized by the Primary Health Care Transition Fund. The networks included at least five family physicians working with other health professionals to provide accessible coordinated care. A key benefit was after hours care made possible by a combination of on-call arrangements and a telephone advisory service staffed by registered nurses (OFHN, 2004a, 2004b). The networks operated under a contract with the MOHLTC and the OFHN. Funding models for rural and Northern Ontario differed somewhat from those in urban areas (MOHLTC, n.d.). On September 1, 2004, all OFHN services moved to the MOHLTC (http://www.health.gov.on.ca/ofhn/ofhn_mn.html).

Interdisciplinary Family Health Networks were intended to provide primary care services.

Family Health Teams

A \$111 million plan to establish Family Health Teams was announced in the 2004 Ontario budget. As recommended by the Romanow Report, the interdisciplinary teams are intended to address the primary health care needs of Ontarians without access to a family physician. They include physicians, NPs, nurses, pharmacists, social workers, dieticians, and other allied health professionals. In addition to a comprehensive range of primary care services, the teams provide after hours care and a telephone advisory service. The MOHLTC provides funding for health care professionals, as well as overhead and transition management (e.g., infrastructure and support for information technology). Governance structures include community groups, provider groups, and mix of provider and community groups (http://www.health.gov.on.ca/transformation/fht/fht_mn.html; Ontario Hospital Association, 2005).

A \$111 million plan to establish Family Health Teams was announced in the 2004 Ontario budget.

Prior to the February 2005 deadline, 214 Ontario communities applied for a Family Health Team in their area. In April 2005, the Ontario Office of the

Premier announced the establishment of 69 teams province-wide (http://www.premier.gov.on.ca/english/news/FamilyHealth041505_bd4.asp).

Some of the new teams were awarded to existing Family Health Networks; others to primary care practices based on other models. Approximately half are in areas with physician shortages. Three networks of Family Health Teams (one each in Barrie, Hamilton, and Peterborough) were also announced. The plan is to set up 150 teams by 2008. Although the effectiveness of the initiative has yet to be established, NPs (Ontario Office of the Premier, 2005), pharmacists (Ontario Pharmacists' Association, 2005), and the Ontario Home Care Association (2005) have expressed their support.

The plan is to set up 150 teams by 2008.

Many programs funded by the MOHLTC involve NPs. Since they were first regulated in 1998, NPs have taken positions in underserved and isolated areas. In 1999, 109 positions were created in the UAP, Aboriginal Health Access Centres, long-term care facilities, and primary care networks (IBM Business Consulting Services, 2003). In 2002, the MOHLTC announced funding for 117 primary care NP positions in small, rural, and underserved communities across the province through the Primary Care Nurse Practitioner Program. Another initiative, the Nurse Practitioners Demonstration Project (\$3 million funding annually), placed NPs in 12 underserved communities in Southern Ontario where family physicians were few or absent. In this project, the Nursing Secretariat worked with district health councils, MOHLTC regional offices, municipal governments, local health care programs, and community associations to design a unique model to suit each site (MOHLTC, 2002a). It is anticipated that NPs will play a major role in the Family Health Teams.

Since they were first regulated in 1998, NPs have taken positions in underserved and isolated areas.

Additional nursing positions have been created in Ontario to support interdisciplinary practice in remote and rural communities.

Initiatives include the Nurse Practitioners Demonstration project and the inclusion of nurses in Family Health Teams.

Given their established role in underserved communities, it is important to know whether NPs are being effectively recruited, retained, and utilized. The following sections consider evidence from the literature.

It is important to know whether NPs are being successfully recruited, retained, and utilized.

Nurse Practitioner Recruitment and Retention

In 2004, 598 NPs were registered with the College of Nurses of Ontario (CNO; 2004). Of these, 430 (88.6%) were employed in nursing in Ontario, 34 (5.7%) were employed outside Ontario, and 24 (4%) were not employed. Although NPs have a high rate of employment, many do not work in NP

positions. CIHI (2005), for example, reported at least 116 nurses in Ontario were working in non-NP positions in 2004. In their survey of Primary Health Care Nurse Practitioner Program graduates, Michel and Pong (2004) found 22% of their sample were not currently employed as NPs. Likewise, 52 of those surveyed in a primary health care NP integration study (IBM Business Consulting Services, 2003) were not practicing as NPs. It was suggested that these NPs could not find work or were dissatisfied with the location, setting, salary, or other circumstances of available employment.

