INTRODUCTION

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Introduction

"There is no health without a health workforce."

This bold statement from the World Health Organization (WHO) Global Health Workforce Network (GHWN) highlights the importance of the health workforce to meet population health needs. Health workers, both at the frontline of service delivery and in support roles, make up the "system" with which patients and family members interact. There are increasing concerns as to whether the current supply and mix of health workers will be able to meet future health system demand and population health needs.

The health workforce also represents the single largest financial input into service delivery. In every province and territory across Canada, the majority of health expenditures go toward the health workforce in the form of salaries, wages or fees. As a result, many—if not all—of the key challenges in health systems policy and practice have direct or indirect implications for the health workforce. Managing the health workforce and associated costs has become the most pressing health system challenge and is critical for health system sustainability. Almost all efforts to shift or reform healthcare directly or indirectly involve the health workforce.

Paradoxically, despite being the backbone of the healthcare system, the health workforce is so pervasive that it is often almost invisible. Many decisions about healthcare services are made without considering the human resources required to deliver the proposed changes. Understanding how the current health workforce evolved is critical to making informed decisions about where the system can and needs to go.

This text aims to introduce a range of audiences to the diversity and variety of workers in the Canadian health workforce. An explicit examination of the division of labour, respective scopes of practice, and training and regulation of Canada's health workers will help inform the next steps in the evolution of our country's healthcare systems. In this introduction, we lay the foundation for the individual case studies in this text by outlining the background context and key concepts relating to the health workforce in Canada. We present the web of stakeholders in the health workforce from a complex adaptive system perspective, and highlight key challenges relevant to the study of the health workforce. We conclude with some of the high-level, cross-cutting equity, diversity and inclusion issues that affect the entire Canadian health workforce.

KEY CONCEPTS AND TERMINOLOGY

There are a number of key terms and concepts required to understand this text's description of the **health workforce**. The first is the term health workforce itself. The WHO has defined it as "all people engaged in actions whose primary intent is to enhance health" (WHO, 2006). This broad definition includes frontline clinical staff who work directly with patients, those who provide support to these staff, and those who manage the health workforce and health system.

In Canada, frontline staff may be further broken down into two categories:

- **Regulated health professions:** This category includes professions such as physician, nurse and pharmacist—those that typically require longer educational preparation in a more specialized body of knowledge, typically at the university level; and
- **Unregulated healthcare professions:** This category includes professions such as personal support worker, therapy assistant and community health worker. It can also include those roles that do not have direct patient contact given that regulation is primarily focused on protection of the public.

GLOBAL STRATEGY ON HUMAN RESOURCES FOR HEALTH: WORKFORCE 2030

The WHO's Global Strategy on Resources for Health, developed through extensive international consultations, intends to achieve universal health coverage and the United Nations' Sustainable Development Goals by mobilizing and guiding national, regional and global efforts to strengthen the availability, access, acceptability, coverage and quality of the health workforce. It advances a holistic vision of the effective service coverage necessary to translate health workforce investments into improved health outcomes:

> *Mere availability of health workers is not sufficient: only when they are equitably distributed and accessible by the population, when they possess the required competency, and are motivated and empowered to deliver quality care that is appropriate and acceptable to the sociocultural expectations of the population, and when they are adequately supported by the health system, can theoretical coverage translate into effective service coverage.*
>
> *(WHO, 2016a)*

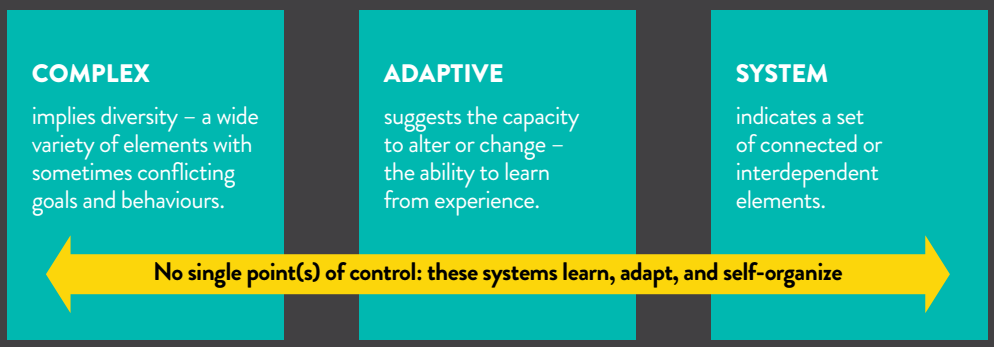
The Global Strategy can help advance several of the Sustainable Development Goals, including those related to health, socioeconomic development and gender equity. It most directly addresses target 3(c), which aims to "substantially increase health financing, and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing States" (WHO, 2016a).

The Global Strategy has adopted the Health Labour Markets Framework for Universal Health Coverage as a guide for identifying policy levers. It outlines a series of global milestones to be achieved by 2020 and 2030 corresponding to four core objectives, which broadly address health workforce performance, alignment, governance and data. The Global Strategy also provides a series of policy recommendations that target stakeholders including national health systems, international partners, and non-governmental actors such as educational and professional institutions.

It is also important to recognize the family members and personal caregivers who—although unpaid, under-recognized and often invisible—play an important role in the health workforce. We are supportive of their inclusion in principle; however, the informal and varied nature of their role makes it very difficult to establish a comprehensive description of their scopes of practice. This text is therefore focused primarily on the more formal workforce.

A related international concept is that of **human resources for health**, which also focuses on universal health coverage and improved population health as key outcomes of the activities of a broad range of workers in a health system. (This vision is reflected in the WHO's Global Strategy on Human Resources for Health: Workforce 2030.) An adjacent term that has been used more often in Canada is **health human resources**. This term tends to be interpreted more narrowly as focused on health workforce planning, recruitment and retention. We purposely use the term **health workforce** to denote a broader focus that includes but also goes beyond these concerns.

Figure 1: Complex Adaptive Systems



(Begun, Zimmerman Dooley, 2003, p. 255)

COMPLEX ADAPTIVE SYSTEMS

Complex adaptive systems are those with multiple, diverse and interconnected elements often accompanied by feedback effects, nonlinearity and other conditions that add to their unpredictability. Because of its complexity, the study of the health workforce is an inherently interdisciplinary field, drawing upon the health sciences, social sciences and management literatures.

HEALTHCARE DIVISION OF LABOUR

Rooted in sociology and economics, the concept of **healthcare division of labour** includes aspects related to work arrangements, control of work setting and influence on social relationships (Storch, 2010). It may also refer to specialization: subdividing work into limited operations performed by separate workers to increase productivity. Much like other divisions of labour, the healthcare division of labour is highly segregated and hierarchical, both within and between professions. Different occupants of the healthcare division of labour have different roles, and these roles have different statuses and legitimacy that have evolved over time (Bourgeault, Neiterman, & Wade, 2016).

The hierarchical nature of the healthcare division of labour has sometimes been described using the concept of professional dominance, first outlined by Eliot Freidson (1970). Professional dominance refers to the way a profession uses legal and clinical autonomy to gain control over other competing professional groups, the profession's institutional domain and its financing. Freidson delineated the four following elements or features:

- Control over the context or terms of one's work (professional autonomy), often indicated by a profession's self-regulatory status;
- Control over the content of one's work (scope of practice);
- Control over clients (or in the case of health professions, patients); and
- Control over other occupations within the division of labour.

Freidson noted that medical dominance over the healthcare division of labour is one of the clearest examples of professional dominance. (*For an excellent description of how medical dominance evolved in Canada, see Coburn, Torrence, & Kaufert, 1983*).

