

**Core Principles and Strategic Directions
for a Pan-Canadian Health Human Resources Plan**

The Health Action Lobby



Le Groupe d'intervention action santé

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The Health Action Lobby (HEAL)

is a coalition of 30 national health and consumer associations and organizations dedicated to protecting and strengthening Canada's health care system. It represents more than half a million providers and consumers of health care. HEAL was formed in 1991 out of concern over the erosion of the federal government's role in supporting a national health care system.

FORWARD

Health human resources as part of the foundation of a sustainable publicly funded health system is possibly the most urgent priority for Canada's health system. The importance of a coordinated pan-Canadian approach to health human resources is underscored by many stakeholders including federal, provincial and territorial governments, the Health Council of Canada, national health organizations, and Canadians as a whole.

Health human resources emerged as a top priority in broad rounds of multi-stakeholder group consultations in both 2001 and 2004. The First Ministers' Accord on Health Care Renewal (February 2003) identified access to appropriate health human resources as a key issue for Canadians. This was again reinforced in the 2004 10-Year Plan to Strengthen Health Care.

The federal government, recognizing the need to advance the health human resources issue from a Pan-Canadian perspective, developed "A Framework for Collaborative Pan-Canadian Health Human Resources Planning" document as part of an engagement process, inviting stakeholders to identify how they would implement this Framework within their own settings.

The Health Council of Canada, in its first monitoring report of the goals outlined in the First Ministers' Accord (Health Care Renewal in Canada Accelerating Change, 2005), asserted that work is urgently needed to accelerate efforts in this area as it is critical to other health care reforms. They stated "This (HHR) is an urgent priority. Without sufficient providers of care working together, all other efforts will flounder." The Health Council acknowledged the lack of a national health human resource strategy and called for a collaborative approach to work toward this goal. To achieve this end, a National Health Human Resources Summit was convened in June 2005, resulting in the report "Modernizing the Management of Health Human Resources in Canada: Identifying Areas for Accelerated Change", which called for a fully integrated approach to health human resources planning based on population health needs. This report further reinforced the need for urgent action to achieve this objective.

HEAL's overarching mission is dedicated to protecting and strengthening Canada's health care system and health human resources has been identified as a key priority. In the fall of 2004, HEAL members participated in a survey related to health human resources, strategic planning and initiatives. The document resulting from this survey, "HEAL's Potential in Pan-Canadian Health Human Resource Policy and Planning" identified four key messages emerging from the findings:

- National health organizations are actively engaged on health human resources issues.

- Greater policy capacity is needed on health human resources among national health organizations.
- Early, meaningful and ongoing engagement of stakeholders on health human resources is essential.
- National health organizations have much to contribute on health human resources.

Three critically important actions were recommended by HEAL:

1. The establishment of an ongoing mechanism to support and promote the exchange of information and policy capacity-building among national health organizations on cross-cutting health human resources policy issues (e.g. regulatory environment; medium to longer-term population health needs assessment) and data collection.
2. The establishment of a mechanism to provide for routine consultation and exchange between national health organizations and the federal government (including the F/P/T Advisory Committee on Health Delivery and Human Resources) on health human resources, policy and related issues.
3. The establishment of a fact-finding task force to carry out a rapid assessment of the trends, prospects and key issues of the various health disciplines, including the capacity of the educational infrastructure to absorb increased enrolment at both entry/undergraduate and postgraduate levels and the availability of practicum opportunities.

HEAL sponsored a multi-stakeholder health human resources summit in October of 2005. The purpose was to foster relationship building with key government representatives and to promote HEAL's belief in an integrated, Pan-Canadian, inter-professional framework for health human resources planning. Participants at the meeting included HEAL members and representatives from Health Canada, including Deputy Minister of Health Morris Rosenberg, Human Resources and Skills Development Canada (HRSDC), Canadian Institute for Health Information (CIHI), and the Health Council of Canada. Discussions centered around the elements contributing to the complexity of health human resources planning in Canada, the crucial role played by health care providers in the delivery of health services, and the most effective strategies to move a comprehensive planning framework forward to ensure the most appropriate and cost-effective supply of future health providers. Follow-up plans to this meeting included the development of a document outlining the core principles upon which a multi-provider, national HHR strategy should be based. The present report is the result of these discussions.

The objective of this document is to advance the country's debate and discussion around a much-needed, coordinated approach to health human resources. Acknowledging the stage set by the Health Council of Canada and Health Canada, this paper will add value and texture to the debate,

and provide a voice for the health provider perspective. It sets out for discussion purposes the core principles and strategic directions that HEAL members believe would underpin a pan-Canadian plan for achieving a sustainable health workforce. This paper is based on “*Toward a Pan-Canadian Planning Framework for Health Human Resources – A Green Paper (June 2005)*” produced by the Canadian Medical Association (CMA) (www.cma.ca) and the Canadian Nurses Association (CNA) (www.cna-nurses.ca).

HEAL’s proactive strategy for achieving a strategic, coordinated human resource plan for Canada's health workforce can only be successful if it is integrated across the provinces and territories *and* the various health professional disciplines. HEAL looks forward to actively working with governments, policy and decision-makers, other stakeholders, and the public toward this end.

EXECUTIVE SUMMARY

While Medicare has enjoyed considerable success as a pan-Canadian initiative since the 1960s, the same cannot be said for the planning of Canada’s health workforce. To the degree that planning has occurred, it has been done largely within provinces and territories, and for various health disciplines in isolation of each other.

There is widespread agreement that if we are going to have a strategic plan for the health workforce, it must be integrated across the provinces/territories and across the various health disciplines.

Internationally, the U.K. National Health Service and Australia’s Health Ministers have undertaken recent initiatives aimed at adopting a strategic human resource planning approach in the health sector.

This document sets out for discussion 10 core principles and associated strategic directions that might underpin such an approach in Canada under the themes of patient-centred care, planning and career life cycle.

MISSION, VISION, VALUES

The **Mission** of the Canadian health workforce is to improve the health and well-being of the population through a broad continuum of approaches.

This might be realized in a **Vision** whereby all Canadians, from childhood through to old age, have access to the right service, by the right provider at the right time, in reasonable proximity to where they live. In addition, all jurisdictions in Canada should have a flexible, knowledgeable public health workforce working in safe supportive environments to meet the population's public health needs, and reduce health and social disparities.

Many organizations today are reflecting on the core values that underlie their businesses. Looking across the range of health professionals in Canada today there are at least three basic **core values** that cut across all disciplines:

- a sense of **compassion** or caring about the patient and his or her needs;
- a focus on **excellence** and continued improvement in clinical practice; and
- **accountability** to the patient and the public, most typically through regulatory mechanisms.

The long-term goal of the health workforce is to realize this vision.

Core Principles and Strategic Directions

A. *PATIENT¹-CENTRED CARE*

- 1. *Population Needs-Based Planning*** – *Planners need to adopt a needs-based approach that anticipates the current and emerging health service² needs of the population that are determined by demographic, epidemiological, cultural and geographic factors, and which takes into account evolving delivery models and technological change and the interface between the publicly funded health system, the private health system, and the public health system..*

Strategic Directions

- In-depth analysis of population surveys and epidemiologic data*
- Benchmarking based on regional variation*
- Review of specialty mix within and between disciplines*
- Develop leadership for system change*

- 2. *Inter-professional Collaboration*** - *The health professions need to collaborate by communicating with one another and coordinating their efforts in the best interests of the patient.*

Strategic Directions

- Promote inter-professional education*

¹ In this document ‘patient’ refers in the broadest context to the health system consumer - from an individual, family and or community perspective.

² In this document ‘health service’ refers to the broad spectrum of health approaches according to population needs including health protection, promotion, and disease prevention to primary health, acute care, community and palliative services.

- ii. *Address liability concerns*
- iii. *Develop funding models that support collaboration*

B. PLANNING

3. ***The Health Workforce is a National Resource*** - *It is desirable to promote a high level of opportunity for mobility within and between provinces/territories for Canadian health professions in education/training and practice across the career lifecycle.*

Strategic Directions

- i. *Promote national standards for portable eligibility for licensure*
- ii. *Recognize regional centres of excellence*
- iii. *Preserve and promote a national system of education and training*

4. ***Greater Self-Sufficiency*** - *Canada must strive for greater self-sufficiency in the education and training of health professionals.*

Strategic Directions

- i. *Improved medium to longer-term supply projection models*
- ii. *Sufficient opportunities for Canadians to train for health professional careers in Canada*
- iii. *Integration of international graduates who are permanent residents or citizens of Canada into practice*

5. ***Recognize the Global Environment*** – *It must be recognized that health professionals are working in an increasingly global world in terms of the exchange of scientific information, mutual recognition of qualifications between countries and the movement of people.*

Strategic Directions

- i. *Promote ethical recruitment*
- ii. *Consider the impact of technology on the potential to deliver services remotely and to exchange health services across borders*

iii. *Maintain high standards of education and teaching*

6. *Inclusive Policy Planning and Decision-Making Processes* - Policy planning and decision-making in the area of health human resources must include representation from all stakeholders involved including governments, regional health authorities, educational and regulatory authorities and practicing professionals.

Strategic Directions

i. *Establish a Canadian Coordinating Office for Health Human Resources*

ii. *Provide for exchanges between the provider community and federal/provincial/territorial advisory committees*

iii. *Promote provider representation at regional and institutional governance bodies*

iv. *Promote inter-sectoral “healthy public policy”*

C. CAREER LIFECYCLE

7. *Competitive Human Resource Policies* - Health professionals should be afforded supportive working environments that are designed to attract and retain them through comprehensive approaches that address their professional and personal needs.

Strategic Directions

i. *Recruitment approaches that address both professional and personal factors*

ii. *Comprehensive retention approaches*

iii. *Flexible employment opportunities*

iv. *Research to determine the potential for repatriation*

8. *Healthy Workplaces* – Health care administrators and decision-makers must recognize the importance of healthy workplaces and collaborate with health care providers to implement strategies to support their health and safety.

Strategic Directions

i. *Best practice approaches*

ii. *Educational programs*

- iii. *Promote culture shift to encourage help-seeking behaviour*
- 9. ***Balance Between Personal and Professional Life*** – *Planners must take into account the expressed desire among the new generation of health professionals for a balance between their professional and personal lives.*

Strategic Directions

- i. *Build into educational curricula*
- ii. *Learn from international experience*
- iii. *Factor work:life balance into supply planning*

- 10. ***Life Long Learning*** - *Health professionals must have access to the resources they need to keep abreast of advances in scientific knowledge and to acquire new skills and they should have opportunities to apply their skills to new challenges over the course of their careers.*

Strategic Directions

- i. *Opportunities for re-entry and advanced training*
- ii. *Career development/progression*
- iii. *Continuing professional development*
- iv. *Leadership identification and development*

SUMMARY

The foregoing is intended to set out the basic core principles and directions that would underpin a proactive strategy to applying a strategic human resource planning perspective to the Canadian health workforce. This can only be successful if it is integrated across the provinces and territories and the various health professional disciplines.

Moreover such an approach cannot be achieved by governments alone, particularly when one considers the many policy levers across the career lifecycle. It is essential to have early meaningful and ongoing engagement of health professionals in the planning process.

A next step would be to identify operational targets and indicators for the strategic directions enumerated above and to identify the appropriate policy levers and stakeholders responsible for them.

Introduction

The objective of this document is to set out for discussion purposes the core principles and strategic directions that would underpin a pan-Canadian plan for achieving a sustainable health workforce.