Although employing NPs is a strategy for improved services, many currently work in non-NP roles.

Although the studies cited above suggest that many NPs do not work in NP roles, anecdotal evidence suggests there are as many as 100 vacancies for NPs in programs funded by the MOHLTC. Details of these vacancies are difficult to establish because there is no central repository for vacancy data from these programs. There is also anecdotal evidence that some positions may have remained unfilled because of salary discrepancies, but the MOHLTC has now addressed this problem. The number and reasons for NP vacancies is an important issue requiring detailed exploration, given that nurses educated as NPs are working in non-NP roles.

Nurse Practitioner Utilization

The success of MOHLTC initiatives to recruit NPs to areas where physician shortages persist depends on optimal collaboration between physicians and NPs. The Nurse Practitioner Integration Study (IBM Business Consulting Services, 2003) comprehensively examined the process of NP assimilation into health care. Sensitive areas included the distribution and expectations of work between NPs and physicians.

From the physicians' perspective, barriers to integration included the negative impact on income of fee-for-service physicians, the potential for impeding physician recruitment and retention, inadequate nurse supervision and responsibility, and liability. For NPs, barriers included skill/knowledge limitations, restrictions on scope of practice, and inadequate public support. Facilitators for successful integration included a shared vision of the practice and a clear definition of the NP role. Where the role was transparent, the NP experienced the greatest satisfaction, was most likely to work to the full scope of practice, be less concerned about liability, and spend more time on clinical activities.

Facilitators for successful integration included a shared vision of the practice and a clear definition of the NP role.

When the primary focus of advanced practice nursing roles is not defined, nursing components of the role may become less valued and visible (Bryant-Lukosius, DiCenso, Browne, & Pinelli, 2004). An issue for NPs working in primary care in underserved areas is the perception of their role as physician replacement or support. In northern and remote areas, clinics and nursing stations are nurse-run. Similar nurse-run services could be extended to other communities with serious physician shortages. However, to date, there have been no proposals for nurse-run clinics separate from family practices run by physicians in underserved areas.

Nurse Practitioner Initiatives

The Ontario government has undertaken to double the number of clinical education spaces for NPs from 75 to 150 by 2007-08 (<http://www.fin.gov.on.ca/english/budget/bud04/pdf/bke1.pdf>). Some of these nurses are expected to take positions in practices in underserved areas. To realize the value of this initiative, recruitment and retention incentives are needed. Sponsorship and other inducements are necessary strategies to encourage senior nurses to undertake the additional education required for NP certification and to guarantee them employment when qualified.

The Ontario government has undertaken to double the number of clinical education spaces for NPs from 75 to 150 by 2007-08.

In an attempt to encourage nurses to qualify as NPs, the MOHLTC is sponsoring initiatives such as the Grow Your Own Nurse Practitioner Program. This program is part of the government's commitment to provide more families with access to primary health care. The program was developed to fill vacancies among government funded NP positions. It provides the opportunity to use Ministry funds allocated to NP positions to sponsor a local RN to obtain his/her NP education. The funding is used to pay the RN's salary while he/she is in school and reimburse education-related expenses. In exchange, the new NP must agree to a return of service commitment to the agency

(http://www.health.gov.on.ca/english/providers/program/nursing_sec/materials.html).

Shortage and underserved point to better approaches to understanding problems of supply and demand.

Issues With Shortage and Underserved

As argued earlier, shortage and underserved are both perspectives on the

gap between supply and demand. Each concept has problems, but together they point to better approaches to understanding supply and demand for nurses.

Issues With Shortage

The consensus is that there is an overall shortage of health care professionals, including nurses and physicians. However, as discussed, insufficient attention has been given to defining the term shortage. Only when the various forms of shortage have been accurately defined will it be possible to assess the situation more precisely. In addition to a better conceptualization of the term shortage, there is a need to examine variations in shortage by practice settings, specialty within professions, and geographical area.

Variations in Supply

Information about the maldistribution of nurses similar to that available for physicians would be extremely useful to planners. Grumbach et al. (2001) emphasize that analysis of nursing shortages at the regional level permits estimation of the number of nurses (employed and unemployed) relative to the overall population of a geographical area. As with physicians (see Barer et al., 1999; Pong & Pitblado, 2001), such an exercise would produce only broad comparisons; nevertheless, it would indicate the extent of variation and provide a context in which to study organizational shortages. Although shortages in remote and isolated areas have been identified, local nursing shortages have never been studied in depth. It is likely that hospitals in some locations are more attractive to nurses than hospitals in other locations. The extent of shortages of nurses and other health care professionals in underserved areas is not known.