A **system of professions** is similar to a complex adaptive system. Abbott (1988) describes this system as "a complex, dynamic and interdependent structural network of a group of professions within a given domain of work." The dynamic nature of this system is a result of professions constantly developing and struggling over areas of knowledge and skill expertise, which Abbott called **jurisdictions**.[1] These dynamics create a system in which a profession's success in occupying a jurisdiction reflects its own efforts as well as the situation of its competitors.

Change in professional jurisdiction can develop in a number of ways, including the introduction of a new technology, through organizational change or when a jurisdiction becomes vacant. Abbott categorized these **system disturbances** as either internal to the division of labour or external to it.

Professionalization is the process by which the work done by a certain group of health workers becomes organized, controlled and codified into the educational and regulatory systems. In this way, a profession can be defined as the control over one's occupation (Johnson, 1972) or the tasks assigned to or taken up by an occupation.

Similar to jurisdiction is the concept of **scopes of practice**. This term refers to the roles, functions, tasks, activities, professional competencies, standards of practice, and entry-to-practice and registration requirements of a particular profession. It tends to designate the domains of practice and scope of role enactment for regulated health professions (Baranek, 2005) and has legal, social and practical dimensions, including:

- How professionals are defined (who is considered a member of the profession);
- What professionals are trained to do;
- What professionals are authorized by legislation to do;
- What professionals actually do;
- How professionals do what they do; and
- What others expect a professional to do (Health Professions Regulatory Advisory Council, 2007).

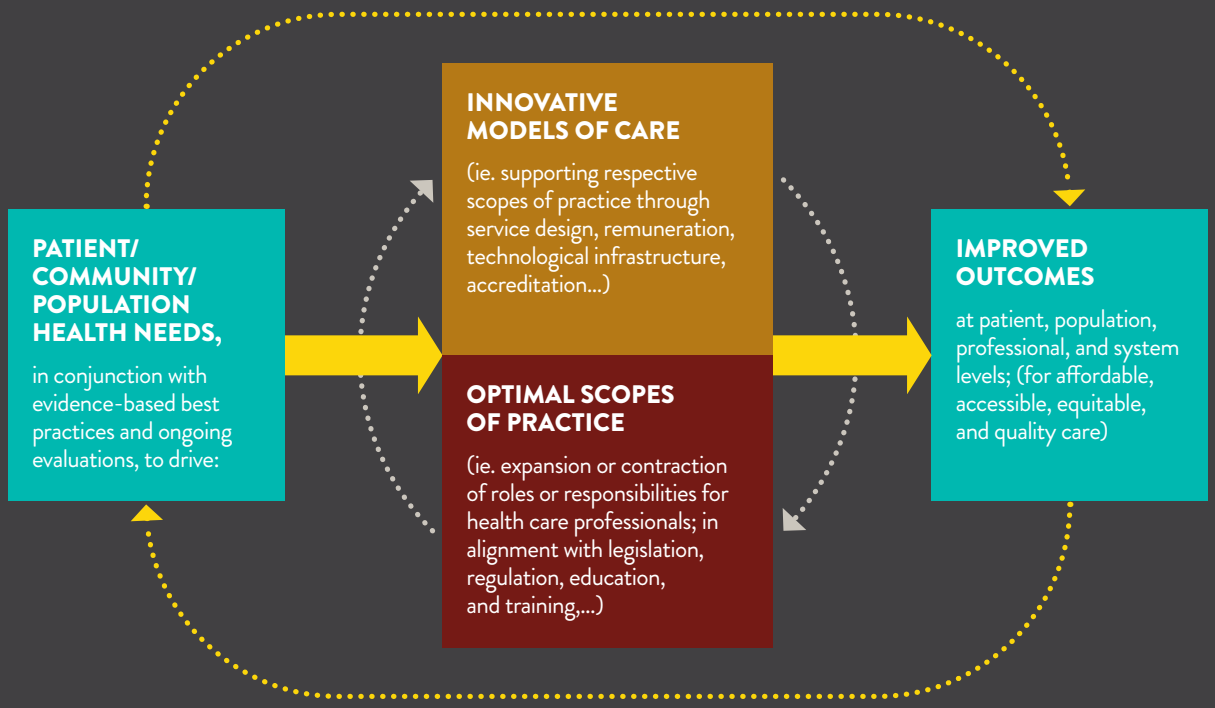
Models of care are related to scopes of practice and refer to the structures and organizations that govern how health professionals interact and work together to deliver healthcare. In a 2014 report, the Canadian Academy of Health Sciences presented a detailed discussion of the relationship between scopes of practice and models of care (see Figure 2). **Interprofessional care** is one such model, where different health professionals work together with a patient-oriented focus. A model of practice refers to a profession's specific approach to delivering care. For example, midwives have a different approach and model of practice for childbirth attendance than do obstetricians.

1 It is important to note that Abbott was referring to professional jurisdiction, which should not be confused with provincial or territorial jurisdictions in the Canadian context.

Figure 2: The relationship between scopes of practice and models of care

How do Models of Care relate to Scopes of Practice?

Innovative models for health care delivery are typically seeking to optimize health human resources through decreasing reliance on independent physician services while increasing the role of non-physician health care professionals. Changes to the organization of health care need be reflected in the legislative, regulatory, educational, and training parameters of the respective scopes of practice.



How do Scopes of Practice relate to Models of Care?

Expanding scopes of practice (ie. pharmacists' ability to prescribe), overlapping scopes of practice (ie. nurse practitioners working with family physicians), and new roles (ie. associated with technological innovations), necessitate modifications to the design and delivery of health care services.

Regulation provides a legally binding directive that defines, describes, protects and enforces important distinguishing characteristics that classify a given profession. Regulation may cover protected titles, specialized skillsets, education and entry-to-practice requirements. The purpose of protected titles such as "physician" or "pharmacist" is to provide an important level of assurance to the public: that only those who meet the requirements and criteria for practice under that professional label can legally use that label in Canada. For example, anyone who does not meet the criteria or requirements described in the Pharmacy Act cannot call themselves a pharmacist. Regulation also sets out processes, procedures and professional repercussions for disciplinary action in response to misrepresentation, malpractice or professional misconduct.

Self-regulation occurs when a government delegates its regulatory authority the profession. This often occurs when some health workers have specialized knowledge far above the public's as it relates to professional practice issues, making the profession (and more

specifically, its regulatory body) better equipped to define entry-to-practice requirements, develop professional standards, conduct investigations and so on. Self-regulation is often seen as a formal recognition of a particular profession's unique skills as well as its impact on public health and safety.

Other terms related to regulation are **licensing** and **certification**. Licensing is a process by which a government or designated agency restricts entry into an occupation by defining a set of functions and activities (i.e., constituting a scope of practice), granting permission to engage in that practice only to persons meeting predetermined qualifications. (Qualifications could include an educational credential or a certificate of competency.) Certification is a process by which a government or designated agency recognizes persons who meet agency-specified standards for entry and practice, granting a certificate entitling the holder to claim a particular set of competencies or use a particular occupational title (Health Professions Legislation Review, 1989).

In Canada, health professional regulation falls under provincial or territorial jurisdiction; as a result, there are a number of different regulatory models across the health workforce. Notably, most provinces have adopted provincial "umbrella" regulations. This type of legislation reconciles standards of governance across all health professions in a province as a matter of public policy (New Brunswick Department of Health, 2015.