While the Canadian Constitution assigns the responsibility for the delivery of health care to the provinces/territories, since its introduction in the 1960s, Medicare has sought to provide universal access to Canadians to hospital and medical services on uniform terms and conditions as set out in the Canada Health Act. Notwithstanding recent concerns about timely access and the limited breadth of Medicare, this is an example of a pan-Canadian approach that continues to be highly valued by Canadians.

In contrast, planning for the workforce that delivers health services has been left to individual provinces and territories. Planning efforts to date have been characterized by two key trends:

- the focus has tended to be exclusively on supply-side planning which views health professionals as costs to the economy; and
- planning approaches have treated health professional groups in isolation of each other, including publicly funded providers and privately funded providers.

The overall policy that has resulted from this approach has been one of “beggar thy neighbour” between provinces and territories with continued reliance on internationally educated health professionals to meet any shortfall. As we move into an era with growing global shortages of health professionals, this approach will not be sustainable.

The seriousness of Canada’s health workforce situation is highlighted by a comparison to other countries. In 2002 Canada ranked 24th among the 30 member countries of the Organization for Economic Cooperation and Development (OECD) in the number of practicing physicians per 1,000 population at 2.1 – almost one-third below the average of 2.9.¹ In the case of nursing, a 2004 OECD study reported that Canada had the highest relative nursing shortage of the 6 countries examined at 6.9% of the present workforce.² There is also a shortage of respiratory therapists in Canada, which is expected to worsen in the coming years.³ Other health professions such as physiotherapists report that there is anecdotal evidence which suggests a shortage of providers within this discipline within Canada.^{4,5}

The urgency of this situation is underscored by the anticipated retirement within the next few years of practitioners within many health disciplines and the potential for new graduates to be recruited to other countries to fill gaps in their delivery systems.

A Strategic Plan for Health Human Resources

In the business world, a strategic plan is the framework that aligns the structure and resources of an organization with its mission, vision, values and long-term goals and objectives.

In the Canadian context, with a health care system that is 70% publicly funded and with all key components regulated, the concept of a strategic plan is applicable to the health workforce within the publicly funded health system, the private system, and the public health system..

Mission, Vision, Values

The **Mission** of the Canadian health workforce is to improve the health and well-being of the population through a broad continuum of approaches.

This might be realized in a **Vision** whereby all Canadians, from childhood through to old age, have access to the right service, by the right provider at the right time, in reasonable proximity to where they live. In addition, all jurisdictions in Canada should have a flexible, knowledgeable public health workforce working in safe supportive environments to meet the population's public health needs, and reduce health and social disparities.

Many organizations today are reflecting on the core values that underlie their businesses. Looking across the range of health professionals in Canada today there are at least three basic **core values** that cut across all disciplines:

- a sense of **compassion** or caring about the patient and his or her needs;
- a focus on **excellence** and continued improvement in clinical practice; and
- **accountability** to the patient and the public, most typically through regulatory mechanisms.

The long-term goal of the health workforce is to realize the vision.

Although many national, provincial and territorial commissions and task forces have studied the Canadian health care system since the 1980s, a pan-Canadian health human resource strategic planning framework remains an elusive target.

Internationally there has been progress in securing policy commitments at a national level to support plans for the future health workforce. In 2000 the National Health Service in the United Kingdom adopted 10 core principles which included the following:

The NHS will support and value its staff

*The strength of the NHS lies in its staff, whose skills, expertise and dedication underpin all that it does. They have the right to be treated with respect and dignity. The NHS will continue to support, recognize, reward and invest in individuals and organizations, providing opportunities for individual staff to progress in their careers and encouraging education, training and personal development. Professionals and organizations will have opportunities and responsibilities to exercise their judgement within the context of nationally agreed policies and standards.*⁶

In April 2004, the Australian Health Ministers' Conference adopted a National Health Workforce Strategic Framework that contains a vision, seven guiding principles and three or four strategic directions to support each principle which incorporates a population health approach

employing health protection and promotion, disease prevention, primary care, community care, remote care and acute care.⁷ This framework is the inspiration for the 10 core principles and strategic directions for Canada that are set out below:

Core Principles and Strategic Directions

The principles are organized under three key headings:

- A. Patient-centred care
 - needs-based planning
 - collaboration among disciplines
- B. Pan-Canadian planning
 - the health workforce as a national resource
 - greater self-sufficiency
 - recognize the global environment
 - inclusive policy planning and decision-making processes
- C. Career lifecycle
 - competitive human resource policies
 - healthy work places
 - balance between personal and professional life
 - life-long learning

A. *PATIENT³-CENTRED CARE*

In its 2005 report *Preparing a health care workforce for the 21st century: the challenge of chronic conditions* the World Health Organization (WHO) has identified patient-centred care as one of five core competencies, and it has set out eight characteristics for it.⁸ The intent of patient-centred care is to recognize and support the role of the informed patient in managing their health conditions. More generally, at a population/system level patient-centred care means focusing on population health needs from a demand-side rather than a supply-side perspective.

- 1. ***Needs-Based Planning*** – *Planners need to adopt a needs-based approach that anticipates the current and emerging health⁴ needs of the population that are determined by demographic, epidemiological, cultural and geographic factors and which takes into account evolving delivery models and technological change and the interface between the publicly funded health system, the private system, and the public health system.*

³ In this document ‘patient’ refers in the broadest context to the health system consumer - from an individual, family and or community perspective.

⁴ In this document ‘health’ refers to the broad spectrum of health according to population needs including health protection, promotion, and disease prevention to primary health, acute care, community and palliative services.

Most health human resource planning initiatives to date have been based on the supply side. This has been a function of the limitations of available data, a preoccupation with budgets and the rapid, high cost of equipment involved in technological change.

Strategic Directions

- i. *In-depth analysis of population surveys and epidemiologic data.* In contrast to the past decades when the only sources of health data were vital statistics (cause of death) and administrative records (discharge abstracts), there is now a wealth of population-based survey data that can be used to examine the relationship between socio-demographic factors, lifestyle and health care utilization. For example, Statistics Canada's 2003 Canadian Community Health Survey collected data from more than 130,000 respondents aged 12 or older, across the provinces and territories.⁹ There is considerable potential in this and other surveys for estimating health needs in relation to the prevalence of health conditions in the population. The value of such analyses can be greatly enhanced by exploiting the potential for longitudinal research through linkage with administrative data. These data sources can be combined with methodological approaches such as the "economic burden of disease" model to highlight diseases such as mental illness and musculoskeletal conditions that attract less attention than more fatal conditions such as heart disease and cancer.

One method of operationalizing this approach that has been proposed is "access modeling" whereby time-based standards for consultations and procedures can be used to assess the imbalance between the expected volume of service required for certain conditions and the available supply of health human resources.

- ii. *Benchmarking based on regional variation* – To this day, supply planning continues to be based on crude indicators such as provider: population ratios and provider: patient ratios that are aggregated at fairly high levels. Such indicators are justifiably criticized as not reflective of the functional skill profiles and variable productivity of sub-aggregated levels.

There are others difficulties with this approach. For example, this form of benchmarking does not take into account the number of providers employed within different sectors of the economy and the fact that a significant percentage of providers such as dietitians and psychologists work outside of health service delivery settings. Dietitians work in agriculture, academic institutions, food and nutrition research, food and pharmaceutical industries, etc., which are quite variable across the country;¹⁰ psychologists deliver health services in a wide variety of settings, including education (schools), the criminal justice system (jails and prisons), social welfare agencies, and the private sector.¹¹

For some professions, issues concerning data quality inhibit effective benchmarking. For example, data traditionally used by the Canadian Institute for Health Information concerning health executives has been discontinued due to the unreliability of the information.¹² Workload measurement systems developed originally in medical laboratories used over the years for benchmarking lab work are no longer used in all

jurisdictions due to a lack of attention and resources.¹³ Some informal benchmarking is done by the Canadian Dental Hygienists Association concerning the numbers of hygienists across Canada, but there is no effective way to screen out professionals who register with more than one regulatory college.¹⁴ For unregulated professions such as counselling (Quebec is the only jurisdiction within Canada where the discipline is regulated), the lack of regulation makes it very difficult to generate data to determine benchmarks.¹⁵

There is little doubt, however, that insight could be gained from benchmarking that could be carried out using the small area variation approach pioneered by Dr. John Wennberg at the Dartmouth Medical School in Hanover, New Hampshire.¹⁶ Although some related work has been carried out in jurisdictions such as Quebec and Manitoba, it has not been widely shared to the point where it has gathered any momentum that might lead to a strategy for the application of benchmarking to planning.

Ideally, benchmarking should be based on a population health approach, health need, and include other factors such as patient acuity and the context in which care is delivered, e.g., urban, suburban, and rural and remote areas, as well as other factors. For example, in many communities in the Arctic and remote areas where there are no oral health professionals, the rates of oral disease amongst Aboriginal peoples are much higher than rates amongst non-Aboriginal peoples.¹⁷

Other important factors to incorporate when determining appropriate benchmarking include whether services were being delivered in the public sector, private sector, or both¹⁸, and at what level, e.g., within the care setting, the regional (RHA level), or the provincial/territorial level.¹⁹

- iii. *Review of specialty mix within and between disciplines* – Over the course of the 20th century there has been considerable specialization and sub-specialization in many health disciplines. Probably the major driving force behind this specialization has been the tremendous growth of scientific information, and the response has been to specialize to achieve mastery of and advance knowledge in specific areas. For example, in response to rapid developments in medical radiation technology, the Canadian Association of Medical Radiation Technologists has developed post-graduate specialty certificates in CT, breast imaging and medical radiation.²⁰

Recent federal and provincial reports have highlighted the need to address the underutilization of professional skills and knowledge and to move toward optimizing the utilization of all members of the multidisciplinary team. One example is the effort currently underway to develop anesthesia teams which will improve the efficient use of operating room anesthesia resources. Anesthesia teams involve the use of an Anesthesiologist in association with a qualified Registered Respiratory Therapist or Registered Nurse. The expectation is that the team approach to anesthesia will allow a Respiratory Therapist to perform procedures such as airway management, obtain vascular access, mechanical ventilation, and other functions, which will allow the Anesthesiologist to effectively manage a larger number of cases.²¹

It is necessary to understand the uniqueness and overlap in scope of practice, as well as the context of practice, to design work in a way that best utilizes professional knowledge and skills, while maintaining and improving provider satisfaction and patient outcomes. Part of the impetus for developing anesthesia teams is that the current role for Respiratory Therapists and nurses of providing technical assistance to Anesthesiologists does not allow either group of practitioners to work to their full scope of practice. The goal of developing anesthesia teams is to allow all team members to apply their full skill set to improve the process of anesthesia delivery.²²

Other disciplines are also looking at the issue of specialization and implications for scope of practice. The Canadian Physiotherapy Association is currently developing a specialist recognition program to be pilot-tested within the next year. There are a number of specific initiatives across the county examining a possible extended scope of practice activities for Physiotherapists such as allowing practitioners to give injections, order specific medications, or request X-rays. Presently there are some isolated examples of this occurring as a form of delegated authority from physicians. The role of support workers within the context of delegation and primary health care should also be examined.²³ The examination of scopes of practice by the Health Council of Canada is a positive development.²⁴

The Canadian Nurses Association in collaboration with the Canadian Practical Nurses Association, Canadian Council for Practical Nurse Regulators and the Registered Psychiatric Nurses of Canada recently published an Evaluation Framework to Determine the Impact of Nursing Staff Mix Decisions (2005).²⁵ The purpose of the framework is to enable employers to determine how effectively they are using their nursing resources.