Information about the maldistribution of nurses would be useful to planners.

The extent of shortages of nurses and other health care professionals in underserved areas is not known.

For physicians and nurses, shortages are greater in some specialties than others. Among physicians, a link has been made between the trend from general to specialized medicine and the difficulty of recruiting physicians for underserved areas. In nursing, it is evident that there are deficits in some specialist areas such as critical care (Angelucci, 2000; Ewart et al., 2004), but variation in the ease of recruiting specialist nurses for particular geographical areas has not been assessed. It is likely that hospitals where recruitment is generally problematic have difficulty attracting critical care

Recruitment of specialist nurses to underserved areas may be a problem.

nurses. Preliminary research being conducted by the Nursing Health Services Research Unit (McMaster University site) suggests that rural hospitals may have problems attracting nurses with particular specialties because of the low volume of patients requiring their skills.

Contextual Aspects of Nurse Supply

Because nursing supply is usually discussed in terms of general shortage, there is a tendency to overlook the needs of minority nursing populations such as rural nurses, the smaller nursing sectors, and nursing specialties. Policies suitable for the majority of nurses in urban centres may not suit those in rural areas. Similarly, policies designed for workforces in the large acute care sector may not address the needs of nurses who work in long-term care, home care, primary care, and public health. While fewer nurses work in these sectors than in acute care, their contributions are essential to the effective functioning of the health care system. In underserved areas, human resource issues for nurses may also be neglected due to emphasis on physician services.

Supply issues in rural areas and in the long-term care, home care, and public health sectors are overlooked.

Problems With the Term Underserved

Problems using the underserved approach to improve health care services to meet unmet demand are discussed below. They include intractable physician shortages and overemphasis on a single type of health care service provider.

Intractable Physician Shortages

Local physician shortages are intensified by overall shortage. New family physicians currently have a wide choice regarding the location of their practice. In rural Ontario and in some urban areas, there are difficulties in recruiting sufficient physicians to provide service to the local population. Underserved area programs are guided by the assumption that if sufficient incentives are offered, physicians can be encouraged to relocate to rural and urban Ontario where there are local shortages. The number of vacancies in these areas suggests this belief may not be justified (MOHLTC, 2006).

The belief that sufficient incentives will solve the underserved problem may not be justified.

Emphasis on a Single Service

In northern and First Nations communities in which physicians are unlikely

to practice, health care delivery has a community orientation. In contrast, in underserved communities, physicians are the gatekeepers to the wider health care system (Lamarche et al., 2003). Problems of access exist because there are too few physicians to provide care to all community members. The situation is exacerbated because physicians in independent practices in these communities tend to be relatively isolated from other health care providers (Lamarche et al., 2003).

While local shortfalls in physician supply are emphasized in government policy, the supply of other health professionals in the community and hospital sectors receives less attention. Focusing on one service provider in isolation from others may result in inefficient care. Emphasis on medical care should not occur at the expense of services such as long-term and chronic care, public health, primary care, or home care. While access to medical services is important, the health of communities also depends on services that provide care, promote health, and prevent disease. Presently, communities have few options to increase access to health services that are not available locally. They do not have the necessary funds or mechanisms to reimburse practitioners other than physicians.

Focusing on one profession as a service provider rather than identifying core services is inefficient.

Because the underserved concept focuses on physicians, problems experienced by other disciplines are neglected.

Lamarche et al. (2003) conclude that including a mix of health professionals in health care delivery can more adequately service community needs. The implementation of Family Health Teams and increased use of NPs in underserved communities may improve the situation, but new strategies for accessing health care may well be needed.

Collaborative models can more adequately service community needs than contemporary practice models.

The supply of family physicians impacts the work of health care professionals in local hospitals and the community. For example, nurses in underserved areas may find the location of their hospital affects their workload and hence their perception of shortage. “Orphan” patients without family doctors are likely to use emergency departments more frequently, receive less follow-up treatment, and have more readmissions. Lack of community services means greater lengths of hospital stay.

Nurses may find employment in an underserved area has an impact on their work.