In Manitoba, the provincial umbrella regulation will ultimately replace 20 existing statutes, with three professions having fully transitioned to governance under the umbrella regulation as of this writing (Government of Manitoba, 2019). The provinces of New Brunswick and Saskatchewan have not adopted umbrella legislation, each for different reasons. New Brunswick has chosen to continue to fully support private "profession-specific" self-regulation (New Brunswick Department of Health, 2015). In Saskatchewan, a template for an umbrella legislation is in development but, due to significant challenges in interpreting and reconciling differences across professional legislations, the realization of the umbrella legislation has been delayed (Saskatchewan College of Psychologists, 2016). In British Columbia, they are moving towards greater coordination by merging a number of regulatory authorities together, from 20 to six.

Among the responsibilities of regulatory authorities is tracking and monitoring members of the profession qualified to practise through the process of registration. This gives regulatory authorities access to important and current information about the supply of health workers, which is captured in a list of the members of the profession, or a **registry**.

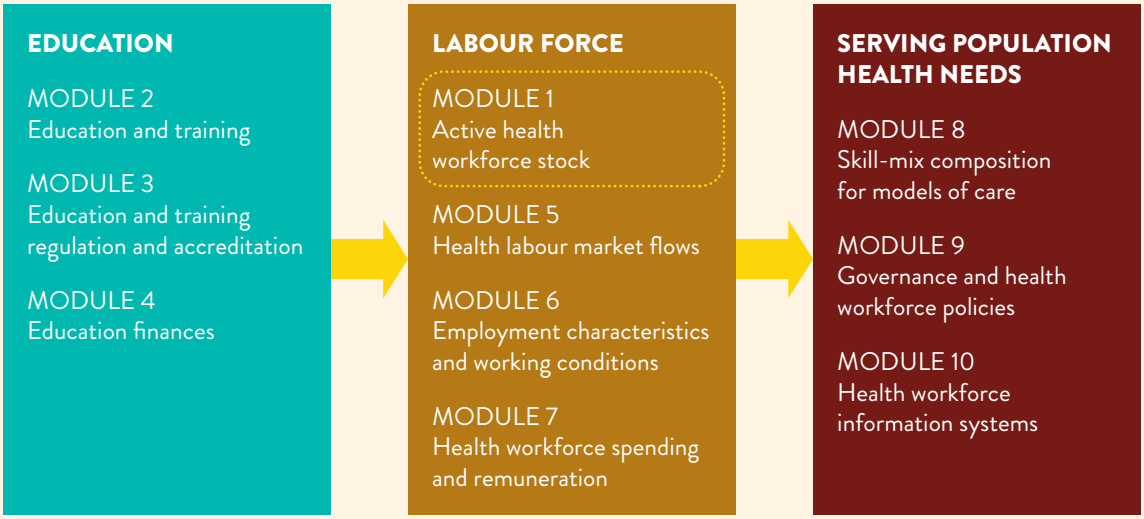
Some regulatory authorities have started collecting specific data from their members as part of a provincial initiative to assist in health workforce planning. This information is commonly referred to as a **minimum dataset** (MDS). In Canada, regulatory authorities have launched several initiatives to develop an MDS. In 2008, the Ontario Ministry of Health and Long-Term Care adopted a requirement for regulatory authorities to contribute data that follows an MDS as part of their required function under the *Regulatory Health Professions Act* (Ontario Ministry of Health and Long-Term Care, 2019). Similarly, in 2013, the Canadian Institute for Health Information (CIHI) produced guidance on creating an MDS that can be used to collect standardized data across health professions(CIHI, 2013). Efforts at the Canadian Health Workforce Network (CHWN), in collaboration with CIHI, are underway to revise an MDS with the specific intent of developing more accurate and interprofessional models of health workforce planning. This dovetails with the recent WHO-led initiatives to establish **National Health Workforce Accounts**, which aim to improve the availability, quality and use of data about the health workforce.

NATIONAL HEALTH WORKFORCE ACCOUNTS

The WHO Global Strategy on Human Resources for Health introduces National Health Workforce Accounts (NHWA) as a standardized approach to collecting health workforce data. The NHWA establishes data comparability across borders, enabling more accurate comparisons and representations of the status of the health workforce at all levels. The NHWA also promotes the development of robust datasets of sufficient quality to inform the evidence base and facilitate knowledge translation between nations. In this way, the NHWA seeks to support more accurate monitoring and evaluation of efforts to achieve universal health coverage through health workforce policy interventions. By harmonizing and consolidating multiple existing reporting requirements, including the WHO MDS for a Health Workforce Registry and the Joint Questionnaire on Non-Monetary Health Care Statistics, the NHWA also reduces the reporting burden imposed on health systems.

The NHWA Handbook published by the WHO (2016b) provides an overview of the fundamental concepts underlying the structure and purpose of NHWA. It presents 10 progressive modules, encompassing 90 health workforce indicators that have been developed to monitor health workforce trends.

Figure 3: Overviwe of labour market components supported by the NHWA modules



This modular approach allows data collection and reporting capacity to be gradually developed. The progressive development of a comprehensive health workforce dataset enables national health systems to generate information and evidence to inform effective health workforce policies that support universal health coverage. The inclusion of both qualitative and quantitative indicators fosters a more holistic and balanced analysis of health workforce landscape, which allows for simultaneous consideration of the policy and regulatory structures and the quantitative health workforce indicators that shape the national health workforce landscape. CIHI leads Canada's NHWA reporting.

THE HEALTH WORKFORCE IN CANADA[2]

The complex web of health workforce stakeholders and jurisdictional roles reflects historical legacies regarding the governance of healthcare in Canada. Health professions and the health workforce developed initially within provincial jurisdictions and then spread nationally, leading to the formation of a number of pan-Canadian health workforce organizations. Canada's complex adaptive health workforce system also involves a range of government and non-governmental actors in domains that address the education, accreditation, funding, regulation, practice and deployment of health workers.

PROVINCIAL/TERRITORIAL STAKEHOLDER GROUPS

Provincial/territorial ministers of health

In each province and territory, the Minister of Health is a key decision-making authority with jurisdiction over most aspects of the health system, including the health workforce. These decisions include the funding, regulation, education, training and numbers of existing health professions as well as the creation of any new health workforce frameworks. In many provinces, these decisions are facilitated by advisory organizations including health quality councils and, in Ontario, the Health Professions Regulatory Advisory Council.

Regulatory authorities

In most cases, the responsibility for governing health professions is delegated to the professions themselves via a self-regulation model (Epps, 2011; Morris, 1996). Although regulatory authorities—called *Ordres* in Quebec, *Boards* in some of the Maritime provinces and *Colleges* in the rest of Canada—have some autonomy with respect to governing their members, any changes to the profession affecting scopes of practice or amendments to professional legislation require consultation and approval from the provincial or territorial Minister of Health. Regulatory authorities are also expected to work with provincial or territorial governments to ensure any changes made to the profession or legislation governing the profession are in the public's interest.

Regulatory authorities therefore play an important role in ensuring members of a profession are qualified and adhere to ethical and professional standards of practice, legislation and codes of ethics. They do so by enforcing legislation, setting and enforcing the standards of practice, establishing the entry-to-practice criteria, licensing or registering members, setting guidelines for continuing education, and ensuring member discipline (Epps, 2011; Morris, 1996). Governments use a number of mechanisms to ensure regulatory authorities remain publicly accountable, including reporting requirements, public disciplinary hearings and appointments of members of the public to governing boards (Epps, 2011; Morris, 1996). Governments do not interfere directly with the decision-making process of regulatory authorities, but they direct the public agenda on professional self-regulation.

In some provinces, regulatory authorities also organize into various interprofessional configurations, such as the Federation of Health Regulatory Colleges of Ontario, to share knowledge and best practices. In Quebec, the *Conseil interprofessionnel du Québec* serves as the collective voice of the province's regulatory authorities. This council works with the Minister of Health and the *Office des professions du Québec* as an advisory body on issues of common concern such as changes to regulation, the creation of new regulatory authorities or the integration of professionals into an existing regulatory authority (Conseil interprofessionnel du Québec, 2019). These interprofessional organizations are dedicated to promoting the professional system by uniting the regulatory authorities to improve services and enhance public protection.

