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The Canadian health workforce planning mosaic:  
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## 1. Abstract

Other federated nations have resolved jurisdictional and other matters that have thus far stumped Canada, enabling them to establish national health workforce agencies.

Despite the absence of such an organization, Canada has developed a very rich mosaic of data, research, planning approaches and collaborations at the national, and provincial and territorial levels. Non-governmental and academic sectors also make important contributions. Yet, planning efforts have failed to maintain a stable and sufficient and suitable healthcare provider workforce. The Health Council of Canada observes that, with the exception of some regional HHR collaboration, “each province and territory does its own planning, without the benefit of pan-Canadian information needed for reliable decision-making.”

Regardless of the observed benefits of a pan-Canadian HRH observatory, nothing material has been done. Canada has thus lost countless opportunities to leverage across the country investments made in leading models. It has been repeatedly expressed that an HRH observatory could support federal-provincial-territorial governments’ HRH planning efforts, while respecting their authority in this area. Campbell et al advance that commitments to HRH strengthening must include systematic programmes of workforce science and strategic intelligence which may well continue to be deficient without a dedicated agency with the specific mandate to support HRH research and policy development for Canada.

With the advent of national health workforce agencies in other jurisdictions –including Australia, the United Kingdom and the United States, clear support from a broad constituency among health professions, growing appetite within certain governmental quarters and clear evidence of the benefits of an observatory or institute, the time may just be right to reopen the dialogue in Canada. Perhaps the rich, but complex and unconnected Canadian mosaic might yet emerge as a cohesive and logical picture.

## 2. Introduction

National health workforce agencies are emerging in a number of countries. Canada has yet to follow this trend.

As is the case of numerous other federations and confederations, Canada does not have one single health care system. It is a mosaic of 14 systems, comprised of the federal government, and the country’s ten provinces and three territories. The organization of Canada’s health care system is largely determined by the Canadian Constitution, in which roles and responsibilities are divided between the federal, and provincial and territorial governments. The provincial and territorial governments have most of the responsibility for

delivering health and other social services. The federal government is also responsible for delivery of some services to certain groups of people.<sup>i</sup>

Despite the absence of a dedicated national agency, health workforce planning and research in Canada is rich. This background paper examines the role, relationships and contributions of select national and provincial agencies and groups. The paper also describes some of the calls for a national human resources for health (HRH) “observatory”.

Key exemplars will no doubt be missed for brevity sake, however this paper’s aim is to reflect the richness of activity in the country.

### 3. Overview of major national data agencies

Although health care is for the most part under provincial and territorial responsibility, there are a number of national and pan-Canadian entities concerned with various components of health workforce planning and research.

#### 3.1 Health workforce generally

##### **Canadian Institute for Health Information (CIHI)<sup>ii iii</sup>**

CIHI is one of the main national sources for health workforce information in Canada. The institute was established in 1994 by bringing together two private organizations (the MIS Group and the Hospital Medical Records Institute) and two public organizations (a division from the Federal Department of Health and a unit from Statistics Canada).

CIHI is funded through voluntary bilateral funding agreements with federal and provincial/territorial ministries of health and individual care institutions. CIHI’s work is based on a cooperative/collaborative model, working with stakeholders to create and maintain a broad range of health databases, measurements and standards. One key partner is Statistics Canada, complementing and supporting each other’s rich data sources and expertise. CIHI is guided by 16-member Board of Directors with equal representation of health leaders from across the country from federal, provincial and territorial governments and non-governmental health-related groups.

While CIHI is not a policy-making agency nor does it take policy positions, its mandate is broad. The institute creates and maintains a broad range of health databases, measurements and standards. Given the breadth of comparable health information it collects, CIHI is uniquely placed to develop reports and analyses from its own data, which it also complements with outside sources. These reports and analyses help inform sound policy development and effective management of the health system, and raise public awareness about a wide range of factors impacting good health. Working with its stakeholders, CIHI also helps them better understand and use the institute’s evidence-based insight and analyses in their day-to-day decision-making. CIHI has the highest commitment to ensuring privacy and value for Canadians.

Data are collected from professional associations, provincial/territorial regulatory bodies, governments, education institutions. CIHI works with these and other stakeholder organizations to develop the data collection standards and the various standard reporting needs from the data. The institute produces annual report updates from each data set and makes them publicly available with appropriate privacy safeguards. Researchers and governments can also access CIHI's databases and expertise, through ad-hoc requests, usually on a cost recovery basis.