If the concept of underserved area is retained as a basis for policy making, it needs to be made more inclusive. Services beyond those provided by physicians (e.g., home care, long-term care) might be

considered for inclusion. It is important for health care policy to recognize that “the solutions to issues of access in rural and remote areas are beyond the scope of any single jurisdiction” (Barer et al., 1999, p. 39).

What Can Be Done?

Clearly defined concepts are basic to the development of sound policies to address deficits in the supply of health human resources. The terms shortage and underserved as they are currently understood do not provide a reliable basis for planning. Shortage has a variety of meanings and is difficult to measure.

Underserved focuses narrowly on the supply of physicians rather than addressing the human resource capacity of all health care services in a geographical area. Developing a common vocabulary for strategic decision making is particularly important for regional planning, including the new Local Health Integration Networks.

Recommendations

Recommendations for health human resource planning for underserved areas are:

- Broaden the scope of underserved to include a range of health care services (e.g., long-term care, home care, public health) rather than restricting it to the services of selected health care professions (e.g., physicians).
- Expand the concept of shortage to identify regional, local, and specialist nursing shortages.
- Take a systemic rather than discipline-based approach to local health care. For example:
 - Create or expand collaborative organizations and networks (e.g., Family Health Teams, community health centres) for health care delivery in underserved areas.
 - Maximize the contribution of all professions with relevant competencies who are available to deliver health care services in local communities.
 - Collect and organize statistical data on health professions and health services to facilitate planning health care delivery in the new

LHINs.

- Consolidate data about NP vacancies in a central MOHLTC repository for analysis and action.
- Construct profiles of health care services and delivery within each LHIN, including information on communities and catchment areas, health care organizations, partnerships, and alliances.
- Explore health human resource capacity in the newly established LHINs using the concepts of underserviced and shortage. For example, assess which communities within each LHIN are underserviced based on how easily residents can access health care services and whether health human resource shortages contribute to access problems.

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Appendix 1

Underserviced Communities in Ontario

Northern Ontario	
Number of communities designated as underserviced	35
Number of practice opportunities available (Jan – Mar 2006)	124
Designated complement of physicians (S/b Jan – Mar 2006)	582
Southern Ontario	
Number of communities designated as underserviced	102
Number of practice opportunities available (Jan – Mar 2006)	648
Designated complement of physicians (S/b Jan – Mar 2006)	2532

Note. Numbers from January to March 2006 pertain to the list of areas designated as underserviced for general/family practitioners (Ministry of Health and Long-Term Care, 2006).

Appendix 2

Provincially Funded Programs for Underserved Areas

Incentive grant program for general and family practice physicians	GP/FP physicians and psychiatrists who establish a practice in an eligible underserved community Family Health Team in Northern Ontario may be eligible for incentive grants of up to \$40,000 paid over four years. GP/FP physicians who establish a practice in an eligible underserved community in Southern Ontario may be eligible for incentive grants of up to \$15,000 paid over four years.
Incentive grant program for physician specialists	Specialist physicians who establish a practice in an eligible underserved community in Northern Ontario may be eligible for incentive grants of up to \$20,000 paid over four years. Under the Northern Medical Specialist Incentive Program (NMSIP), a second grant of up to \$20,000 may be paid over four years to northern specialists who are willing to provide a minimum of 12 days of outreach services per year.
Incentive grant program for rehabilitation professionals	Intended to attract audiologists, occupational therapists, physiotherapists, and speech-language pathologists to fill full-time vacancies in MOHLTC funded positions in Northern Ontario. The program offers grants up to \$5000 per year to a maximum of \$15,000 paid over three years.
Rural and Northern Physician Group Agreement (formerly Northern Group Funding Plan)	Funds groups of three to seven general/family physicians in 13 eligible communities in Northern Ontario located more than 80 km from a major centre and less than 10,000 population. It provides a global payment to a group of physicians and ensures patients will receive a wide range of comprehensive primary care services.
Rural and Northern Physician Group Agreement (formerly Community Sponsored Contracts)	Provides a guaranteed salary to physicians in 24 eligible communities in Northern Ontario that have been designated as underserved and require a complement of one or two physicians. Physicians participating in this program are not eligible to apply for the incentive grant program.
Community Health Centres	Physicians who practice full-time at a community health centre may be eligible to apply for financial incentives through the Ministry's Underserved Area Program.