At the present time the following questions are being asked:

- Is generalism being threatened by specialization? There is concern amongst some disciplines that limited certified personnel can lack flexibility within the workplace and, as a result, can be subject to displacement.²⁶ There is also the issue how specialization may affect the ability to meet needs when there is a shortage of providers for some disciplines in some areas and related disciplines are asked to fulfill these needs.²⁷
- Does specialty mix within and between health disciplines correspond to the health needs of the population? It is critically important for the publicly funded health system to be able to respond effectively to emerging health needs, e.g., the rise in childhood obesity and type 2 diabetes and emergent associated diseases both in childhood and later in adulthood.²⁸

2. ***Inter-Professional Collaboration:*** *The health professions need to collaborate by communicating with one another and coordinating their efforts in the best interests of the patient.*

In its 2000 report *Crossing the Quality Chasm: A New Health System for the 21st Century*, the Institute of Medicine set out 10 “new rules to redesign and improve care”. Number 10 on this list is “Cooperation among clinicians”. “Clinicians and institutions should actively collaborate and communicate to ensure an appropriate exchange of information and coordination of care”.²⁹ Similarly the WHO has included “partnering” – with patients, other providers and communities as one of the five core competencies for the future.

Strategic Directions

- i. *Promote Inter-professional education* – To this day, health professionals continue to be educated and trained largely in isolation of each other. This approach does not promote an understanding among the health disciplines about the contribution that each makes to quality patient care. Increased efforts to promote inter-professional education would increase the awareness of other disciplines and would also pave the way for increased multidisciplinary teamwork in the future.

Currently there are several health provider disciplines which are exploring, have, or have had interprofessional education and training initiatives involving their respective disciplines and other provider groups.^{30,31,32,33,34,35,36,37} Other disciplines such as medical laboratory science report that they have felt left out of this process.³⁸

It should be remembered that within the health system and current developments toward multidisciplinary teamwork, there are individuals of very diverse backgrounds, and the system must be sensitive to and accommodate this, both for providers and also for patients.

- ii. *Address Liability Concerns* – In an era of increased litigation, liability concerns are a potentially significant barrier to increased collaboration. The Canadian Medical Protective Association and Canadian Nurses Protective Association have recently adopted a joint statement that sets out seven steps to help decrease the risks of collaborative practice. These steps cover the following issues:
 - the need for each health professional to have their own appropriate and adequate professional liability protection and/or insurance coverage;
 - the need to confirm that other members of the collaborative health care team are similarly covered;
 - the need for adequate professional advice on insurance coverage and compliance with its terms; and
 - adequate coverage to address the reporting period over which claims can be made.³⁹

Given that tort reform appears unlikely in the foreseeable future, this approach will likely need to be followed by other health disciplines.

- iii. *Develop funding models that support collaboration* - Probably the biggest funding-related issue that might impede collaborative practice, particularly in the community setting, is

the public: private divide that is defined by the Canada Health Act. While it is estimated that some 98% of physician services are publicly funded, and more than 90% of all services provided in hospitals, the Canadian Institute for Health Information estimates that just 8% of the services of other health professionals were publicly-funded in 2004.⁴⁰ The private share of total health expenditure has remained constant at about 30%. Innovative arrangements between governments, third-party insurers, providers and patients will have to be explored.

A number of such models currently exist. For instance, private speech-language pathologists and audiologists are sometimes contracted by public institutions to deliver services.⁴¹ Physiotherapists are funded in primary health collaborative models within different public settings such as community health centres and in hospital settings where they perform initial triage and assessment for patients such as those with arthritis conditions or acute orthopedic injuries.⁴² Practice setting such as CHCs or other arrangements where providers are remunerated through salary encourage a collaborative approach.⁴³ Other models have the potential of being actualized. For example, CHCs could apply for provincial government funding for oral health professionals, allowing nurse practitioners and physicians to make referrals to on-site professionals, and long-term care facilities and hospital intensive care units could hire dental hygienists to provide mobile dental hygiene services and in-service training sessions for different providers.⁴⁴ The year 2000 \$800 million Primary Health Care Transition Fund has sponsored a number of innovative projects in the delivery of primary care which have included funding models. It is hoped that the results of these initiatives will lead to sustainable, long-term funding models that support collaboration and are flexible enough to meet emerging health needs.^{45,46,47} In terms of mental health services, funding models should expand access to services such as counselling through enhancing eligibility to third-party billing⁴⁸ and allowing psychologists within private practice to link services with primary health care physicians and other providers.⁴⁹ The issue of self-employment for health care providers and how this influences the development of funding models that encourage collaboration must also be considered.⁵⁰

Funding models should also facilitate collaborative planning to ensure that all jurisdictions in Canada have the ability to recruit and retain a flexible, knowledgeable public health workforce in safe and supportive work environments to meet public health needs and reduce health and social disparities. This should include the capacity to plan for the optimal number, mix and distribution of public health workers to meet population health needs within interprofessional and client-centred service models which make full use of their skills and competencies.

iv. Developing Leadership for System Change

Unfortunately, all too often in Canada health system reform has either been introduced or proposed according to the “big bang” theory, that is, a form of dramatic and sudden change. The regionalization wave of the 1990s is the best recent example.

This approach flies in the face of the widely acclaimed innovation diffusion framework developed by Everett Rogers decades ago, which sets out the three key components of: characteristics of an innovation; stages of the innovation-diffusion process; and adopter categories. Over the past few years the “big bang” has started to give way to “change management”, however there is no systematic approach or national locus of activity in this area in Canada. One interesting example has been the National Health Service (NHS) Modernization Agency which was established in 2001 to support the NHS in modernizing services and improving patient outcomes. In July 2005 it was superceded by the NHS Institute for Innovation and Improvement which has a broad mandate to promote innovation/adoption at the frontline.

There is clearly potential to harness/capitalize on the potential to promote system change in Canada, given the burgeoning investment in health services research and proliferation of management/leadership programs in Canada’s universities, colleges and the NGO community.

B. PAN-CANADIAN PLANNING

Undoubtedly the biggest challenge to adopting a pan-Canadian approach to health human resource planning is the fact that the provinces and territories have primary responsibility for education and delivery of health services (with the exception of Aboriginal health services provided by the federal government). Over time a series of provincial/territorial standards for educational credentials and licensure have evolved. The capability of training health professionals has varied widely among the provinces and territories, although the federal 1966 Health Resources Fund Act provided \$500 million over 15 years to redress this in significant measure.⁵¹

3. *The Health Workforce is a National Resource - It is desirable to promote a high level of opportunity for mobility within and between provinces/territories for Canadian health professions in education/training and practice across the career lifecycle.*

Although the provinces and territories provide similar high standards of education and training, mobility is often raised as an issue from the perspectives of graduate retention vis à vis provincial/territorial educational investment, critical mass to support educational programs and portable eligibility for licensure.

Strategic Directions

- i. *Promote national standards for portable eligibility for licensure - The Agreement on Internal Trade (AIT), signed by the provinces and territories in 1994, was intended to promote the movement of goods, services and people (labour) across the country. In the area of labour mobility the AIT was intended to enable any worker qualified for an occupation in the territory of a Party to be granted access to employment opportunities in that occupation in the territory of any other Party. Toward that end, each signatory to the AIT gave an undertaking to “mutually recognize the occupation qualifications of workers of any other Party and to reconcile differences in occupational standards”.*⁵²

Just over 10 years after the AIT was signed it is not clear how the health professions measure up to its intent. Medical laboratory sciences had a pre-existing portability agreement with a certification system for medical laboratory science from 1937. The AIT entrenched that certification as the basic entry-level credential in those jurisdictions where professional regulation is in place. (Quebec is not a signatory to the national document.)⁵³ Medicine adopted a national standard for portable eligibility for licensure in 1992.⁵⁴ Other health disciplines such as radiation technology, psychology, occupational therapy, physiotherapy, and respiratory therapy have implemented mutual recognition agreements since 1994.^{55,56,57,58,59} Other disciplines such as dietetics report that the mutual recognition agreement for them has not resulted in much change.⁶⁰ For unregulated professions such as health executives and counselling, the AIT does not apply directly.^{61,62} For the foreseeable future, the “art of the possible” will continue to be national standards for portable eligibility for licensure, with the possibility of national credential verification mechanisms that could expedite cross-border licensure.

- ii. *Recognize regional centres of excellence* – The Canadian population is dispersed over the second largest country in the world with a few large population centres and many small ones. It is simply not possible to offer all services in all locations. Moreover, the quality literature of the 1990s and since has repeatedly demonstrated that health outcomes are better when procedures are carried out with sufficient frequency. This was acknowledged by the provincial/territorial premiers in January 2002 when they agreed “to share human resources and equipment by developing Sites of Excellence in various fields such as pediatric cardiac surgery and gamma knife surgery”.⁶³ Clearly such a strategic direction needs to encompass the training dimension as well as clinical service.
- iii. *Preserve and promote a national system of education and training* – Historically, Canada has relied on the national character of its education and training system, particularly for those jurisdictions that have not had training programs. Canada’s health professionals have surely benefited from educational and training experiences in different jurisdictions.

In the case of medicine, the national character of the education/training system may be seen in a comparison of the location of undergraduate medical education and postgraduate training compared to location of practice for Canadian medical graduates exiting post-MD training in 2003. Nationally, three out of 10 graduates had taken some or all of their medical education/training outside the region where they were practicing. Similarly the 2002 distribution of the registered nursing workforce shows that more than one-quarter of the RN workforces in BC, AB and PEI received their initial nursing education from another province.⁶⁴ This phenomenon also affects other disciplines such as physiotherapy, occupational therapy, medical radiation technology, medical laboratory science, dental hygiene, speech-language pathology, audiology, and respiratory therapy. Smaller provinces purchasing seats in larger provinces or regional centres, the need for French-language education and training, a small number of programs nation-wide, and the availability of decreasing clinical placements are some of the drivers that are shared amongst these disciplines in terms of this phenomenon.^{65,66,67,68,69,70} For other professions such as psychology the government does not support training by funding seats.⁷¹

4. *Greater Self-Sufficiency - Canada must strive for greater self-sufficiency in the education and training of health professionals.*

Canada continues to rely heavily on the recruitment of internationally educated physicians and nurses. In the case of medicine, approximately one-third of the increase in physician supply each year is due to International Medical Graduates who are either recruited directly to practice or who have taken significant post-MD training in Canada. In nursing, the number of internationally educated nurses applying for licensure is increasing rapidly, almost tripling from 1999 to 2003.⁷²

In other health professions such as physiotherapy, occupational therapy, medical radiation technology, medical laboratory science, dental hygiene, speech-language pathology, audiology, respiratory therapy, and social work, the majority of providers are educated and trained in Canada.^{73,74,75,76,77,78,79,80} For psychology, many providers are Canadian citizens who have gone to the United States for their education and training because of the limited availability of places in Canada and the much higher availability in the US. (The numbers of psychologists from other countries are very small.)⁸¹

Strategic Directions

- i. *Improved Medium to Longer-Term Supply Projection Models* – At the present time there is a dearth of projection models for health professionals in the public domain. In the case of nursing, Eva Ryten (2002) has developed a projection model in collaboration with the Canadian Nurses Association that is projecting a shortage of 78,000 registered nurses by 2011 and 113,000 by 2016.⁸² The Canadian Medical Association has developed the Physician Resource Evaluation Template (PRET). The original 2021 projection of the PRET in 1999 was a population:physician ratio of 718:1 compared to the 1999 level of 534:1. Since 1999, first-year medical enrolment has increased by some 600 places and the 2005 PRET projection for 2021 is 449:1.⁸³ It must be stressed that these models are simply projecting head-counts of active nurses and physicians. They do not take into account productivity, practice patterns or variances in specialty mix. There is a need for more documented projection models in the public domain to stimulate criticism and debate.