Specifically related to national health workforce planning, CIHI provides support in various forms, including:

- developing and maintaining 28 databases and registries, 11 of which are specific to the health workforce. For physicians, there is the National Physician Database<sup>iv</sup>, Scott's Medical Database<sup>v</sup> and National Physician Survey<sup>vi</sup>. Their nursing database includes the Canadian Regulated Nursing Professions Database<sup>vii</sup> and National Survey of the Work and Health<sup>viii</sup>. The Occupational Therapist Database, Pharmacist Database, Physiotherapist Database, Medical Radiation Technologist Database and Medical Laboratory Technologist Database are their other health provider data holdings<sup>ix</sup>.
- tracking 24 health professions – Audiologists, Chiropractors, Dental Hygienists, Dentists, Dietitians, Environmental public health professionals, Health information management professionals, Licensed practical nurses, Medical laboratory technologists, Medical physicists, Medical radiation technologists, Midwives, Nurse practitioners, Occupational therapists, Optometrists, Pharmacists, Physicians, Physiotherapists, Psychologists, Registered nurses, Registered psychiatric nurses, Respiratory therapists, Speech-language pathologists and Social workers - in aggregate, by province/territory, practice setting, regulatory environment, supply/demographics and graduate trends
- collecting detailed information on seven professions: nurses (RN, LPN, RPN, NP), physicians, pharmacists, occupational therapists, physiotherapists, medical laboratory technologists, medical radiology technologists
- as commissioned by provincial and territorial governments, carry out specific studies such as a cost/benefit study of a possible national unique identifier methodology and system to better track professionals over time, through their careers and as they move around the country
- providing education products that explain CIHI's products and information
- developing and releasing special analytic products (e.g., recent reports on physician retirement patterns and the cost drivers of physician expenditure).
- providing major funding and analytic support to three cycles of the National Physician Survey.
- CIHI is a Canadian national correspondent to the OECD, providing data to the OECD's Health Data on Canadian HHR supply and utilization, used for international comparisons.

## 3.2 Medical workforce

In addition to CIHI, the national health workforce data agency, there are a number of other pan-Canadian health workforce databases. The following section highlights some of these data holdings, a number of which span the professional lifecycle from entry into training to retirement.

### Canadian Medical Association (CMA) Masterfile

The CMA Masterfile is a compilation of data collected regularly by a variety of provincial and national organizations, including the national certifying bodies and the CMA itself. The information is updated daily based on information provided by provincial and territorial medical associations, provincial registrars (i.e., licensing bodies), medical schools, individual physicians, etc.<sup>x</sup> The database includes all physicians (both CMA members and non-members) who have a valid Canadian address. Through the Masterfile, the CMA provides public information online on annual physician counts and percentage distributions (physicians by province, specialty, age, gender, country of MD graduation etc).<sup>xi</sup>

### National Physician Survey<sup>xii</sup>

The National Physician Survey (NPS) is Canada's most comprehensive survey of physicians and future physicians. The survey reaches out to all physicians – in practice and in training. The overall goal of the NPS project is to produce a comprehensive database documenting what all physicians in Canada are doing in their practices in response to both societal needs and personal and professional interests. The database also includes the perspectives and expressed practice intentions of the physicians of tomorrow. The NPS is co-led by the College of Family Physicians of Canada, the Canadian Medical Association and the Royal College of Physicians and Surgeons of Canada and is supported by the Canadian Institute for Health Information.

The NPS is conducted every three years, since 2004. The NPS database covers unique domains not dealt with by other data sources in Canada. The physician database contains a comprehensive range of data, including, but not restricted to: practice profile, practice setting, remuneration mode, services provided, workload, on-call activities, populations served, perceived problems with access to medical care, planned changes in practice scope, and use of technology. The medical student and resident database also contains a wide range of data, including: intended workload, practice setting, and preferred remuneration modes by age and sex, regional/familial/environmental backgrounds and intended practice location. The NPS website contains methodological information and detailed findings available in tabular and analytic formats.

### The Association of Faculties of Medicine of Canada (AFMC)

The Association of Faculties of Medicine of Canada (AFMC) represents Canada's 17 faculties of medicine. The organization's mandate involves a wide array of initiatives around medical education, including research and data gathering. The Canadian Post-M.D. Education Registry and the Office of Research and Information Services (ORIS) are the two database

extensions of the AFMC, serving as the central repository for statistical information on postgraduate medical education and undergraduate medical education in Canada respectively.

CAPER maintains individual-level longitudinal file containing socio-demographic information and details of the current and past training programs of each resident or fellow under the supervision of the Canadian faculties of medicine on November 1st of each year<sup>1</sup>. CAPER records capture data throughout postgraduate medical training as well as ongoing practice location following post-M.D. training. The *Annual Census of Post-M.D. Trainees* is CAPER's flagship report. It gives a detailed statistical profile of post-M.D. trainees in Canada, including:

- The numbers and types of physicians being trained in family medicine, surgical, laboratory and other medical specialties;
- The socio-demographic characteristics of postgraduate trainees, such as age and sex distribution;
- The distribution of post-M.D. trainees across provinces and Faculties of Medicine;
- The numbers of international medical graduates (IMGs) and visa trainees studying in Canada;
- The number of residents and fellows exiting post-M.D. training programs;
- Ongoing practice location of postgraduate trainees following training<sup>xiii xiv</sup>