2 This section is an updated and expanded version of a description by Fréchette and Shrichand, 2011.

Professional associations and unions

Unions and professional associations exist at the provincial and territorial level, functioning independently of their regulatory authorities. Professional associations are non-profit groups that protect the interests of their profession rather than those of the public. When the public's and profession's interests converge, professional associations may work with their regulatory authority counterparts to further those interests. There are often fees associated with membership in a professional association, but membership is voluntary and not required to practice in the jurisdiction.

In some provinces/territories, a single organization serves the role as both regulatory authority and professional association. For example, in half of the provinces and all three territories professional associations for registered nurses has this dual role. This differs with other professions, such as medicine, pharmacy and physiotherapy, where these roles are governed by two distinct organizations.

One or more unions exist at the provincial/territorial level for a number of professions, particularly nursing. Some unions cut across health professional groups as organization-based groups. Both unions and professional associations negotiate wages, fees and working conditions on behalf of their members.

NATIONAL/FEDERAL STAKEHOLDER GROUPS

Federal Minister of Health

The federal Minister of Health is responsible for maintaining and improving the health of Canadians in accordance with national standards set out in the *Canada Health Act* (Government of Canada, 2019a). Provincial and territorial healthcare insurance plans are required to meet these standards—public administration, comprehensiveness, universality, portability and accessibility—to get access to full payment under the Canada Health Transfer (Government of Canada, 2019b). With respect to the health workforce, the Minister of Health and Health Canada support the federal/provincial/territorial committees.

Federal/provincial/territorial committees

The federal/provincial/territorial Advisory Committee on Health Delivery and Human Resources (ACHDHR) was established in 2002 by the Conference of Deputy Ministers of Health to provide policy and strategic advice on the planning, organization and delivery of health services. Now known as the Committee on Health Workforce (CHW), it provides a national forum to share information and discuss cross-cutting health workforce issues. It includes senior representatives from Health Canada and representatives from the health workforce departments of each of the provinces and territories. Through the committee's work, a pan-Canadian health human resources strategy was developed in 2007. More recently, the committee in collaboration with the Conference Board of Canada has coordinated the development of a pan-Canadian Physician Resource Planning Tool.

National associations of professional regulatory authorities

A number of professions collaborate across provincial and territorial boundaries on the regulation of health workers. The Federation of Medical Regulatory Authorities of Canada and the National Association of Pharmacy Regulatory Authorities are a two examples of national organizations that support regulation advancement and promote national discussion on common regulatory and practice-related issues. Another such organization, the Canadian Alliance of Physiotherapy Regulators (2019), has moved toward a national evidence-based entry-to-practice standard as a proxy to a pan Canadian license.

National certifying bodies

The College of Family Physicians of Canada and the Royal College of Physicians and Surgeons of Canada are the professional organizations responsible for establishing standards for training, certification and continuing professional development for family physicians and medical specialists, respectively. Although they both carry the name "college" they are *not* regulatory authorities. Both carry out various scholarly and analytic projects relating to the medical

workforce and the health system. Similarly, the Canadian Nurses Association (CNA) manages the only national nursing certification program in Canada and collects unique data to inform workforce planning and policy development.

National educational accreditation groups

A number of national health professional education accreditation organizations exist, including the Association of Faculties of Medicine of Canada, the Canadian Association of Schools of Nursing and the Association of Faculties of Pharmacy of Canada. Health Canada provided funding to the Accreditation of Interprofessional Health Education initiative to propose a strategy and workplan to explore and encourage the development of core joint principles for accrediting pre-licensure interprofessional education. It currently accredits pre-licensure education for physical therapy, occupational therapy, pharmacy, social work, nursing and medicine. Evolving into the Canadian Interprofessional Health Collaborative, it is now the national hub for interprofessional education and collaboration in healthcare. One of its key outputs is the National Interprofessional Competency Framework (Canadian Interprofessional Health Collaborative, 2010).

National professional associations and unions

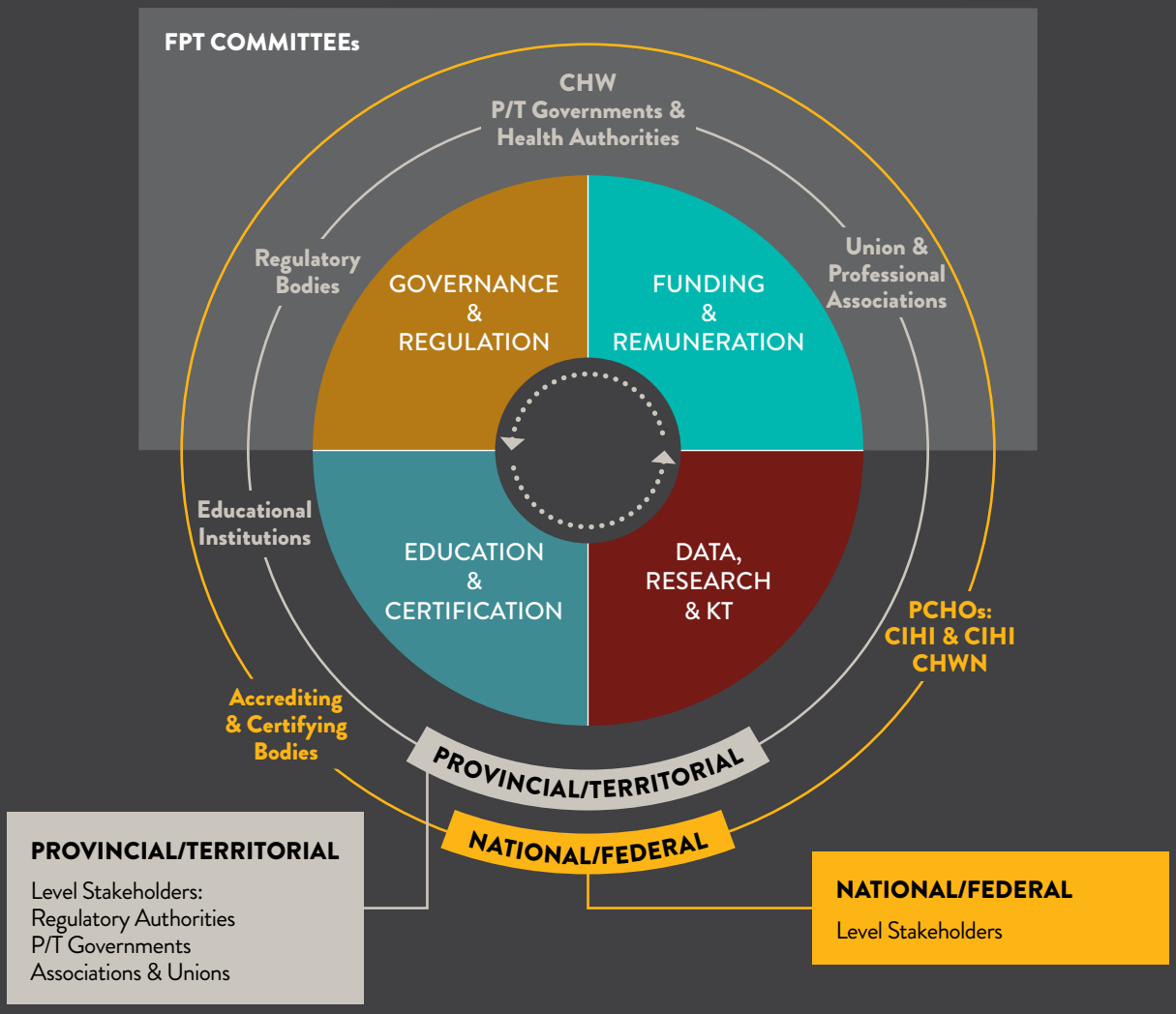
Voluntary professional associations also exist at the national level, but unlike their provincial/territorial counterparts, they do not directly negotiate the terms and conditions of remuneration and working conditions for their members. They do, however, coordinate the efforts of their provincial and territorial counterparts to promote the interests of their members through lobbying and advocacy at the national level and by representing the profession at international tables. Examples include the Canadian Medical Association and the Canadian Nurses Association for physicians and nurses, respectively. Nurses unions at the provincial level are also organized nationally as the Canadian Federation of Nurses Unions. HEAL, the Health Action Lobby, represents the collective interests of the national health professional associations.