To date the availability of detailed data to support projection models has been confined to physicians and nurses, mainly as a result of their predominantly public payment and its associated administrative data requirements. However, CIHI has consulted extensively on a minimum data set for HHR and is working with several professionals to expand data collection. Another potential source of information is private insurance carrier data on private practice contracts by profession.⁸⁴

- ii. *Sufficient Opportunities for Canadians to Train for Health Professional Careers in Canada* - In the 1990s there were drastic cutbacks in nursing enrolment and a 10% cut in medical school enrolment. This followed a decade of already declining numbers where

first year enrolment saw a reduction of over 5%. Overall, there was a 16% decrease from a high of 1887 first year medical students in 1980-81 to a low of 1577 in 1997-98.

In 2000 approximately 5,000 nurses graduated from Registered Nursing (RN) programs offered across the country. This is just over 55% of the 9,000 RNs graduated in Canada in 1989.⁸⁵ In medicine the number of MD degrees awarded dropped from a peak of 1,835 in 1985 to 1,537 in 2001.⁸⁶

These levels are well below replacement level. It has been estimated that Canada needs to graduate at least 12,000 nursing students per year and for medicine a first year class size of 2,500 is considered the bare minimum level required to keep up with attrition and population growth.⁸⁷

In international comparative perspective, Canada provides far fewer opportunities for young people to attend medical school than does England. In 2002 there were 6.5 places per 100,000 population in Canada compared to 12.2 in England.⁸⁸

While there have been reversals in these declining enrolment trends since the 1990s, there is a need to thoroughly review the health professional education and training infrastructure to assess the capacity for further expansion of enrolment. Results from the national nursing sector study indicates that with additional resources 70% of RN schools could expand their enrollment by 25%.⁸⁹

Other disciplines also report a dearth of training opportunities. For example, the number of available seats in various masters programs for speech-language pathology and audiology was 415 for 2004, while the number of applicants was over 1,300.⁹⁰ In respiratory therapy, generally about 15% of vacant positions for the discipline are not filled; the main obstacle is securing clinical placements.⁹¹ There is a shortage of clinical placement for medical radiation technology.⁹² In psychology, a significant shortfall of education and training opportunities can be deduced from the small number of applicants for graduate training that are accepted compared to the large number that are rejected, the inability of the supply of providers to keep abreast of the demand for services, and the advanced median age of registered psychologists (over 50 years of age).⁹³ Training programs for health executives are also in short supply and current programs tend to utilize competencies that are no longer applicable for health leaders and executives who must cope with increasingly complex environments.⁹⁴ New graduates in dietetics are employed in the field quite quickly (about one month) after graduation, which is indicative of a shortfall in the supply of new graduates.⁹⁵ While there have been significant improvements for training in medical laboratory sciences, there is still a need in several provinces to increase the number of educational seats. For example, the Saskatchewan Institute of Applied Science and Technology recently closed their waiting list since it had exceeded five years instead of increasing enrolment to address a rapidly escalating shortage.⁹⁶ Educational opportunities for specific populations such as Aboriginal peoples, especially those living in the north, are problematic. Applicants sometimes must attend universities and colleges in the south, however, they face barriers such as cultural issues and homesickness; many successful graduates do not return to the

north to work. Providing educational opportunities in northern communities would be one way to address this.⁹⁷ While it is difficult to determine if a shortage of training opportunities exist for physiotherapists without specific data to confirm this, there are some physiotherapist positions which go unfilled, especially in underserved areas, indicating that there appears to be a shortage of providers to fill available positions. There is a general shortage of clinical placement positions for physiotherapy across the country due to decreased personnel, increased patient acuity and less time for public institutions to provide supervision to students. As well, there is hesitancy on the part of approximately 50% of providers who work in the private sector to supervise students in a highly competitive economic environment. There is also a major shortage of academics to teach physiotherapy since many individuals are reaching retirement age.⁹⁸ Privatization is also an issue affecting the training of occupational therapists since approximately 25% of providers work within the private sector and this rate is increasing. Payment is either by fee-for-service or through insurance, and this will affect training patterns.⁹⁹

Increased positions in the educational system must be paired with enhancements and expansion of the infrastructure of academic teaching health organizations and increased capacity to provide training in community hospitals and other community settings. This will provide adequate capacity to cope with additional learners, sufficient faculty to educate them, and will operationally enhance interdisciplinary training. Of no less importance is the capability, once in practice, to have access to appropriate infrastructure support within an academic health organization and within the community including access to tests, equipment, operating rooms, etc. to provide quality patient care.

At the same time that enrolment expands, there is a growing concern that rising tuition is resulting in onerous burdens on new graduates. This may limit access to health professional education to the most advantaged, and among those who do get in, debtload may influence both their choice of education and training and their practice location upon graduation.

- iii. *Integration of International Graduates who are permanent residents or citizens of Canada into practice* – Canada has benefited immensely from the contribution of International Medical Graduates and Internationally Educated Nurses (IMGs and IENs) and other internationally educated health professionals. Canada is an attractive destination for immigrants for a variety of reasons. A rate-limiting step to the integration of more IMGs and INGs into clinical practice is the capacity of the training infrastructure to provide additional training so that they meet Canadian standards. In the case of medicine roughly 1/10th of those IMGs eligible to pursue post-MD training in Canada are able to obtain a training position each year. The availability of supplementary nursing education programs to assist internationally educated nurses to meet licensure requirements are too few in number, and vary significantly in their design and cost.¹⁰⁰

Integration of internationally trained graduates affects other health disciplines as well. Assessments of foreign-trained speech-language pathologists and audiologists are completed regularly; there are substantial equivalencies with a few countries but sometimes practitioners must do extra courses or supervised clinical practica.¹⁰¹ For

medical laboratory sciences, prior learning assessments available on a national basis have determined that less than 50% of applicants are eligible to write the examination.¹⁰² In respiratory therapy, practitioners must apply directly to an accredited training program to evaluation and appropriate training as necessary. This evaluation and training must address competencies within the national profile, but the method, content and length of training is not yet standardized.¹⁰³ In dietetics, results from an international education initiative with Ryerson University show that the length of time for foreign-trained providers to achieve competence for practice in Canada varies from a few months to perhaps a year. Canadian practitioners are assisting work by the International Confederation of Dietetic Associations to move toward international minimum educational and training standards.¹⁰⁴ In medical radiation technology, Canada has been involved in establishing standards of practice to reflect the Western world and is represented on the International Society of Radiographers and Radiological Technologists (ISRRT).¹⁰⁵ In occupational therapy, currently a workforce integration project will examine the need: to orient practitioners to the Canadian context before their arrival in Canada; to assess their qualifications and equivalencies before they arrive in Canada; and for bridging programs and study groups. Canada subscribes to the standards of the World Federation of Occupational Therapists.¹⁰⁶ Some internationally educated physiotherapists within Canada have experienced difficulty in finding supervisors for required Canadian clinical practice and the integrated nature of courses within the entry to practice programs at the graduate level which makes it difficult for foreign-trained graduates to make up the educational component to be able to practice. A project by the Canadian Alliance of Physiotherapy Regulators is currently examining barriers experienced by internationally educated practitioners.¹⁰⁷ The Canadian Association of Social Workers evaluates credentials of foreign-trained social worker credentials; this evaluation is accepted in most jurisdictions except British Columbia and Quebec. The evaluation assesses the candidate's education, including record of courses and grades obtained, certificates or diplomas obtained, description of field practice, including number of hours, and proof of membership in professional social work association(s) from another country, if applicable.¹⁰⁸

The federal government has committed \$75 million in the 2005 budget to accelerate and expand the assessment and integration of internationally-trained health professionals. It estimates this might result in the integration of up to 1,000 physicians, 800 nurses and 500 other health professionals.¹⁰⁹ This will need to be coordinated with the output of Canadian educated and trained health professionals.

5. ***Recognize the Global Environment*** – *It must be recognized that health professionals are working in an increasingly global world in terms of the exchange of scientific information, mutual recognition of qualifications between countries and the movement of people.*

There are several features of the growing global environment that will have implications for the health professions. The first is the increasingly level playing field in terms of access to and exchange of scientific information that has resulted from the Internet and from developments in communications technology. The second is the proliferation of

bilateral and multilateral agreements between countries that may involve mutual recognition of occupational standards and/or a harmonization of standards. Third, there is increased mobility of populations and health professionals that expands greatly on traditional migration patterns, which will also increase the requirement for culturally appropriate health care.

Strategic Directions

- i. *Promote Ethical Recruitment.* Like other developed countries, Canada continues to rely on the recruitment of internationally educated health professionals. While this is for the most part “passive” recruitment that occurs through informal networks, Canada has been criticized for recruiting heavily from developing countries like South Africa that can ill afford to lose them.

In 2001 the health Ministers of the Commonwealth countries adopted a *Code of Practice for the International Recruitment of Health Workers*. This Code sets out the guiding principles of transparency, fairness and mutuality of benefits as they related to recruits and recruiters among the various countries.¹¹⁰

While this is a laudatory step, this is a guideline at best and a subsequent step that has been advocated is the signing of more formal Memoranda of Understanding (MOUs) between governments.

One experiment that should be assessed is the 2003 MOU between the Government of South Africa and the Government of the U.K. that focuses on the reciprocal educational exchange of personnel.¹¹¹ Under this agreement, South African doctors and nurses will have the opportunity to work in the U.K. National Health Service (NHS) on various projects, during which time their positions will be kept open in South Africa. Similarly, NHS staff will be encouraged to take on assignments in South Africa. It is expected that this MOU will lead to a sharing of expertise in areas such as public health, professional regulation, workforce planning and public: private partnerships. It is not known if there has been an interim evaluation on how this is working, although South Africa has had an agreement with Cuba since 2001 and as of November 2004, almost 700 Cuban physicians and lecturers have worked in South Africa.¹¹²

- ii. *Consider the impact of technology on the potential to deliver services remotely and to exchange health services across borders.* There have been many successful demonstrations and pilot projects of telehealth technology in Canada, beginning with the pioneering work of Dr. Max House in Newfoundland. As the communications infrastructure continues to develop there will be a much greater reach of audio-visual technology to support remote diagnosis and treatment. This also raises the prospect of exchange of services across borders. In the case of diagnostic imaging, there are reports that already some Canadian clinics are having images analyzed in the United States. A recent report in the Washington Post documented a U.S. hospital that has all its images taken during the night analyzed by a clinic in India, subject to review the next morning.¹¹³

In 1994 in a futuristic survey of health care, the Economist Magazine speculated on the prospect of inter-continental robotic surgery.¹¹⁴ This has since been successfully tested by McMaster University's Centre for Minimal Access Surgery, and in August 2004, NASA astronauts tested tele-robotic surgery underwater, with a view to what may be required in space some day.¹¹⁵

This need not only be useful for very long distances, experiments are underway in the US and Canada and the use of tele-homecare monitoring.