CAPER also manages the IMG Database. This national longitudinal database project will track International Medical Graduates from the time they enter the Canadian medical assessment, training and licensure pathways until they begin practice in one of the Canadian provinces. This pan-Canadian database will provide a complete picture of physicians who earned their qualifications outside Canada and their unique contribution to the Canadian physician workforce.<sup>xv</sup>

ORIS has 40 years of longitudinal data around undergraduate medical education, holding data similar in content to CAPER, such as:

- First year enrolment figures across provinces and Faculties of Medicine
- Undergraduate medical enrolment numbers by year of study
- Socio-demographic characteristics, such as age and sex distribution;
- Non Canadian students enrolled in Faculties of Medicine by legal status (Permanent residents, Visa trainees), country of citizenship etc.

ORIS publishes this data in their annual report, *Canadian Medical Education Statistics*.<sup>xvi</sup>

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<sup>1</sup> The yearly report includes the following information: the faculty of medicine supervising post-M.D. training; socio-demographic information; previous medical education and certification, and field of current post-M.D. training

### 3.3 Nursing workforce

In addition to the information collected by CIHI, there are other important data sources about the nursing profession, some of which are described below.

#### Canadian Nurses Association <sup>xvii xviii</sup>

The CNA manages the only national nursing certification program in Canada. As such, it collects unique data that can help inform workforce planning and policy development. CNA's certifying statistical information reports, known as *Certification Statistical Information*, include the number of CNA certifications by specialty, province of registration, year; and number of RNs with CNA certifications by specialty/areas of nursing practice and province and territory.

Building on CIHI's *Registered Nurses Database*, which contains supply and distribution information for the registered nursing workforce in Canada from 1980 to the present, the Canadian Nurses Association (CNA) combines data elements into various analytic endeavours covering a breadth of domains, such as:

- Demographics and education
- Supply potential (e.g., supply, demand, loss, shortages, migration)
- Raw number of nurses (the "stock")
- Participation rates (i.e., the number of nurses employed in nursing)
- Workplace factors (e.g., place of work, employment status)

The *Nursing Education in Canada Statistics* report, derived from data collected as part of the annual *National Student and Faculty Survey of Canadian Schools of Nursing*, is the only comprehensive source of national, historical data available to inform research and policy decisions regarding the future supply of nurses in Canada.

The data support effective health human resources planning by providing statistical analysis about:

- the number of pre-licensure graduates eligible to apply for initial licensure/registration and enter the registered nurse (RN) workforce;
- the number of RNs obtaining graduate qualifications;
- the number of nurse practitioner (NP) graduates;
- innovations in nursing education program access and delivery;
- the composition of faculty delivering nursing education; and
- faculty retention, recruitment and leaves of absence.

## 4. Research, analysis and planning

The research, analysis and planning mosaic in Canada is very rich and complex, despite the absence of a national agency. The following section provides a small sampling of the abundant work carried out by various national agencies and provincial governments. While great work is done, opportunities for cross provincial/territorial or pan-Canadian knowledge transfer are not as rich and abundant.

### 4.1 Governmental and non-governmental agencies and committees

This sub-section provides exemplars of governmental and non-governmental agencies and committees that directly or indirectly contribute to the planning and forecasting processes. Specific provincial planning and forecasting approaches are discussed in the next section, "4.2 provincial planning".

#### **Advisory Committee on Health Delivery and Human Resources** <sup>xix</sup>

The Federal/Provincial/Territorial (F/P/T) Advisory Committee on Health Delivery and Human Resources (ACHDHR) was established in 2002 by the F/P/T Conference of Deputy Ministers of Health (CDM). The CDM mandated the ACHDHR to provide policy and strategic advice to it on the planning, organization and delivery of health services including HRH. Providing a national forum for discussion and information sharing of F/P/T issues, the ACHDHR includes senior representatives from each province/territory, Health Canada, and external experts (i.e. academics, researchers, etc) related to the committee's mandate. <sup>xx</sup>

Since its inception, the ACHDHR's key accomplishments include:

- Developing a national framework document, titled *A Framework for Collaborative Pan-Canadian Health Human Resources Planning*, which was approved by F/P/T Ministers of Health in 2005. The document is aimed at facilitating collaboration across jurisdictions, identifying challenges and outlining priorities for a stable and effective health workforce. <sup>xxi</sup>
- Supporting pan-Canadian data and modeling workshops in 2007 and 2009, which shared knowledge and promoted collaborative HHR data and modeling activities.
- Developing a national assessment process for proposals looking to change an entry-to-practice credential for medical and health professions.
- Providing direction on the development of an agreement with all P/Ts on the implementation of a national assessment of international medical graduates.
- Produced a report advocating for pan Canadian self sufficiency of the health workforce, recommending F/P/T governments go beyond supply side planning and offering strategies involving partnerships with the education system, employers and health providers to develop and maintain a stable health workforce. <sup>xxii</sup>