National data, research and knowledge-translation organizations

There are a number of national organizations involved in health workforce data collection, research and knowledge translation. They include CIHI, the Canadian Foundation for Health Improvement (CFHI; formerly the Canadian Health Services Research Foundation) and the Canadian Health Workforce Network (CHWN; formerly the Canadian Health Human Resources Network).

- **CIHI** is one of seven pan-Canadian health organizations and a major source of national health workforce information. Funded through voluntary bilateral funding agreements with federal and provincial/territorial ministries of health and individual care institutions, CIHI works with stakeholder organizations to create and maintain a broad range of health databases, measurements and standards. CIHI is uniquely placed to develop reports and analyses from its own data that help inform policy development and effective health system management.
- **CFHI** is another of the seven pan-Canadian health organizations, dedicated to accelerating healthcare improvement across Canada. It accomplishes its mandate by developing partnerships within and across jurisdictions to work together on common improvement priorities, and by providing a pan-Canadian platform to share and implement evidence-informed solutions. A number of these initiatives address the health workforce explicitly or implicitly.
- **CHWN** was founded as a health workforce knowledge-exchange network with funds from Health Canada (2011–13) and the Canadian Institutes of Health Research (2011–14). It provides a pan-Canadian forum for national experts, researchers and policy makers involved or interested in health workforce research, policy and planning. CHWN's virtual infrastructure enables participants to share health workforce knowledge, innovations and practices through its library of Canadian health workforce sources and its health workforce innovations portal. It organizes and provides secretariat support to the biennial Canadian Health Workforce Conferences.

Figure 4: Web of health workforce stakeholders and agencies



THE INTERNATIONAL EXPERIENCE OF HEALTH WORKFORCE AGENCIES

A number of countries have created health workforce agencies, also known as "observatories", as a strategy to improve the performance of their health systems and minimize fluctuations in the availability of health workers. A review of these observatories for the WHO (2011) describe that these observatories, "*collect, analyze and disseminate data and information on the health workforce and the labor market, conduct applied research and produce knowledge, contribute to policy development, contribute to building capacity and understanding of HRH issues and advocate/ facilitate the dialogue between stakeholders*.(p.2)

Australia, for example, as a federated system similar to Canada's, is a useful model for the Canadian context. In 2010, Australia launched a national health workforce agency, Health Workforce Australia (HWA), to help guide nationally coordinated action toward strategic long-term healthcare reform and innovation. This strategy was intended to address the challenges of providing a skilled, flexible and innovative health workforce that meets the healthcare needs of all Australians (HWA, 2013a). To meet the challenges of a complex system and develop a sound evidence base to inform national policy, HWA worked across jurisdictions and sectors with a range of healthcare providers, educators and other stakeholders. This collaborative work enabled HWA to develop policy programs that facilitate reform in training, workforce, workplace and international recruitment and retention (IHWC, 2014).

This approach yielded some promising tools, including Health Workforce 2025, which provides national projections of health workforce numbers and develops models to determine the effects of different policy scenarios for a range of health professions. In line with HWA's commitment to developing a sound evidence base, these projections quantify the current health workforce and "provide impetus and consensus for reform through the provision of evidence" (IHWC, 2014). In addition to delivering Australia's first major, long-term, national projections for doctors, nurses and midwives, Health Workforce 2025 also outlines why, without nationally coordinated reform, Australia is likely to experience limitations in the delivery of high-quality health services (HWA, 2013b). Health Workforce 2025 also presents alternative, sustainable views of the future, based on available policy choices. Moreover, "to address the findings of Health Workforce 2025, a clear set of actions is needed. The work to be undertaken will require a coordinated national approach involving governments, professional bodies, colleges, regulatory bodies, the higher education system and training providers" (HWA, 2012b).

HWA was absorbed by Australia's Department of Health in 2014, but its coordinated and collaborative health workforce planning process has endured. By prioritizing engagement with a broad range of stakeholders, including patients and providers, Australia has promoted widespread buy-in on the value of workforce planning, and has seen evidence of uptake of the Health Workforce 2025 recommendations.

Source: Bourgeault, Demers, & Bray, 2015

KEY HEALTH WORKFORCE CONCERNS[3]

The health workforce field covers a range of concerns, including preparing, regulating, deploying and managing people who work in healthcare. It not only deals with existing types of workers and what they do, but also looks to the future and how these roles and tasks will evolve over time. Health workforce issues faced by all healthcare systems can be categorized into three areas:

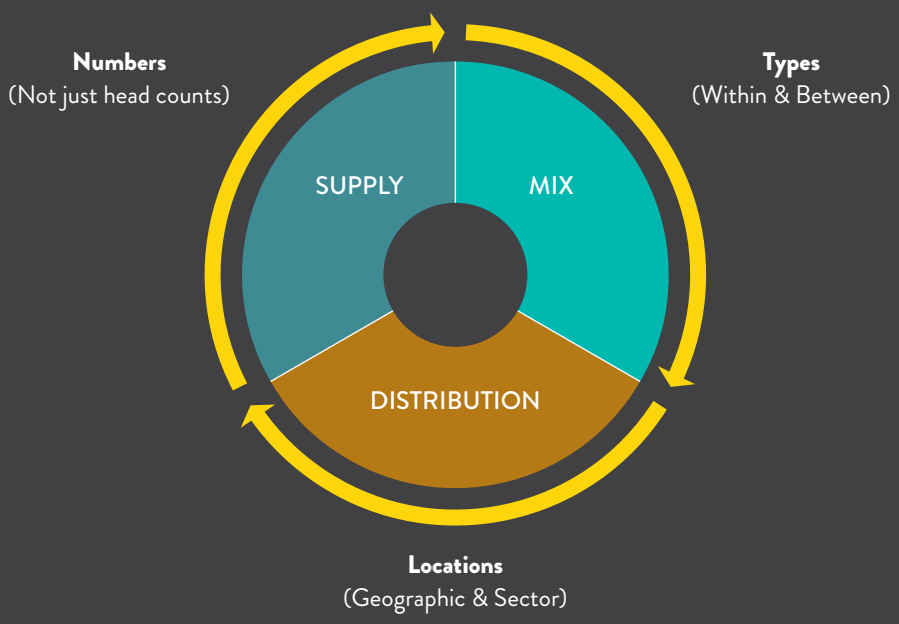
- **Supply** (addressing the numbers of healthcare professionals providing services to a population);
- **Distribution** (addressing the locations or deployment of healthcare professionals across geographic areas or care sectors); and
- **Mix** (addressing the relative number of healthcare professionals providing various types of specialty services).