Clearly there will be challenges of addressing liability and funding issues with these innovative approaches but there is little doubt that they will become much more commonplace.

- iii. *Maintain high standards of education, and teaching* - Canada has achieved some of the highest standards in the world for the education and training of health professionals. In a more global environment it will be a challenge to maintain these standards. For example, the Royal College of Physicians and Surgeons of Canada has incurred significant expense in assessing the training systems of several countries abroad to determine how they compare with Canadian programs. Also, in nursing this is evident in the fact that many internationally educated nurses do not meet the educational standards required for licensure in Canada.

Canada is also involved in the development of international standards or subscribes to international standards for respiratory therapy, radiography and radiologic technology, occupational therapy, and speech-language pathology and audiology.^{116,117,118,119} Psychology has bilateral accreditation and mobility arrangements with the United States or individual schools within that country.¹²⁰

- 6. ***Inclusive Policy Planning and Decision-Making Processes*** - *Policy planning and decision-making in the area of health human resources must include representation from all stakeholders involved including governments, regional health authorities, educational and regulatory authorities and practising professionals.*

Throughout the 1990s significant policy directions and decisions were adopted unilaterally by the federal/provincial/territorial (FPT) health Ministers on the advice of what is now called the FPT Advisory Committee on Health Delivery and Human Resources. One result of this approach is the shortage of nurses and physicians in Canada today.

Strategic Directions

- i. *Establish a Canadian Coordinating Office for Health Human Resources* – Exploration of models across the country may identify an appropriate prototype upon which a Canadian Coordinating Office for Health Human Resources could be developed.

- ii. *Provide for exchanges between the provider community and federal/provincial/territorial advisory committees* - While health professionals have been included on some of the advisory committees in the past, they have not generally been representative of the “coalface” of day-to-day clinical practice. A promising start has been the recent exchanges between ACHDHR and the sectoral studies that are underway in the health field. There is a need for regular interaction between committees and providers that go beyond fact-finding to the development of policy options.
- iii. *Promote Provider Representation at Regional and Institutional Governance Bodies* – One of the results of the regionalization of the 1990s is that it greatly reduced the number of health professionals having input on governance bodies, for example, through the elimination of individual hospital boards. In some cases health professionals were specifically prohibited from serving on regional boards. There is a need for an environmental scan across the country to compare and contrast the opportunities that health professionals have for meaningful input to governance bodies.
- iv. *Promote inter-sectoral “health public policy”*

Just as there is a need for improved coordination within the health sector there is a need for enhanced linkages across sectors. In his landmark 1986 report *Achieving Health for All: A Framework for Health Promotion*, federal Health and Welfare Minister Jake Epp coined the term “health public policy”. This was intended to coordinate all policies with a direct bearing on health, including income security, employment, education, housing, business, agriculture, transportation, justice and technology.¹²¹

In the HHR context, at this point we do not have even a conceptual framework of what this would entail, let alone a gap/needs assessment.

Several health disciplines and health professional organizations are involved in specific issues concerning healthy public policy in Canada.^{122,123,124,125,126,127,128}

C. *CAREER LIFECYCLE*

During the past few years there has been concerted attention to the issue of patient safety. In a business that is as “people intensive” as health care, few would argue that having a healthy, well-educated and up-to-date provider workforce is key to the delivery of quality patient care.

The “career-lifecycle” in the health field was coined by Morris Barer and Greg Stoddart in their 1991 report *Toward Integrated Medical Resource Policies for Canada*.¹²⁹ They set out the medical career lifecycle as comprising the four stages of: undergraduate medical education, post-MD pre-licensure training, specialty training and clinical practice. They identified 49 policy options/levers across the continuum of these four stages. This concept has general applicability to other health professions.

7. ***Competitive Human Resource Policies - Health professionals should be afforded supportive working environments that are designed to attract and retain them through comprehensive approaches that address their professional and personal needs.***

The health sector is catching on to what has been known in the business sector for years, namely that it is less costly to retain an existing customer than it is to recruit a new one. As communities and institutions have discovered recruitment is not only costly, but in today's climate of shortage it is becoming increasingly difficult.

Strategic Directions

- i. *Recruitment approaches that address both professional and personal factors* – There is extensive literature on the recruitment of health professionals to rural and remote areas. This literature highlights the importance of both personal and professional factors. One of the key emerging issues in this area is the recognition of the need to recruit a family and not just the individual professional, who in likelihood is one-half of a professional couple. Some provinces/territories have hired recruiters, however probably greater efforts will be required on the part of regional health authorities, and local professional and business communities. Recruitment for female-dominated professions should also consider the desire for providers to begin families¹³⁰ and supports a balance between work commitments and family responsibilities.¹³¹

Recruitment strategies must consider a wide variety of issues, including: attrition from health professions; work-health issues and the need to ensure a safe work environment for providers;¹³² the interface between private sector and public sector providers;¹³³ and work-life balance.¹³⁴

- ii. *Comprehensive Retention Approaches* -Until recently the focus of efforts to attract and retain employees has been on recruitment. Using the rural and remote experience as an example, one of the key tools that has been employed is some type of “front-end loaded” recruitment bonus that might be paid out over the first few years of practice. More recently some jurisdictions have developed retention bonuses that reward long service, although it is too early to judge their success.

As in the case of recruitment, retention strategies must be broader than monetary incentives. An inventory of healthy workplace strategies prepared for the Canadian Nursing Advisory Committee (2002) identified strategies such as flexible work arrangements, family care initiatives, leave provisions, support for professional development and health and wellness programs to cite just a few.¹³⁵

Other retention incentives include improvements in access to locums for nurses and physicians to alleviate stress and burnout.¹³⁶ Support for specialty training and continuing professional development is crucial, both in terms of allowing time for continuing professional development and also adequate funding per employee^{137,138} For other professions, access to workplace health benefits would provide a major retention incentive.¹³⁹ Other important issues to address within retention strategies include high

caseloads, the need for mentorship, issues concerning unregulated workers,¹⁴⁰ and the interface between private and public providers so that patients can pass smoothly from one group to the other.¹⁴¹

- iii. *Flexible employment practices* – during the past decade there has been progress in offering programs that support maternal and more recently paternal leave. Looking to the future more and more people of working age will likely be engaged in the “eldercare” of the aging baby boom generation, potentially over many years. This will require continued attention to issues such as job-sharing and flexible hours.

Flexible employment practices should also include alternative service delivery models to allow practitioners to deliver services outside their usual venues of practice.¹⁴²

While flexible employment practices are attractive, they can also have drawbacks in that employers can opt for part-time and casual employment to the detriment of full-time positions. If new graduates cannot find full-time positions they will leave the health workforce.¹⁴³

- iv. *Research to determine the potential for repatriation* – There are thousands of Canadian-trained health professionals working outside Canada, mainly in the United States, and many of whom have significant parts of their careers ahead of them. Research has shown that they leave Canada for a variety of professional reasons including secure jobs, research opportunities, influence of postgraduate training location as well as personal reasons. While a certain number return to Canada each year, the potential for recruiting larger numbers to return to practice in Canada has not been fully assessed and the exploratory research could be done for a modest investment.

- 8. ***Healthy Workplaces*** – *Health care administrators and decision-makers must recognize the importance of healthy workplaces and collaborate with health care providers to implement strategies to support their health and safety.*

Workplace health is an important field of study. Professional health organizations acknowledge the workplace as a key determinant of personal health. The Canadian Policy Research Networks wrote in 2002 “the connection is being made between the health of health workers and the ability of the system to meet patient needs”.¹⁴⁴ In addition, professional organizations are beginning to acknowledge the importance of a culture that permits practicing health professionals and those in training to find a level of personal and professional balance in order to better sustain their personal health. Compared to other workers, Canadians in health occupations are more likely to miss work due to illness or disability and to be absent for more days, on average.¹⁴⁵ HHR planners and policy makers understand that our current health human resource crisis means our Canadian health care system cannot afford to lose a single provider from the workforce owing to health concerns. Increasingly research is confirming ill health to be a function of the broader context of the environments and conditions in which our health providers work.

- i. *Best Practice Approaches* - It is no longer satisfactory to admonish individual health care providers to make healthy nutrition and exercise choices, we must create environments that make healthy choices the easy choice and enable providers to practice healthy behaviours. National organizations such as Health Canada, the Canadian Council of Health Service Accreditation, Canadian Health Services Research Foundation, and in the United States, the Joint Commission on the Accreditation of Health Organizations (JCAHO), are recognizing healthy workplaces and work organization as important health professional recruitment and retention strategies. The quality of nurses' professional practice environments has a direct correlation with job satisfaction, work production, recruitment and retention, the quality of care, and ultimately, client outcomes. This is articulated in the Canadian Nurses Association 2001 position statement on Quality Professionals Practice Environments.¹⁴⁶

Medical student and resident organizations have been very successful in negotiating agreements that create more humane parameters and expectations for trainees which continue to balance the need for a satisfactory training experience against the service requirement expected of trainees. HHR planners must consider, however, the effect that these new policies have on human resource requirements and we must all be alert to the intergenerational tensions regarding workload sharing and other coverage issues.

Individual facilities such as Homewood Health Care (mental health and addictions services in Guelph) have developed specific initiatives and bodies such as the Calgary Health Authority have moved to a flexible spending account (flexible working days) for health and wellness. A central repository of such examples should be established as a resource of best practices for all health professionals.^{147,148}

Healthy workplaces must also address issues concerning health and safety for all health professionals,^{149,150} reasonable earnings for health professionals working in the private sector,¹⁵¹ and control over hours of work, respect, and working conditions.¹⁵²

Best practices in healthy workplaces should also be linked to patient care. The experience of employers has been that improvements in workplace environments are most successful when employers and employees can make a direct link between healthy workplaces and better patient care.¹⁵³

- ii. *Educational Programs* - Education programming in the area of personal health and well-being is not a standard offering in most workplaces. Some employee assistance programs (EAP's) are offering a wider range of services, however in most instances these programs are not available to physicians. Furthermore, educational resources to promote balance, wellness and prevent ill health are not routinely available.

To address this gap, professional associations are developing curricula, seminars and others services to assist members. In the case of physicians, the CMA Centre for Physician Health and Well-being has developed a new national educational curriculum for physician leaders to raise the level of understanding around the issues and develop

skills to create healthy work environments and better assist and respond to physician colleagues in need. This curriculum, although designed initially for physicians, is one that is broadly applicable to all health professionals and health care administrators.

- iii. *Promote culture shift to encourage help-seeking behaviour* - Often the culture amongst health providers and the environments in which they work and train is fraught with many barriers for maintaining wellness or seeking help once there is a problem. Strong, knowledgeable and driven health professionals have a tendency to self assess, deny illness and postpone intervention. Such a culture shift needs to be promoted by leaders within the health professions and they will need tools to assist them.
9. ***Balance Between Personal and Professional Life – Planners must take into account the expressed desire among the new generation of health professionals for a balance between their professional and personal lives.***

Society is witnessing a generational sea-change in the priority that younger Canadians are placing on the balance between their personal and professional lives. This phenomenon is not unique to health care, however in professions where demand seems boundless and the human resources are scarce, it creates an additional challenge for human resource planners. Importantly however, this positive trend seems necessary in health professions that are battling low levels of morale, burn-out and disability.

Strategic Directions

- i. *Build into Educational Curricula- Educators* are becoming increasingly aware that educating for balance early is critical in helping students become the resilient health professional of tomorrow. Realizing that the competition for lecture time is a ubiquitous problem there is recognition by some that the integration of formal teaching on balance and coping must be accompanied by a positive cultural shift in the training environment and that mentors and positive role models are necessary. The new mentor for these students is the professional that has learned how to survive and thrive in an increasingly complex and demanding clinical environment.