### Canadian Institutes of Health Research (CIHR)

The CIHR is the major federal agency responsible for funding health research in Canada. In 2009-2010, CIHR's budget was just over 1 billion dollars.<sup>xxiii</sup>

CIHR consists of 13 "virtual" institutes, which provide funding based on their four priorities of health research - biomedical research, clinical research, research respecting health systems and services, and the social, cultural and environmental factors that affect the health of populations. The institutes bring together researchers, health professionals and policy-makers from voluntary health organizations, provincial government agencies, international research organizations and industry and patient groups from across the country. Applicants and institutions who request funding have to meet the CIHR's high level objectives, and undergo a peer review process to ensure internationally accepted benchmarks in research.<sup>xxiv</sup>

The Institute of Health Services and Policy Research (IHSPR) is one of the 13 institutes of CIHR, with the mandate to champion and support "excellent health services and policy research and knowledge translation to identify, understand and address health system needs and challenges and to contribute to health system accessibility, responsiveness, effectiveness, efficiency and sustainability."<sup>xxv</sup> IHSPR's priority research areas include primary and community-based healthcare, financing, sustainability and governance, health information drug policy and lastly, access to appropriate care across the continuum – with HRH being a key priority.<sup>xxvi</sup>

CIHR has funded HRH research on topics such as

- The effects of budget cutbacks in healthcare in the 1990s on the nursing workforce.
- The role of medical education towards expanding the health care workforce in rural communities.
- The recruitment of healthcare professionals from less developed regions such as Africa.<sup>xxvii</sup>

### Pan-Canadian Health Human Resources Network<sup>xxviii</sup>

The Pan-Canadian Health Human Resources Network (CHHRN) was established through funds from the Canadian Institutes of Health Research (CIHR). The inaugural three year initiative brings together national experts, researchers and policy makers involved/interested in health human resource research, policy and/or planning.

The goal of CHHRN is to create a virtual infrastructure enabling participants to share health human resources (HHR) knowledge, innovation and promising practices through the following mechanisms:

- A network of regional and thematically-linked HHR researchers and knowledge users and clinical, policy and program decision-makers across Canada
- Regional hubs situated at the University of Ottawa, Dalhousie University and the University of British Columbia building upon the Ontario HHR Research Network, the

WHO/PAHO Collaborating Centre on Health Workforce Planning and Research, and the Centre for Health Services and Policy Research

- A Web-based portal to link regional and thematic networks
- A clearinghouse of Canadian and international research, knowledge and promising practices.

The regional hubs will build upon existing strengths while bringing additional opportunities for national collaboration and knowledge sharing in support of network's mandate. These hubs will also contribute to the mandate of the Central hub, its programmes of research and the other network members and teams, work with the hub lead to coordinate and manage research defined as regional priorities, and work with other theme hubs on joint programs of knowledge dissemination and uptake. Each of the regional hubs will be provided with administrative resources to manage the hubs' activities and to participate in the knowledge exchange activities of CHHR.

The four thematic knowledge innovation hubs focus on some of the pressing HHR concerns identified in numerous knowledge synthesis and policy recommendation documents across Canada. The thematic hubs are: rural/remote aboriginal HHR; mobility and migration; supply/demand modeling/planning, and; skill mix-task shifting and models of care.<sup>xxix</sup>

### Canadian Health Services Research Foundation

CHSRF is an independent not-for-profit corporation established through funds from the federal government in 1998. CHSRF funds research and evaluation it deems are critical areas in evidence aimed at improving health services for Canadians. CHSRF has identified three broad themes that it will commission research and promote policy dialogue in – healthcare financing and transformation, Canada's aging population and primary healthcare.<sup>xxx</sup>

CHSRF has funded HRH research such as:

- Assessing over a two year period in the province of Quebec, the implementation of a multidisciplinary, interprofessional model of care in primary care, called Family Medicine Group's.<sup>xxxi</sup>
- Developing an integrated team approach for hospice/palliative care in communities.<sup>xxxii</sup>

The organization also produces a series of essays, titled *Mythbusters*, citing research and evidence aimed at exposing various misconceptions in Canadian health policy. *Mythbusters* has produced essays on HRH related misperceptions as well, debunking claims that there is a significant outflow of Canadian doctors to the US<sup>xxxiii</sup>, and the quality of care of other health professionals such as nurse practitioners are inferior to that provided by physicians.<sup>xxxiv</sup>

### Canadian Medical Association

The Canadian Collaborative Centre for Physician Resources (C3PR) is a research group under the Canadian Medical Association. Its purpose is to undertake research that promotes appropriate supply, mix and distribution of physicians to meet the needs of the Canadian population. The Centre also provides national leadership in the development of standardized methodologies and approaches to describing and measuring physician resources in Canada.<sup>xxxv</sup>

C3PR produces analytic "Bulletins", papers, commentaries and other scholarly work such as: international comparison of physician density, physician and nursing - healthy workplace, intended changes to physicians' practices, physician and nurse personal health. This work is based on various sources, including the CMA Masterfile, the Canadian Institute for Health Information, the Association of Faculties of Medicine of Canada and the National Physician Survey.