SUPPLY

Supply problems in the health workforce are generally described in terms of shortages and surpluses. Although there are no hard and fast measures for these terms, a **shortage** is a situation where there are not enough workers to meet demand. This often results in people with legitimate needs for care waiting long times, travelling long distances or doing without care altogether. In a **surplus** situation, there are more workers than required and providers do not have enough legitimate work to keep them busy.

While the actual numbers of health workers affect shortages and surpluses, their **activity** and **participation rates** may have an even greater impact. For example, if there are 100 practitioners, but each of them is practising only half of the time, that is a very different situation than if 100 practitioners are practising full time. Because of this difficulty in simply counting health workers, there have been efforts made to develop a way to measure full-time equivalency. However, this task is made particularly complex by the fact that different groups of health workers have varying and multiple sources of employment and funding.

Figure 5: The three components of health workforce balance



3 This section is based on Chapter 4 from *Social Dimensions of Health and Health Care* (2016) by Wade, Bourgeault & Neiterman.

DISTRIBUTION

There is competition between jurisdictions for health workers, which may draw the health workforce away from areas in need, resulting in severe shortages among vulnerable communities (ACHDHR, 2007; Centre for Rural and Northern Health Research, 2013). These problems with distribution may occur across care sectors (i.e., providers move to a different sector), but are largely geographic (i.e., providers move from one physical location to another). Thus, the issue of the distribution of health workers is intricately tied to issues of supply.

Consider, for example, the interjurisdictional migration patterns of physicians. Of the 82,198 physicians in Canada in 2015, 1,101 (1.3%) moved to another jurisdiction in 2016. Between 2012 and 2016, British Columbia was the only jurisdiction that continuously experienced net physician gains due to interjurisdictional migration; most jurisdictions experienced net physician losses (CIHI, 2018).

MIX

Achieving the right mix of health professionals that aligns with population health needs is a complex challenge, linked to both supply and distribution. The 2007 Framework for Collaborative Pan-Canadian Health Human Resources Planning highlighted that "Canada's ability to provide access to 'high-quality, effective, patient-centred and safe' health services depends on the right mix of healthcare providers with the right skills in the right place at the right time" (ACHDHR, 2007).

Both intra- and interprofessional organizational structures present challenges to achieving an appropriate mix. While intraprofessional organization in the case of the medical profession is focused on achieving the right balance of generalist and specialist practitioners, in reality, there are often shortages of specific types of physicians and surpluses of others. The under- and unemployment of medical specialists are indicative of a lack of coordination between supply, distribution and mix (Fréchette et al., 2013).

Interprofessional organization of scopes of practice and models of care, however, has typically been determined on the basis of tradition and politics rather than on actual population health needs.

Achieving the right mix of health workers is intricately linked to the issue of scope of practice and skill mix initiatives. Although these terms are often used interchangeably, there are nuanced differences. A profession's scope of practice refers to:

> *...the activities its practitioners are educated and authorized to perform. The overall scope of practice for the profession sets the outer limits of practice for all practitioners. The actual scope of practice of individual practitioners is influenced by the settings in which they practice, the requirements of the employer and the needs of their patients or clients. Although it can be difficult to define precisely, scope of practice is important because it is the base from which governing bodies prepare standards of practice, educational institutions prepare curricula, and employers prepare job descriptions.*
>
> (Canadian Nurses Association, 2014)

In other words, scope of practice outlines the tasks and skills housed within a particular profession. **Skill mix** initiatives, on the other hand, use individual professions' scopes of practice to define an optimal interprofessional workforce composition that is aligned with local population health needs and increases the productivity and efficiency of the system as a whole. Working to optimal scope means achieving the most effective configuration of professional roles as determined by other healthcare professionals' relative competencies (Nelson et al., 2014). In some cases, this involves delegating or re-assigning tasks from a more highly trained and skilled health worker to a less highly trained but still appropriately skilled worker.

This task shifting is sometimes considered in parallel with a process of rationalization. What makes this rational, in part, is an economic argument that tasks are typically shifted from more to less expensive health workers. This may involve expanding the scopes of practice for existing health workers, such as nurse practitioners, or developing new professional roles or groups of health workers, such as physician assistants. There are a number of barriers to the optimization of scopes of practice (see Table 2). The economic value attributed to different tasks in health care are also affected by gender and other social stratifiers (discussed more fully below).

TABLE 1: Canadian Academy of Health Sciences model of barriers and enablers

	BARRIERS	ENABLERS
SYSTEM LEVEL	Healthcare professional accountability/liability concerns	• **Educating professionals and courts** on changes to legislation that recognize the principles of shared-care models
	Educational needs/requirements that inhibit professionals working to full or optimum scope	• **Establishing practicums and residencies** that foster interprofessional competencies • **Post-licensure credentialing** for continued competency development over the course of a career
	Rigid legislation/regulations	• **Expanding adoption of more flexible legislative frameworks** that can be interpreted at the local setting
	Payment models that do not support changes in scopes of practice	• **Alternative funding** (e.g., bundled or mixed payment schemes to include all healthcare professionals and to be aligned with desired outcomes
ORGANIZATONAL LEVEL	Communication across multiple care settings	• Implementation and upkeep of **electronic medical records** essential for all respective healthcare professionals (and for patients themselves) to have timely access to the most up-to-date information on treatment and status
	Professional protectionism	• Representation of the interests of professions in the context of collaborative care arrangements and **interprofessional standards / overlapping scopes of practice**
	Accountability	• Broader application of collaborative performance measures and an overall quality assurance framework through involvement of **accrediting bodies**
	Availability of evidence	• Systematic monitoring and evaluation (with specific focus on input and outputs) to estimate cost incurred for introducing change and the **long-term return on investments**
PRACTICE LEVEL	Professional hierarchies	• **Change management team:** a designated role for managing changes in scopes of practice and models of care
	Professional cultures (lack of trust and role clarity, job protectionism, turf wars, task escalation)	• **Continuing professional development** to cultivate team thinking and develop levels of trust around relative competencies • **Team vision** to reinforce that the ultimate goal is the improved well-being of the patient—who provides the care is secondary to the quality and accessibility of services provided
	Communication among healthcare professionals	• **Instilling group mentality:** internalization of shared responsibility across healthcare professions • Scheduling **regular meetings** for healthcare team members to consult on appropriate care strategies • Integrating **information communication technologies** • **Co-location** to have different types of healthcare professionals and services functioning in a shared space

Source: Nelson et al., 2014.

HEALTH WORKFORCE PRODUCTIVITY

The healthcare sector makes up roughly one-tenth of the economic activity of modern economies, and labour inputs make up a large share of its costs, especially when compared to other industries. As such, the measurement, tracking and improvement of the sector's labour productivity, referred to as health human resources productivity (HHRP), should be of significant policy concern.

In principle, HHRP is defined in terms of the relationship between health outcomes (i.e., health status protection or improvement for individuals or populations) and health human resource inputs (e.g., time, effort, skills, knowledge). However, the vast majority of HHRP literature defines HHRP as the ratio of procedural and service outputs over inputs measured in terms of time or numbers of personnel. Little information is therefore available on how health human resources changes affect health outcomes.

Advances in health services management, such as the development of clinical guidelines, implementation of new information technology and optimization of scopes of practice, could improve HHRP. These approaches have faced the classic political dilemma of diffuse benefits and concentrated costs: productivity improvement would provide societal benefits but would come at a cost for those involved in providing the associated services, with a significant threat to jobs and incomes. Generally for healthcare systems, the dominant mutually satisfactory strategy for individuals and organizations paid to provide care is to do more with more: more inputs, more outputs and a shared belief that improved outcomes will result.