Considerations of balance should be built into accreditation standards for health professional educations.

- ii. *Learn from international experience* - In 1993 the European Working Time Directive was adopted which sets out a maximum 48 hour working week (including overtime). In North America long hours have been raised as a quality of care issue. What might happen if maximum hours were mandated for health professionals in Canada?¹⁵⁴

While such a move might be seen as very positive for the personal health of providers and ultimately patients, it would have significant implications for health resource planners who must now consider the impact on their human resource requirements. For example, for some providers experiencing shortages such as health executives, reducing the hours of work coupled with the increased demands and complexity of this work

would effectively worsen the human resource shortage in this sector.¹⁵⁵ For other professionals, such a move would ameliorate work-life balance, although teaching institutions would require advance notice since this will affect clinical sites.¹⁵⁶

In a document developed by the CMA Ad Hoc Policy Working Group on Physician Resources in 2004 it was projected that Canada would require 12,780 more physicians¹⁵⁷ immediately to meet the shortfall imposed by a 48 hour work week (excluding call). This number would jump even further if hours spent on call were included.

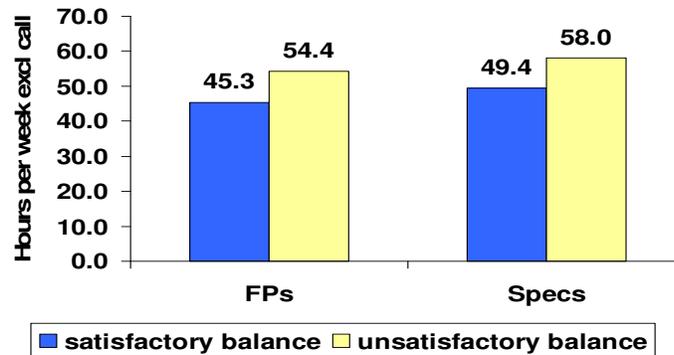
Similar impacts would be felt if recommendations to eliminate nursing overtime were implemented. Nursing overtime is linked to negative patient and provider outcomes. In 2002, the total overtime hours (paid and unpaid) amounted to an estimated 300,000 hours per week, 15.7 million hours per year – or 8,643 full-time full-year positions.

The implications for Canadian health care will be enormous should such mandatory restrictions take effect. Planners are already witnessing a voluntary reduction in time spent at work by many professionals. We need to be prepared for both the positive and negative impact such mandatory restrictions will have on our human resource requirements.

- iii. *Factor work:life balance into supply planning* – We know that health professionals continue to work long hours. One approach to assessing a reasonable workload is to benchmark work week among populations that self-identify as being satisfied with a work:life balance. Health and safety committees within workplaces should be able to advise management on appropriate work-life balance.¹⁵⁸

An example may be seen in the following graph that compares mean hours of work (excluding call) between physicians reporting satisfaction with the balance between their personal and professional commitments versus those who are unsatisfied. In the case of GP/FPs those who are satisfied reported an average 45 hours per week compared to 54 hours per week among those who were not satisfied. Similar approaches may be applied to other health professional groups depending on data availability.

Balance between personal and professional commitments



Source: 2004 National Physician Survey

Findings from the national nursing sector study indicate that nurses were less likely to be physically or mentally healthy when they worked involuntary overtime.¹⁵⁹ In addition, nurses who expected job instability and had experienced violence at work were also more likely to be dissatisfied with their current position. Nurses who were able to take coffee and meal breaks were more satisfied with their current job, as well as those who were provided educational opportunities by employers.

- 10. *Life Long Learning*** - Health professionals must have access to the resources they need to keep abreast of advances in scientific knowledge and to acquire new skills and they should have opportunities to apply their skills to new challenges over the course of their careers.

The increased emphasis on life long learning stems from several factors. First, in general there is increased career mobility in society. Second, the focus on continuous quality improvement has underscored the need to keep up with the latest research and improvements in practice. Third, the proliferation of knowledge has stimulated interest in “knowledge translation” and “knowledge management”.

Strategic Directions

- i. Opportunities for Re-entry and Advanced Training* - In most fields of occupational endeavour, the day is long gone when an employee would expect to start and finish their career either in the same organization or doing the same job. The health field is no different. The U.K. Department of Health recognized this some years ago with the launch of a National Health Service Careers service in 1999.

There are many educational offerings to develop managerial/administrative skills such as Master of Business Administration programs that are offered in executive format suitable to full-time employees and some are being developed specifically for the health field.

In the area of clinical retraining in the nursing field, a number of post RN specialty programs such as oncology, mental health, emergency and others have grown in their offerings. In addition, educational programs to support advanced practice roles such as clinical nurse specialist and nurse practitioner have been put in place over the past few years. In the field of medicine, however, the post-MD system has been flatlined since the early 1990s and there is very little opportunity for family physicians to train in a specialty or for specialists to train in a new specialty.

- ii. *Career development/progression* - This concept is being increasingly recognized in the health field. In a recent report that examines strategies for addressing nurse shortages in member countries of the Organization for Economic Cooperation and Development, Simoens et al.¹⁶⁰ highlighted the role of career advancement as a retention strategy, citing examples of “clinical ladders”, single or multi-occupation job evaluation and individual or group performance pay. They also note the potential for leadership development of nurses. This needs to be a consideration in future organizational design of the Canadian healthcare system.
- iii. *Continuing Professional Development* – The growth of new knowledge in the health field has been well-documented. The Director of Kaiser-Permanete’s clinical portal has estimated that the amount of available medical knowledge doubles every seven years.¹⁶¹ The U.S. National Library of Medicine adds between 1,500 – 3,500 references to its MEDLINE database daily from Tuesday through Saturday, more than 571,000 total were added during 2004.¹⁶² The challenge of coping with this growing volume of information is giving rise to a new discipline of “knowledge translation”.

Research is a critical component of best practices in healthcare. Given this, there needs to be considerable further investment to ensure that health professionals have access to the best current research available in a digestible format that can be readily put into practice. Moreover it is not sufficient for knowledge management tools and continuing professional development courses to be accessible. Despite the fact that many regulatory agencies have expectations for professional development in order to maintain registration, responsibility for continuing professional development is sometimes left to the individual health practitioner and the provision of support (both financial and in terms of time) for practitioners to attend conferences and workshops can vary with individual employers.¹⁶³ Health professionals need the time to avail themselves of them. Continuing professional development much be recognized as part of “the cost of doing business” in healthcare. Many health professional organizations offer life-long learning opportunities and continuous professional development to their members in a variety of formats.^{164,165,166,167,168,169,170,171,172}

Time is also an important consideration for professors in health disciplines, whose requirements to maintain their teaching load impacts their ability to conduct research.

More relief time for professors in health disciplines to enable them to conduct research would provide an incentive for more health professionals to enter PhD programs, which, in turn, would alleviate impending shortages of health professionals to teach these professions.

Iv *Leadership Identification and Development*

There was general acknowledgement of the need for leadership development in all professions to fill existing and future gaps. Potential leaders need to be identified in the early stages of their careers and provided with appropriate mentoring and career development opportunities. Specific strategy development in this area is needed to ensure a well qualified cohort of leaders to guide the health system of the future.

SUMMARY

The foregoing is intended to set out the basic core principles and directions that would underpin a proactive strategy to applying a strategic human resource planning perspective to the Canadian health workforce. This can only be successful if it is integrated across the provinces and territories and the various health professional disciplines.

Moreover such an approach cannot be achieved by governments alone, particularly when one considers the many policy levers across the career lifecycle, as enumerated by Barer and Stoddart. It is essential to have early meaningful and ongoing engagement of health professionals in the planning process.

A next step would be to identify operational targets and indicators for the strategic directions enumerated above and to identify the appropriate policy levers and stakeholders responsible for them.

Endnotes

- ¹ OECD Health Data 2004.
- ² Simoens et al. Tackling Nurse Shortages in OECD Countries. OECD Health Working Papers No. 19. 2005.
- ³ Sobel, M., Litwin, P., Seville, C., Homuth, C. The Coming RT Shortage. Canadian Journal of Respiratory Therapy, Winter 2000. There are approximately 20 other countries in which respiratory therapy is a recognized healthcare profession. The only other available comparison is with the United States, which has recently studied the possibility of shortages in that country, and determined the situation is similar to that in Canada. Both countries are predicting an inability to fill at least 15-20% of currently vacant positions with practitioners trained in their respective countries. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.
- ⁴ Such anecdotal evidence includes comparisons between Canada and the United States, which has a shortage of physiotherapists as well as information from international and national recruiters in addition to advertisements in newspapers and professional newsletters, indicating the growing availability of physiotherapy positions in most countries. Source: Canadian Physiotherapy Association, response to 2006 survey.
- ⁵ According to a 2004 survey of HEAL member organizations concerning health human resources, several organizations noted the lack of predictive value of data in dealing with issues of planning, supply and other important HHR matters. So in fact there may be shortages for several health professions within Canada, but with unavailable data to demonstrate this.
- ⁶ Secretary of State for Health, The NHS Plan. London, UK. HSMO, 2000.
- ⁷ Australian Health Ministers' Conference. National Health Workforce Strategic Framework, April 2004. www.healthworkforce.health.nsw.gov.au/amwac/pdf/NHW_stratfwork_AHMC_2004.pdf Accessed 11/06/05.
- ⁸ World Health Organization. Preparing a health care workforce for the 21st century: the challenge of chronic conditions. 2005. www.who.int/chronic_conditions/workforce_report/en. Accessed 11/06/05.
- ⁹ Statistics Canada. Canadian Community Health Survey: Public Use Microdata File. The Daily, Monday, January 24, 2005. www.statcan.ca/Daily/English/050124/d050124b.htm. Accessed 21/05/05.
- ¹⁰ Source: Dietitians of Canada, response to 2006 HEAL survey.
- ¹¹ Source: Canadian Psychological Association, response to 2006 HEAL survey.
- ¹² Source: Canadian College of Health Service Executives. response to 2006 HEAL survey.
- ¹³ Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.
- ¹⁴ Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.
- ¹⁵ Source: Canadian Counselling Association, response to 2006 HEAL survey.
- ¹⁶ Wennberg JE. Dealing with medical practice variations: a proposal for action. Health Affairs 1984; 3(2): 6-32.
- ¹⁷ Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.
- ¹⁸ Source: Canadian Psychological Association, response to 2006 HEAL survey.
- ¹⁹ Source: Canadian Healthcare Association, response to 2006 HEAL survey.
- ²⁰ Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ²¹ Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.
- ²² Ibid.
- ²³ Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.
- ²⁴ Source: Canadian Healthcare Association, response to 2006 HEAL survey.
- ²⁵ Canadian Council for Practical Nurse Regulators, Registered Psychiatric Nurses of Canada. Evaluation Framework to Determine the Impact of Nursing Staff Mix Decisions, 2005. www.cna_aaic.ca/CNA/documents/pdf/publications/Evaluation_Framework_2005_e.pdf. Accessed 11/06/05.
- ²⁶ Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.
- ²⁷ For example, the Canadian Association of Medical Radiation Technologists has noted that in areas where there is a shortage of radiologists, radiation technologists have to perform these duties. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ²⁸ Source: Canadian Institute for Child Health, response to 2006 HEAL survey.
- ²⁹ Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, D.C. National Academy Press, 2001.
- ³⁰ Many dietetics university education programs offer at least one nutrition course to students in other disciplines. There are also interprofessional education initiatives leading to collaborative patient-centred practice in the province of Saskatchewan. Source: Dietitians of Canada, response to 2006 HEAL survey.
- ³¹ Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey. Many of the association's programs support interprofessional training.