The Centre has also done various physician supply projections for various provinces and has also provided specialty specific projections in certain specialties.<sup>xxxvi</sup> The CMA developed the Physician Resource Evaluation Template (PRET) in the late 1990s, as a tool to make these supply projections of practicing physicians in Canada. A spreadsheet-based stock and flow model, PRET gathers information from data holders such as CIHI, AFMC and CAPER to factor in parameters such base stock (including gender mix, age), exits (e.g., retirement, death, emigration) and entrants (e.g., postgraduate practice entry, returns from abroad, immigration).<sup>xxxvii xxxviii</sup>

### National certifying bodies

The College of Family Physicians of Canada (CFPC) and the Royal College of Physicians and Surgeons of Canada (Royal College) both carry out various scholarly and analytic projects, and provide commentary and papers on matters relating to the medical workforce and the health system more broadly, some of which are derived from their respective certification databases and the National Physician Survey. The CFPC's far reaching contributions touch various domains, including family physician shortages, organization and provision of primary care (medical home), wait times and access. The Royal College shares similar interests around access, wait times and workforce shortages and is also currently leading three major studies: resident duty hours, generalism and specialist physician (un- and under-) employment.

The Canadian Nurses Association also produces numerous reports on the nursing shortage and workforce modeling, the latter resulting in the publication of *Tested Solutions for Eliminating Canada's Registered Nurse Shortage*, which provides new projections for how the shortage will grow by almost five times over 15 years. (updated July 2009)<sup>xxxix</sup>.

Further information on these and other initiatives of these certifying bodies is available on their respective websites.

### The Ontario Physician Human Resources Data Centre (OPHRDC) <sup>xi</sup>

The Ontario Physician Human Resources Data Centre (OPHRDC) is referred to as the “definitive” source for information on physicians and postgraduate medical trainees in Ontario.

Located at McMaster University, OPHRDC is a collaborative project of the College of Physicians and Surgeons of Ontario (CPSO), the Ontario Ministry of Health and Long-Term Care (MOHLTC), the Ontario Medical Association (OMA), and the Council of Ontario Faculties of Medicine (COFM). OPHRDC produces detailed listings of the number and distribution of physicians, by region, specialty and demographic variables, etc as well physician hospital appointments. The centre also publishes extensive reports on physicians in training in the provinces medical schools, such as by training program, by institution and level. The information produced by OPHRDC supports planning and research in the province.

## 4.2 Provincial planning <sup>xii</sup>

As noted in the introduction, responsibility for planning and delivering health and other social services mostly resides among the provincial and territorial governments. The delivery of some services to certain groups of people, such as First Nations people and Inuit, is under the responsibility of the federal government, Health Canada more specifically<sup>xiii</sup>. As such, health workforce planning approaches in Canada are as varied as the number of provinces and territories.

The following section has been developed from information that is readily available in the public domain and key informant interviews from select members of the Advisory Committee on Health Delivery and Human Resources who generously gave of their time. Any inaccuracies or omissions are accidental and in no way the responsibility of the interviewees who have not vetted this section.

### Overview

On the one hand, some jurisdictions such as Alberta and British Columbia have adopted shared/network planning models between a unit with responsibility for HRH planning and a wide network of collaborators. On the other hand, other provinces, such as New Brunswick and Ontario have established predominantly centralized planning models in a dedicated unit or division within their respective ministries of health. The units within the various ministries of health vary in size, from a handful of persons to more than 70 and have been in existence for varying periods of time, from a few years to decades. For brevity sake, the following description serves to illustrate the richness and complexity of the various provincial planning approaches and networks, without being fully comprehensive.

### Shared/network planning models

#### *British Columbia (BC)*

BC's Ministry of Health sets province-wide goals, standards and performance agreements for health service delivery by the province's six health authorities<sup>xliii</sup> who also share responsibility for their HHR plans with the ministry. The ministry's actions and insights

are guided by the *Change and innovation agenda* which lays out a strategic map for collective action to advance health care in the province against stated priorities.

Although there exists a Health Human Resources Planning branch, HHR planning involves a number of areas within the ministry and various committees. The complex network includes the ministry's "Strategic Policy, Information Management and Data Stewardship" area (such as for data access and mining) and the HHR strategy Council which is comprised of VPS of the health authorities and representatives of the Health Employer's Association of British Columbia (HEABC). HEABC also houses working groups responsible for supply and demand forecasting for priority health professions, except physicians.