Adapted from Evans, R., Schneider, D., and Barer, M. (2010) Health human resources productivity: What it is, how it's measured, why (how you measure) it matters, and who's thinking about it.

MOBILITY AND PRODUCTIVITY

A number of additional concerns are worth noting, specifically the increasing mobility of health workers and issues of their productivity.

Health workforce mobility, or the ability of health workers to move freely into and out of professions and jurisdictions, adds to the level of complexity that interacts with the previous three issues. It is very much tied to social, personal, familial, cultural, economic, workplace environment and political factors (International Organization for Migration, 2014). Although mobility fosters the right to personal freedom, it can also represent a significant loss to the jurisdictions that invested resources (which can include financial support for education and training) in hopes of meeting the needs of their respective populations (International Organization for Migration, 2014).

Managing or even anticipating mobility is also challenging, as decisions to enter a given profession or a specific province/territory/country may be influenced by a number of different factors. For example, a decision to enter a profession or specialty may be influenced more by preference than by population health need, and this can lead to issues of access to practice resources and employability (Fréchette, Shrichand, & Manogaran, 2019). In contrast, decisions to leave certain professions may be due to lack of effective support for physical or psychological workplace challenges such as workplace violence and bullying (Canadian Nurses Association & Canadian Federation of Nurses Unions, 2015). Other factors influencing mobility may include cost of living, suitable housing and access to schools for children.

The mobility of health workers is increasingly being recognized as an important issue, leading to the development of initiatives to support more centralized processes and the establishment of pan-professional umbrella regulations to support mobility within and between provinces and territories. Furthermore, there is growing interest in building national standardization processes and platforms for health workforce data to inform health workforce planning across the country. These initiatives align closely with the adoption of the Canadian Free Trade Agreement in 2017 (previously the Agreement on Internal Trade), which also calls for the reconciliation of regulatory processes across

provincial and territorial governments to facilitate a level playing field across the country (Canadian Free Trade Agreement, 2017). The agreement includes specific objectives focused on promoting cultural diversity and workers' rights for employees, protecting health and safety for the public, and aligning with commitments under international trade agreements.

The ability to track and monitor mobility trends across the country and in and out of professions could help identify some of the drivers influencing many of the supply, distribution and mix imbalances we continue to see (International Organization for Migration, 2014).

HEALTH WORKFORCE PLANNING ACROSS SUPPLY, DISTRIBUTION AND MIX CONSIDERATIONS

Health workforce planning is defined as:

> *The process of estimating the number of persons and the kind of knowledge, skills, and attitudes they need to achieve predetermined health targets and ultimately health status objectives. Such planning also involves specifying who is going to do what, when, where, how, and with what resources for what population groups or individuals so that the knowledge and skills necessary for the adequate performance can be made available according to predetermined policies and time schedules. This planning must be a continuing and not a sporadic process, and it requires continuous monitoring and evaluation.*
>
> (Hall & Mejia, 1978)

In some cases, health professional groups have been left to determine their own numbers without a clear link to or measurement of population health needs. This approach, though still in place today for a number of health workers, is problematic because of the variability in estimates from each profession and has resulted in cycles of over- and under-supply, high turnover and attrition, and a lack of stability in the health workforce. It has also done little to address the persistent misalignment between health workforce and population health needs.

Moving forward, there is increasing recognition that health workforce planning is both a technical and a political exercise that requires the engagement of all key workforce stakeholders to ensure the relevance of tested policy scenarios and to enable complementary resource mobilization. Furthermore, using iterative, short-term health workforce planning cycles can address the uncertainty embedded in all health systems and mitigate the decreasing accuracy of projections over time. Promising practices in this field also showcase the value of multi-professional needs-based planning that moves beyond simple projections of supply to address questions of optimal workforce distribution and mix.

SUPPLY

Health personnel-to-population ratios are typically used to measure health worker density. This approach involves empirically determining the number of health professionals in each discipline currently working in a given geographic area and then using census data to estimate the provider-to-population ratios. When using these ratios to assess the sufficiency of workforce projections, planners either project forward current ratios within the geography in question or use population and workforce growth trends to compare projected ratios to a threshold ratio established by normative bodies such as the WHO, which proxy "need" for health services. In some cases, only the relevant population is included. For example, midwife-to-population ratios can be calculated using the population of women of childbearing age, rather than the total population of the area.

These ratios have the advantages of being easy to calculate with minimal data requirements, enabling comparability, and facilitating communication and understanding of findings. However, this approach also has a number of key flaws:

- It assumes all within the population have equal access to care, regardless of distance or ability to pay, and that all care is necessary.
- There is a lack of clarity concerning optimal ratios. In Canada, for example, we often compare our ratios to the Organisation for Economic Co-operation and Development (OECD) average. But this average is not necessarily an optimal measure; it is a mathematical average of the ratios in OECD member countries, all of which could be suboptimal.
- These ratios are typically either uni-professional (i.e., about only one profession) or aggregate, and do not account for skill mix, scopes of practice or models of care. A physician-to-population ratio of 2:1,000 with a nurse-to-population ratio of 10:1,000 is quite different from the same physician-to-population ratio with a nurse-to-population ratio of 100:1,000.
- The ratios assume constant provider activity, participation and productivity rates and population health needs across planning geographies and time.

Utilization-based approaches to health workforce planning (also referred to as demand-based approaches) apply observed healthcare utilization rates in various population subgroups to projected population profiles to estimate future demand for health services and corresponding workforce requirements. This approach, which reflects an economic rather than a population health focus, is considered to be particularly appropriate in systems where access and utilization is constrained by ability to pay (Tomblin Murphy et al., 2016). If utilization rates are used to project future requirements, however, projections are predicated on the maintenance of the status quo. Utilization rates are susceptible to both underestimating population health needs in systems where barriers to access remain and overestimating population health needs in systems where oversupply leads to provider-induced demand (Birch et al., 2007).

Needs-based approaches allow planners to estimate the workforce required to meet the unique needs of patients based on demographic and epidemiological profiles, and an established level of service. These approaches assume all population health needs can and should be met, the requisite resources to meet these needs are available, and there is sufficient political will to deploy these resources (Dreesch et al., 2005). As a result, these approaches are considered consistent with the objectives of publicly funded health systems (such as Canada's) that are striving for universal health coverage regardless of ability to pay (Tomblin Murphy, 2016).