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- ³² Schools of dental hygiene at Dalhousie University and the University of Manitoba have expanded to include interprofessional education. Source: Canadian Dental Hygienists' Association, response to 2006 HEAL survey.
- ³³ Interprofessional education involving psychology occurs at Memorial University, the University of British Columbia's health sciences, and the University of Western Ontario's TUDOR-PHCS program. Source: Canadian Psychological Association, response to 2006 HEAL survey.
- ³⁴ Interprofessional education initiatives for occupational therapists are underway at the University of British Columbia, the University of Alberta, the University of McMaster, and the University of Laval where occupational therapy students learn with other health professional students at the pre-licensure level. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ³⁵ The University of British Columbia, the University of Toronto, and McMaster University are exploring and implementing opportunities for interprofessional education involving physiotherapists. Other work is taking place in faculties across the country (Toronto, Saskatchewan, Newfoundland and Labrador, and northern Ontario) within clinical placements where physiotherapy students learn and work in collaboration with other healthcare providers. There are also some examples across the country where physiotherapists are working in collaborative models with other health providers in primary health care settings. In hospital/rehabilitation settings collaborative teams are more the norm of practice. Source: Canadian Physiotherapy Association, response to 2006 survey.
- ³⁶ Within these two disciplines, there is a crossover of CT with PET/CT equipment, and between the functions ascribed to radiologic technologists, radiologists, and the imaging community. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ³⁷ Social work is involved in an interprofessional education initiative at Memorial University and also in a new advisory committee entitled "Transdisciplinarity Understanding on Research in Primary Health Care which will focus on establishing a training program for university students interested in research concerning primary health care and include four disciplines. Source: Canadian Association of Social Workers, response to 2006 HEAL survey.
- ³⁸ The Canadian Society for Medical Laboratory Science believes that this is related to the fact that discussions concerning interprofessional education for health provider disciplines are occurring at the university level, while education programs for medical laboratory science take place at the community college level. Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.
- ³⁹ Canadian Medical Protective Association and Canadian Nurses Protective Society. CMPA/CNPS Joint Statement on Liability Protection for Nurse Practitioners and Physicians in Collaborative Practice, March, 2005.
- ⁴⁰ Canadian Institute for Health Information. National Health Expenditure Trends, 1975-2004, Ottawa, 2004.
- ⁴¹ Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.
- ⁴² Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.
- ⁴³ Source: Canadian Healthcare Association, response to 2006 HEAL survey.
- ⁴⁴ Source: Canadian Dental Hygienists' Association, response to 2006 HEAL survey.
- ⁴⁵ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ⁴⁶ Source: Dietitians of Canada, Response to 2006 HEAL survey.
- ⁴⁷ Source: Canadian Institute of Child Health, response to 2006 HEAL survey.
- ⁴⁸ Source: Canadian Counselling Association, response to 2006 HEAL survey.
- ⁴⁹ Source: Canadian Psychological Association response to 2006 HEAL survey.
- ⁵⁰ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ⁵¹ Government of Canada. Statutes of Canada 1966-67. Chapter 42. Health Resources Fund Act. Ottawa, Queen's Printer, 1966.
- ⁵² Internal Trade Secretariat. A Consolidation of the Agreement on International Trade. www.intrasec.mb.ca/pdf/consol_ei.pdf Accessed 11/06/05.
- ⁵³ Source: Canadian Society for Medical Laboratory Science, response to the 2006 HEAL survey.
- ⁵⁴ Source: Canadian Medical Association, personal communication, 2006.
- ⁵⁵ Labour Mobility Agreements for radiation technology were signed in 1998-99 by all provincial and regulatory bodies. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ⁵⁶ A mutual recognition agreement for psychology was signed in 2002. Source: Canadian Psychological Association, response to 2006 survey.
- ⁵⁷ The 10 provincial regulatory bodies for OT have established a mutual recognition agreement for OTs. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ⁵⁸ A mutual recognition agreement for physiotherapy was signed in 2002. Since then, a national consortium of organizations, including regulators and governments, have been working to implement the agreement under the

following key areas: 1) consistency under the AIT; 2) adaptation of provincial/territorial legislation and policies; 3) development of an alternate mechanism to assess examination equivalency; and 4) co-ordination. Successful completion of the Physiotherapy Competency Exam run by the Canadian Alliance of Physiotherapy Regulators is required for Canadian graduates entry to practice in all provinces and administered in all jurisdictions except Quebec and New Brunswick. Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

⁵⁹ The mutual recognition agreement for respiratory therapy in 2001 resulted in the creation of a National Alliance of Respiratory Therapy Regulatory Bodies, which continues to work on projects that will improve inter-provincial mobility and help to standardize regulatory practice for these practitioners in Canada. Projects include the development of a national competency profile and exam, implementation of a national program for accreditation of respiratory therapy programs, and development of a national foreign credential recognition framework. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.

⁶⁰ Dietitians were always able to apply for registration in jurisdictions different for those in which they were trained; according to Dietitians of Canada, efficiency and expediency of registration within new jurisdictions has not materialized under the mutual recognition agreement. Source: Dietitians of Canada, response to 2006 HEAL survey.

⁶¹ Portability is not much of an issue for health executives within Canada, but there are restrictions in terms of hiring qualified executives from outside Canada. Source: Canadian College of Health Service Executives, response to 2006 HEAL survey.

⁶² It is hoped that by establishing a standard set of competencies for counselling the AIT will be satisfied. The validation of competencies developed by BC will occur by May 2006; other provinces have been invited to participate and may do so. BC may achieve regulation in 2007. Source: Canadian Counselling Association, response to 2006 HEAL survey.

⁶³ Canadian Intergovernmental Conference Secretariat. Provinces Pave the Way for the Future of Health Care. News Release January 24-25, 2002. www.scics.gc.ca/cinfo02/850085004_e.html Accessed 23/05/05.

⁶⁴ Canadian Institute for Health Information. Workforce trends of registered nurses in Canada, 2002. Ottawa, 2003.

⁶⁵ Newfoundland and Labrador, Prince Edward Island and New Brunswick all buy physiotherapy seats from Dalhousie. New Brunswick also buys seats for this discipline from Laval. The Consortium Nationale de Formation en Santé also provides funding to facilitate French-language training in various health professions such as physiotherapy, occupational therapy and registered nursing outside Quebec. Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

⁶⁶ The Atlantic provinces all have agreements concerning seat purchases and all seats for this region for this discipline are out of Dalhousie University. New Brunswick has bought seats for French-language education and training at Laval and University of Montreal. Saskatchewan used to buy seats at the universities of Alberta and Manitoba, however, the province has discontinued this practice with Manitoba. The change in educational requirements for the discipline from the BSc to the MSc level will be required by 2008. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

⁶⁷ For medical laboratory science, in clinical genetics, there are only two programs at the current time, one at the Mitchener Institute and the other at BCIT. A major challenge for medical laboratory science programs is the availability of adequate positions for clinical placements. Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.

⁶⁸ The Department of National Defense purchases one seat each every year at Algonquin College and Georgian College. Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.

⁶⁹ In addition to Nova Scotia, seats for speech-language pathology and audiology are purchased from Dalhousie University by New Brunswick, and Prince Edward Island. The University of Montreal also has designated seats for Francophones from New Brunswick. There are only nine programs in Canada and many provinces do not offer any programs in communications sciences and disorders. Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.

⁷⁰ The only example of respiratory therapy students receiving training outside of their home province is the Dalhousie University program, where students have the opportunity to perform a portion of their clinical training at a site of their choice. The rationale is to provide students with a broader clinical experience. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.

⁷¹ Source: Canadian Psychological Association, response to 2006 HEAL survey.

⁷² Jeans M, Hadley F, Green J, DaPrat C. Navigating to become a nurse in Canada. Ottawa, Canadian Nurses Association, 2005.

⁷³ Approximately 90% of physiotherapists are educated and trained in Canada. There are a few instances of international recruitment for physiotherapists mostly for underserved and remote areas. Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

⁷⁴ Approximately 95% of occupational therapists are educated and trained in Canada and we do not actively recruit these providers. Instead, foreign-trained providers arrive through voluntary migration to Canada. Within 10 years, there will be a need to replace 15% of the workforce due to retirement. About 60% of occupational therapists in Canada are women of childbearing age, so there is a need for ongoing recruitment, but Canada is not dependent on international recruitment. All university occupational therapy seats are full. Source: Canadian Association of Occupational Therapy, response to 2006 HEAL survey.

⁷⁵ Approximately 95% of medical radiation technologists are educated in Canada. A few years ago there was a shortage of providers and the Canadian Association of Medical Radiation Technologists provided a mechanism for international educated providers to write the certification examination in their home country. Those who were successful were offered employment. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

⁷⁶ Approximately 90% of providers working in medical laboratory sciences are educated in Canada currently. While there is a global shortage of these providers, the Canadian Society for Medical Laboratory Science is seeing an increase this year in the number of new applicants for its prior learning assessment process. Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.

⁷⁷ Approximately 90 - 95% of those writing the National Board Exam in dental hygiene are Canadians. Source: Canadian Dental Hygiene Association, response to 2006 HEAL survey.

⁷⁸ Approximately 80% of speech-language pathologists and audiologists are trained in Canada. The Canadian Speech-Language Pathologists and Audiologists has negotiated an international mutual recognition agreement with some professional associations in other countries such as the United States, the United Kingdom and Australia, and is working on agreements with New Zealand and Ireland. Source: Canadian Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.

⁷⁹ Currently about 90% of respiratory therapists working in Canada are trained in this country. The Canadian Society of Respiratory Therapists is seeking ways to evaluate and license practitioners trained in other countries. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.

⁸⁰ Social work does not rely on internationally educated professional to practice front-line social work in Canada. Source: Canadian Association of Social Workers, response to 2006 HEAL survey.

⁸¹ Source: Canadian Psychological Association, response to 2006 HEAL survey.

⁸² Ryten E. Planning for the future: Nursing human resource projections. Ottawa, Canadian Nurses Association, 2002.

⁸³ Canadian Medical Association, Research Directorate, 2005.

⁸⁴ Source: Canadian Psychological Association, response to 2006 HEAL survey.

⁸⁵ See note 63.

⁸⁶ Association of Faculties of Medicine of Canada. Canadian Medical Education Statistics, Ottawa, 2005.

⁸⁷ See note 63.

⁸⁸ Canadian Medical Association. Notes for an address by Dr. Sunil Patel : Presentation to the Standing Committee on Citizenship and Immigration of the House of Commons, April 19, 2004.

⁸⁹ O'Brien-Pallas L, Tamblin Murphy G, White S et al. Building the Future: An Integrated Strategy for Nursing Human Resources in Canada: Research Synthesis Report.

www.buildingthefuture.ca/e/study/phase1/reports/Research-Synthesis-Report.pdf Accessed 01/06/05.

⁹⁰ Source: Canadian Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.

⁹¹ Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.

⁹² This occurs for many reasons, e.g., an increase in the number of students; a shortage of workers within possible clinical sites, which mitigates the ability to supervise students; and an increase in workload within these sites, so the facilities want students who are better prepared for clinical placement. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

⁹³ Source: Canadian Psychological Association, response to 2006 HEAL survey.