The network also includes the Medical Health Human Resources Planning Task Force. This group includes vice-presidents of medicine of the health authorities, academic leads, as well as representatives from the public, the Ministry of Health and the Ministry of Education. The Task Force's primary function is to inform the allocation of residency positions by maintaining a current understanding of population health needs. These are derived from health region level service delivery information (i.e., the public served by the region), Ministry of Health information and strategic insights in response to anticipated changes in demand, and HEABC analysis. In addition, the network is complemented by the BC Academic Health Council which is the intersection of health delivery and education. Lastly, workforce data is housed with Jobs, Tourism and Innovation, a separate ministry.

BC has developed its own modeling/forecasting tool, which is housed in the ministry's Health System Strategic Planning Division, separate from the Health Human Resources Planning branch. The matrix-based tool covers the continuum of services on one axis and population segments on the other (e.g., physician activity). It is thus possible to intersect supply and demand information. Thus, as new professions are introduced, it will be able to assess their impact on the current workforce complement. It is also possible to run different scenarios based on different variables such as workers and needs.

The recommendations from the network within the Ministry of Health are ultimately the object of discussions between the ministries of health and advanced education to match the desired slate of positions with available educational capacity. The ultimate decisions on allocation of training positions rest with the Ministry of Advanced Education, the fund holding agency for health professions' education.

### Alberta (AB)

Systemic change in Alberta is guided by a comprehensive health workforce strategy known as the *Health Workforce Action Plan*. This plan lays out policy directions in two broad sections: changing the workforce to support changes in service delivery and expanding the capacity of the workforce to ensure an adequate supply of health workers. Implementation is overseen by three government departments, including the Ministry of Health and Wellness.<sup>xliv</sup>

Unlike British Columbia, Alberta comprises only one health authority, Alberta Health Services (AHS). Forecasting/analysis efforts bring together the health authority and other

areas of the Ministry of Health (e.g., public health for surveillance data, and labour analysis for claims data). The Workforce Policy and Planning Branch (WPPB) is the central hub which leads the development of forecasts and tools. It is anticipated that the physician model will be available in December 2011 and two nursing occupations (RN & LPN) for in-patient and continuing care in spring 2012.

Planning in the broadest sense, which is guided by the Health Workforce Action Plan and responsive to evolving issues and opportunities (e.g., integration of new health professions), extends beyond forecasting to strategy development. This broader endeavour includes more than 200 stakeholders, including WPPB, Alberta Health Services, deans, special programs such as the Rural Physician Action Plan and regulatory bodies.

The number of required training positions is informed by the goals set out in the Action Plan and forecasts, which is currently an evolving process. Once the number of positions is determined, discussions are held with the Ministry of Advanced Education and Technology, the funding agency for health profession education except for physicians, which are discussed directly with medical schools as residency positions are funded by the Ministry of Health.

### Centralized planning models

#### New Brunswick

New Brunswick has had nursing and physician workforce plans since the early 1990s. Much like the provinces described above, New Brunswick's health workforce planning actions are now guided by strategic documents, namely *Setting a New Direction* released in 2003 (also known as the Fujitsu report)<sup>xlv</sup> that extends beyond nursing and medicine, and *Supply and Demand Update 2008-2015*<sup>xlvi</sup>.

Guided by these broad strategies, the Health Human Resources Planning branch is responsible for HRH planning for the province. The process is based on a multi-stakeholder consultative approach and includes other ministries (e.g., office of human resources and post-secondary education), the two health authorities, professional associations, unions, and various committees (eg., Nursing Resources Advisory Committee and other ad hoc such as physicians). Others may be consulted on an ad hoc basis to address specific issues, such as reviewing specific forecasting models. In addition to these stakeholders, the HHR planning branch will also interface with the Strategic Health Human Resources Committee whose focus extends beyond planning to encompass a wider gamut such as labour relations. This committee includes representatives from the Department of Health, the office of human resources within the Department of Finance and the health authorities.

The HHR branch is a central data repository of health workforce data for the province, through three major databases. Its Service Provider Database, which has been in existence for more than 20 years, currently includes 10 occupational groups such as RNs, LPNs, physicians, social workers and medical radiation technologists. The approach to

create this database is unique in country in that registration data is managed and collected by the province, and shared free of charge with the various regulatory bodies in the province. The HHR branch's other large repositories cover physician registration and utilization data (Medicare Decision Support System) and health authorities' payment data (the Public Sector Health Delivery Data Warehouse) which describes activities, location and cost. All of these data sources are used to populate the province's HHR planning model and generate scenarios.