⁹⁴ Source: Canadian College of Health Service Executives, response to 2006 HEAL survey.

⁹⁵ Source: Dietitians of Canada, response to 2006 HEAL survey. The association does not have a quantified estimate of the shortfall.

⁹⁶ Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.

⁹⁷ Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.

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- ⁹⁸ Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.
- ⁹⁹ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ¹⁰⁰ See note 73.
- ¹⁰¹ Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.
- ¹⁰² Of those eligible candidates, a third are successful on their first attempt, another third pass on a subsequent attempt, and the remaining third never succeed. Those who participate in a formal bridging program have a success rate comparable to the national examination pass rate of 85%. Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.
- ¹⁰³ The Canadian Society of Respiratory Therapists is currently developing standards to address this. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.
- ¹⁰⁴ Source: Dietitians of Canada, response to 2006 HEAL survey.
- ¹⁰⁵ Source: Canadian Association of Medical Radiation Technologists, Response to 2006 HEAL survey.
- ¹⁰⁶ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ¹⁰⁷ Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.
- ¹⁰⁸ Canadian Association of Social Workers, response to 2006 HEAL survey.
- ¹⁰⁹ Finance Canada. Budget 2005: Securing our Social Foundations www.fin.gc.ca/budget05/pdf/pasoce.pdf Accessed 11/06/05.
- ¹¹⁰ Commonwealth Secretariat. The Commonwealth Code of Practice for the International Recruitment of Health Workers. www.thecommonwealth.org/shared_asp_files/uploadedfiles/7BDD970B-53AE-441D-81DE Accessed March 27, 2005.
- ¹¹¹ Department of Health (U.K.) New agreement for health care cooperation with South Africa, Press Release, October 24, 2003.
- ¹¹² Department of Health (SA) Health Department is considering permanent residence applications by some Cuban doctors. Press Release, November 23, 2004.
- ¹¹³ Stein R. Hospital Services Performed Overseas, Washington Post, April 24, 2001, Page A01.
- ¹¹⁴ The Economist. Peering into 2010: A Survey of the Future of Medicine. 1994. 330 #7855, March 19, after p.66.
- ¹¹⁵ CBC News. Astronauts go underwater to test robotic surgery skills. August 9, 2004. www.cbc.ca/story/science/national/2004/08/09/neemo040809.html?print Accessed 24/05/05.
- ¹¹⁶ The Canadian Society of Respiratory Therapists is a member of the International Council of Respiratory Care. Part of the mandate of this council is to encourage development of standards for respiratory care. The Society is also investigating accreditation opportunities in Saudi Arabia and Qatar. Source: Canadian Society of Respiratory Therapists, response to 2006 HEAL survey.
- ¹¹⁷ The Canadian Association of Medical Radiation Technologists has been active in the revision of educational standards of the ISRRT. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ¹¹⁸ Since the Canadian Association of Occupational Therapists subscribes to WFOT standards, if a foreign-trained practitioner has been trained in a country which also subscribes to these standards, then s/he can qualify for the CAOT certification exam which is one requirement for registration in eight out of 10 provinces. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.
- ¹¹⁹ The Canadian Association of Speech-Language Pathologists and Audiologists subscribes to an international agreement concerning accreditation processes, standards and agreement on substantial equivalencies. Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.
- ¹²⁰ Canada and the United States have an accreditation agreement that allows for joint accreditation by the Canadian Psychological Association and the American Psychological Association. There are preliminary discussions underway to look at an international accreditation body; the bilateral Canada-US agreement will likely be terminated in the future in favour of an international framework. Source: Canadian Psychological Association, response to 2006 HEAL survey.
- ¹²¹ Epp E. Achieving Health for All: A Framework for Health Promotion. Ottawa: Minister of Supply and Services Canada, 1986.
- ¹²² The Canadian Association of Medical Radiation Technologists is involved in breast screening initiatives and the education on self-examination bone mineral density screening for osteoporosis. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.
- ¹²³ The Canadian Association of Occupational Therapists has been involved in advocacy toward the compassionate care benefit and other work concerning end-of-life care, reform of disability benefits, work on assistive technologies

and universal design for all people to ensure equal access to the environment, work on wellness and healthy workplaces, falls prevention among the elderly, and other issues. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

¹²⁴ Healthy public policy in speech-language pathology and audiology includes newborn hearing screening (a policy in many provinces) and policies for the funding of hearing aids. Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.

¹²⁵ Physiotherapists are trying to encourage children to be more physically active. There are also efforts by physiotherapists to ban children under the age of 16 from riding all-terrain vehicles. As well, there are physiotherapy anti-tobacco position statements. Source: Canadian Physiotherapy Association, Response to 2006 HEAL survey.

¹²⁶ Dietitians of Canada has been active on several fronts such as nutrition recommendations, Canada's food guide, food labelling and advertising, food security, food safety, and other issues. Source: Dietitians of Canada, response to the 2006 HEAL survey.

¹²⁷ The new National Dental Officer of Health meets with the Canadian Dental Hygienists Association on a regular basis throughout the year and the association anticipates that this will be a venue for providing input into policy planning and decision-making. Source: Canadian Dental Hygienists Association, response to the 2006 HEAL survey.

¹²⁸ The Canadian Healthcare Association has been involved in advocacy for healthy workplaces. Source: Canadian Healthcare Association, response to 2006 HEAL survey.

¹²⁹ Barer M, Stoddart G. Toward Integrated Medical Resource Policies for Canada. Winnipeg. Manitoba Health, 1991.

¹³⁰ Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

¹³¹ Source: Canadian Association of Social Workers, response to 2006 HEAL survey.

¹³² Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

¹³³ Source: Canadian Psychological Association, response to 2006 HEAL survey.

¹³⁴ Source: Canadian Counselling Association, response to 2006 HEAL survey.

¹³⁵ Wagner S, Bookey-Bassett S, Clement-Gallian L, Butler J. A Catalogue: Current Strategies for Health Workplaces. Report prepared for the Canadian Nursing Advisory Committee, 2002.

¹³⁶ Canadian Institute of Child Health, Response to 2006 HEAL survey.

¹³⁷ Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

¹³⁸ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

¹³⁹ Source: Canadian Dental Hygienist Association, response to 2006 HEAL survey.

¹⁴⁰ Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

¹⁴¹ Source: Canadian Psychological Association, response to 2006 HEAL survey. In psychology the ability to have one day per week to work in private practice would be a major retention incentive.

¹⁴² Source: Canadian Dental Hygienist Association, response to 2006 HEAL survey.

¹⁴³ Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.

¹⁴⁴ Koehoorn M, Lowe G, Rondeau K, Schellenberg G, Wager T. Creating High-Quality Health Care Workplaces. Ottawa. Canadian Policy Research Networks, 2002.

¹⁴⁵ Canadian Institute for Health Information. Canada's Health Care Providers. Ottawa, 2001.

¹⁴⁶ Canadian Nurses Association. Quality Professional Practice Environments, 2001.

¹⁴⁷ Source: Canadian College of Health Care Executives, response to 2006 HEAL survey.

¹⁴⁸ Source: Canadian Association of Speech-Language Pathologists and Audiologists, response to 2006 HEAL survey.

¹⁴⁹ For example, dental hygienists are prone to develop musculoskeletal injuries or repetitive strain injuries. Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.

¹⁵⁰ For example, the move to Picture Archiving and Communications Systems (PACS) has eliminated exposure to damaging chemicals for medical radiation technologists. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

¹⁵¹ For example, occupational therapists have noted that as publicly funded contracts for occupational therapy services are put out to tender through the private sector, there has been the phenomenon of underbidding and, as a result, providers are not sufficiently compensated for the level of work involved. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

¹⁵² A recent survey of Canadian psychologists showed that the reasons for preferring the private sector to the public sector in non-teaching hospital environments included more control over the hours of work and patient streams,

more autonomy, increased respect, and better working conditions. Source: Canadian Psychological Association, response to 2006 HEAL survey.

¹⁵³ Source: Canadian Healthcare Association, response to 2006 HEAL survey.

¹⁵⁴ European Commission. EU Working Time Directive. www.eubusiness.com/guides/working-time-directive. Accessed 10/06/05.

¹⁵⁵ Canadian College of Health Service Executives, response to 2006 HEAL survey.

¹⁵⁶ Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

¹⁵⁷ Canadian Medical Association. Who Has Seen the Winds of Change? Report of the CMA Ad Hoc Policy Working Group on the Physician Workforce. Ottawa, 2004.

¹⁵⁸ Source: Canadian Psychological Association, response to 2006 HEAL survey.

¹⁵⁹ See note 87.

¹⁶⁰ See Note 2.

¹⁶¹ Kaiser Permanente. Kaiser Permanente and the Google Search Appliance.

www.google.com/appliance/kaiser.html Accessed 21/05/05.

¹⁶² U.S. National Library of Medicine. Fact Sheet Medline. www.nlm.nih.gov/pubs/factsheets/medline.html Accessed 21/05/05.

¹⁶³ Source: Canadian Association of Social Workers, response to 2006 HEAL survey.

¹⁶⁴ The Canadian Society for Medical Laboratory Science offers its members professional development course in through paper format distance education and also online learning. Source: Canadian Society for Medical Laboratory Science, response to 2006 HEAL survey.

¹⁶⁵ The Canadian Counselling Association requires that counsellors with the Canadian Certified Counsellor designation be recertified every three years through the completion of four continuing education units. Source: The Canadian Counselling Association, response to 2006 HEAL survey.

¹⁶⁶ The Canadian Psychological Association offers online continuing professional development required by the Canadian Code of Ethics for Psychologists, a continuing education accreditation system and continuing education programs. Source: Canadian Psychological Association, response to 2006 HEAL survey.

¹⁶⁷ The Canadian Association of Occupational Therapists offers both face-to-face learning services such as workshops and online learning opportunities. Source: Canadian Association of Occupational Therapists, response to 2006 HEAL survey.

¹⁶⁸ Some Canadian provincial regulatory colleges in physiotherapy have requirement for practitioners to maintain their certification through proof of participation in continuous learning activities to maintain competencies. Source: Canadian Physiotherapy Association, response to 2006 HEAL survey.

¹⁶⁹ The Canadian College of Health Service Executive Certified Health Executive (CHE) Program and Designation includes a requirement for continuing education to maintain the designation. Source: Canadian College of Health Service Executives, response to 2006 HEAL survey.

¹⁷⁰ The Canadian Association of Medical Radiation Technologists has a variety of activities, including the development of specialty certificates, annual conferences, professional journals and newsletters, advanced certification and fellowships, correspondence courses, degree completion opportunities, maintenance of certification, and others. Source: Canadian Association of Medical Radiation Technologists, response to 2006 HEAL survey.

¹⁷¹ The Canadian Dental Hygienists Association has developed a new Director of Education position and the association is placing an emphasis on online education. The nine provincial regulatory bodies require registrants to obtain continuing education credits. Source: Canadian Dental Hygienists Association, response to 2006 HEAL survey.

¹⁷² Every regulatory body in dietetics requires continuous learning and many use the professional portfolio approach. Dietitians of Canada offers a number of continuing professional development opportunities such as: online education programs with self-assessment and end of lesson examinations; practice-based evidence in nutrition with guidance in relationship to practice questions with links to the evidence (a practice and professional development service), accessible through the association's website; conferences; noon hour web casts on emerging issues/new topics; issue backgrounders sent to all members by email broadcast which provides a timely synthesis of the evidence on emerging/hot topics. Source: Dietitians of Canada, response to 2006 HEAL survey.