Health workforce planning and modeling carried out by the branch not only applies elements from the aforementioned data repositories but also factors the health care delivery models themselves (including impact of technology), provincial plan objectives (e.g., chronic disease management), the current workforce supply and important health population elements germane to the health profession in the specific scenario (e.g., diabetes for endocrinologists). This method is consistent with an approach advanced in the ACHDHR's Framework for Collaborative Pan-Canadian Health Human Resources Planning. As such, population health needs, which many jurisdictions have found difficult to define/quantify and model, are a factor but not the basis of the model.

Increases in health workforce supply, as derived from projections developed through the modeling tool or identified from the postsecondary education section itself (which are also subject to verification through the modeling tool) are discussed in various terms, including educational system capacity, with the Postsecondary Education Department which funds the province's educational institutions. Note that there is no faculty of medicine in the province, which purchases seats in other faculties of medicine in Canada.

### Ontario

Ontario's health workforce planning also functions under a broad provincial strategy, known as *HealthForceOntario*. Among others, The Ministry's Health Human Resources Policy Branch supports implementation of the strategy. Launched in 2006<sup>xlvii</sup>, the strategy is to:

- Identify and address Ontario's health human resource needs.
- Engage partners in education and health care to develop skilled, knowledgeable providers and create the health care delivery teams that will make the most of their abilities.
- Introduce new and expanded provider roles to increase the number of providers working in health care and build on the skills of those already in the system.
- Make Ontario the employer-of-choice for all health care providers.<sup>xlviii</sup>

Given the specialized nature of the HHR Policy branch, it addresses a broad scope of issues, such as labour market strategy (e.g., workforce makeup and healthy work environments), profession-specific strategies (e.g., post-graduation employment guarantee and workforce retention strategies in nursing), oversight of professional regulatory colleges, recruitment and retention of health professionals, promoting scopes of practice and effective practice patterns, re-entry of physicians in practice, managing the supply/mix/distribution of physicians and allied health professional, and creating new roles and promoting interprofessionalism to improve access to care, etc. The branch

confers and collaborates with numerous stakeholders to identify priorities and to move strategies forward.

As the Ministry funds all graduate medical education (residency) and undergraduate distributed medical education seats, it has direct involvement in their allocation. The branch continues to work to improve long-term evidence for decision-making and planning of the future physician supply by moving away from anecdotal and qualitative elements to quantitative factors. Consultations with the medical schools and the ministry's modeling tool are important components supporting decision-making.

Forecasting and modeling is carried out through the province's "Population Needs-Based Physician Model", which is deemed as one of the most advanced forecasting tool/simulation models in the country to project future supply of and need for physicians in Ontario. It simulates a variety of scenarios that can help understand the potential impact on the gap between future physician supply and need in Ontario. <sup>xlix</sup>

Physician services need is based on how various socio-economic and lifestyle risk factors in the population (e.g. smoking) will contribute to the incidence and prevalence of various conditions in the future (e.g. lung cancer). Stats Can and the Canadian Community Health Survey are the major sources used to obtain quantifiable data for population demography and socio-economic & lifestyle risk factors. <sup>i</sup> Supply of physician services is based on the flow of physicians from the education system to practice and data from physician survey responses on time spent treating specific conditions. A variety of data sources were used and specially formed expert panels complemented the project's development. The ministry notes that, when combined with other quantitative and qualitative evidence, this model can improve understanding of how policy interventions affect physician supply and its appropriateness. <sup>ii</sup>

### 4.3 Regional collaboration among provinces <sup>iii</sup>

#### *Atlantic Advisory Committee on Health Human Resources*

The Atlantic Advisory Committee on Health Human Resources is a partnership amongst the four Atlantic provinces (Newfoundland and Labrador, Prince Edward Island, New Brunswick and Nova Scotia) that meets generally on a quarterly basis to collaborate and share information on HRH issues relevant to the region. The committee produced a simulation model in 2005 that examined a number of health professions including medicine, nursing, physiotherapists and occupational therapists. The methodology has been received positively, and the tool has been utilized by member jurisdictions such as Nova Scotia and New Brunswick in its policy development and planning. The software developed for this model was also the genesis for the CNA's Nurse Practitioner simulation model in primary care. <sup>liii</sup>

*Western and Northern Health Human Resources Planning Forum*

The Western and Northern Health Human Resources Planning Forum is comprised of western provincial and northern territorial Ministries of Health and Advanced Education that explore opportunities for coordinated planning and joint initiatives in health human resources. The member jurisdictions are British Columbia, Alberta, Saskatchewan, Manitoba, Yukon Northwest Territories, and Nunavut. The forum has completed over 30 projects, such as the formation of a standard assessment system for IMGs in the region, producing a study guide for international pharmacists, developing a Mentorship Program for Aboriginal Health Science Students and developing HHR plans for Yukon and Nunavut.<sup>liv</sup>

#### 4.4 Provincial HHR issues/challenges<sup>lv</sup>

Across all jurisdictions, issues can often have political roots, be the result of stakeholder engagements and health authority requirements, or driven by overarching provincial strategies.

Implementation of the Agreement on Internal Trade and integration of internationally educated health professionals were identified by some of the jurisdictions examined in this exercise as among the chief issues being addressed. Familiar concerns were also identified as ongoing preoccupations, including changes in work patterns/generational patterns, productivity, rural access to care and aging populations. As some jurisdictions continue to refine their demand/needs-based HHR modeling tools/approaches, persisting challenges remain around the effective integration of population health needs with service delivery models.

## 5. Calls for a Canadian observatory/agency

The notion of a pan-Canadian observatory or agency for human resources for health was among the main recommendations emanating from two major health workforce studies in 2006: Task Force Two: A human resource strategy for physicians in Canada<sup>lvi</sup> and Building the Future: an Integrated Strategy for Nursing Human Resources in Canada<sup>lvii</sup>. Similar requests and recommendations have been repeatedly made since that time<sup>lviii lix lx</sup>.

The House of Commons Standing Committee on Health also undertook a study of human resources for health in Canada in February 2009 and released its report in June 2010, titled Promoting Innovative Solutions to Health Human Resources Challenges<sup>lxi</sup>. The report states “the Committee also acknowledges that there may be a need to consider the creation of an additional mechanism or national observatory on HHR that operates at arm’s length from F/P/T governments.” (page 14)

The Government of Canada’s response simply reaffirmed existing structures (e.g., ACHDHR), initiatives (e.g., Framework for Collaborative Pan-Canadian Health Human Resources Planning) and its financial investments related to HRH, all of which are quite laudable but have failed to achieve the stated objectives enunciated by the various health professions and the government’s own Standing Committee on Health<sup>lxii</sup>.

These and other HHR research and planning efforts have failed to maintain a stable and sufficient and suitable healthcare provider workforce. The Health Council of Canada observes that, with the exception of some regional HHR collaboration, “each province and territory does its own planning, without the benefit of pan-Canadian information needed for reliable decision-making. The result is burnout in the workforce and continued competition between jurisdictions for health care providers – and continued public frustration with wait times, uncoordinated care, and finding appropriate providers.”<sup>lxiii</sup> In a recent study commissioned by the Canadian Health Services Research Foundation<sup>lxiv</sup>, Denis et al observe that “The tendency to reproduce the usual ways of doing and organizing, which we earlier called policy” persistence, will not be resolved if not sufficiently challenged.” (page 24)

Despite the observed benefits of a pan-Canadian HRH observatory, nothing material has been done. Interestingly enough, the abovementioned Health Council of Canada was created based on the recommendations of a federal commission which explicitly states that the Health Council’s long term mandate include developing a national health human resources strategy<sup>lxv</sup>. However, apart from certain monitoring efforts of provinces on HRH targets<sup>2</sup>, there has been little mention of the HCC’s role in national HRH planning eight years into its creation. Canada has thus lost countless opportunities to leverage across the country investments made in leading models. It has been repeatedly expressed that an HRH observatory could support federal-provincial-territorial governments’ HRH planning efforts, while respecting their authority in this area. Campbell et al advance that commitments to HRH strengthening must include systematic programmes of workforce science and strategic intelligence<sup>lxvi</sup>, which may well continue to lack without a dedicated agency with the specific mandate to support HRH research and policy development for Canada. Such an agency could support synthesis and translation of leading practices, data and knowledge across jurisdictions, professions and academe.

Notwithstanding its apparent leaning toward the status quo, the Government’s response to the recommendations of the Standing Committee on Health also noted the Government of Canada’s commitment to “continued leadership, targeting its investments to well position Canada to meet emerging HHR needs and challenges, while acknowledging P/T jurisdiction in this area.”<sup>lxvii</sup> Read through an optimistic lens, this observation could be construed as possible openness to pursue the notion of creating an observatory or institute. This very notion is also gaining traction in some provincial and territorial quarters<sup>lxviii</sup>.

With the advent of national health workforce agencies in other jurisdictions –including Australia, the United Kingdom and the United States of America– clear support from a broad constituency among health professions, growing appetite within certain governmental quarters and clear evidence of the benefits of an observatory or institute, the time may just be right to reopen the dialogue in Canada. Perhaps the rich, but complex and unconnected Canadian mosaic might yet emerge as a cohesive and logical picture.

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<sup>2</sup> In 2005, the Health Council of Canada put forward nine HRH targets for governments, professional associations, regulatory bodies, employers, unions, and educators. The HCC argued the targets should be achievable within two to five years and stated that they plan to report publicly on interim progress towards these goals. Since their 2008 report, *Rekindling Reform: Health Care Renewal in Canada*, the Health Council has not assessed these targets in reports.

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