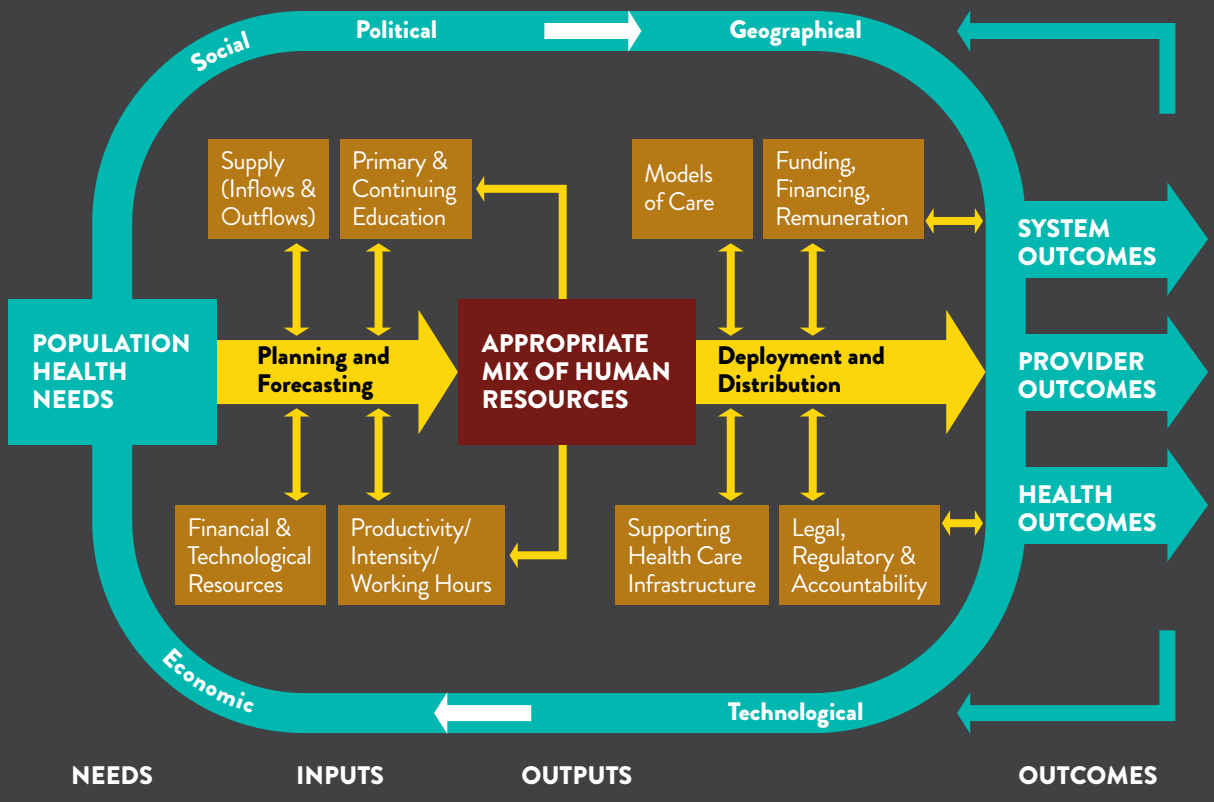
DISTRIBUTION

Health workforce planning exercises are often performed at the national or provincial/territorial level, with minimal consideration of the alignment between service needs and workforce capacity at the regional or local level. As a result, their aggregate projections do not reflect the potential for inequitable and inefficient distribution of the health workforce within planning areas. They also fail to provide the evidence base necessary to develop targeted policies to address persistent imbalances on the basis of geography, sector and skill mix. Estimates that account for workforce capacity distribution and population health needs can inform more targeted health workforce deployment and management strategies. Accounting for mobility and migration in stock and flow models can also enable health workforce planners to produce more robust estimates of workforce distribution.

MIX

In light of increased focus on interprofessional collaboration and efficiency gains as means to address both quantitative and qualitative workforce imbalances, it is becoming increasingly clear that uni-professional health workforce planning is inadequate and misaligned with health system needs. Multi-professional planning is therefore of utmost value. In recent years, service target-based approaches have emerged as an extension of needs-based approaches that use task analysis and demographic and epidemiological profiles to project service or competency requirements. These requirements can inform a defined package of services that can then be allocated across a variety of health professions with relevant and often overlapping

Figure 6: Revised health workforce planning and deployment framework



Source: Bourgeault, Demers, & Bray, 2015

scopes of practice. While utilization-based and needs-based approaches can be deployed for a number of professions sequentially, the key strength of service target-based approaches is their ability to address issues of skill mix and to integrate multiple professions into a single planning exercise that can explore innovative and efficient models of care provision (Dreesch et al., 2005). Figure 6 presents a health workforce planning model that shows the key issues of supply, distribution and mix.

EQUITY, DIVERSITY AND INCLUSION CONSIDERATIONS

One of the overarching themes emphasized in this introduction is the highly segregated nature of the health workforce in Canada. This has resulted in Indigenous and internationally educated health workers, as well as those in predominantly female fields, being assigned a secondary status. The official language capacity of health workers is also an important consideration (see Geoportal of Minority Health). We have encouraged the authors of each chapter to highlight these dimensions in their descriptions of the individual professions.

GEOPORTAL OF MINORITY HEALTH

High-quality health data is essential to policy and planning decisions. However, data is often missing or incomplete for certain populations. The Geoportal of Minority Health aims to fill these data gaps and improve knowledge about health and access to health services of the Francophone minority populations of Ontario. This initiative was established through funding from the Ontario Ministry of Health and Long-Term Care in 2013–2014.

Figure 7: Minority Health Observatory showing distribution of health professions by Local Health Integration Network

PROFESSION BY LHIN

Champlain (3511)

Total Population in 2011: 123065D

Speciality	French	English	Others
Audiologists	53	83	9
Chiropodists	12	31	6
Chiropractor	0	261	20
Dental Hygienists	369	1,140	137
Dental Technologists	5	36	20
Dentists	291	638	236
Dentunists	10	36	22
Dietitians	192	355	34
Massage Therapists	204	888	122
Medical Laboratory Technologists	186	695	68
Medical Radiation Technologists	270	500	64

The portal was established to facilitate the development of a centralized geographic database that includes:

- Socio-economic data associated with different linguistic variables;
- Data on health professionals, including their ability to provide services to official language minority populations;
- National health surveys; and
- Points of health services.

It also includes a geographic information system that allows spatial analysis of data and an online mapping application. This system enabled the creation, organization and presentation of spatially referenced data, and the production of plans and maps as depicted above.

The Geoportal of Minority Health offered information that can be used to improve knowledge of the social and structural factors that underlie health disparities that disproportionately affect minority populations. Its base of information could have been useful to a wide range of knowledge users: health workforce planners for minority health, local health integration networks, public health and community organizations, and researchers.

INDIGENOUS STATUS

Pre-contact, Indigenous peoples lived all across the lands and waters of what is now known as Canada. Colonization by first the French and then the British brought a series of policies intended to eradicate Indigenous healthcare practices and segregate access to settler healthcare—despite the fact that settlers benefitted from Indigenous healers and medical knowledge. Racial segregation in healthcare was enacted in part through the federal government's establishment of "Indian hospitals" to treat Indigenous patients (Lux, 2018). The treatment these patients

KEY HEALTH-RELATED RECOMMENDATIONS FROM THE TRUTH AND RECONCILIATION COMMISSION

18. We call upon the federal, provincial, territorial, and Aboriginal governments to acknowledge that the current state of Aboriginal health in Canada is a direct result of previous Canadian government policies, including residential schools, and to recognize and implement the health-care rights of Aboriginal people as identified in international law, constitutional law, and under the Treaties.

19. We call upon the federal government, in consultation with Aboriginal peoples, to establish measurable goals to identify and close the gaps in health outcomes between Aboriginal and non-Aboriginal communities, and to publish annual progress reports and assess long-term trends. Such efforts would focus on indicators such as: infant mortality, maternal health, suicide, mental health, addictions, life expectancy, birth rates, infant and child health issues, chronic diseases, illness and injury incidence, and the availability of appropriate health services.

20. In order to address the jurisdictional disputes concerning Aboriginal people who do not reside on reserves, we call upon the federal government to recognize, respect, and address the distinct health needs of the Métis, Inuit, and off-reserve Aboriginal peoples.

21. We call upon the federal government to provide sustainable funding for existing and new Aboriginal healing centres to address the physical, mental, emotional, and spiritual harms caused by residential schools, and to ensure that the funding of healing centres in Nunavut and the Northwest Territories is a priority.

22. We call upon those who can effect change within the Canadian health-care system to recognize the value of Aboriginal healing practices and use them in the treatment of Aboriginal patients in collaboration with Aboriginal healers and Elders where requested by Aboriginal patients.

23. We call upon all levels of government to:

    i. Increase the number of Aboriginal professionals working in the health-care field.

    ii. Ensure the retention of Aboriginal health-care providers in Aboriginal communities.

    iii. Provide cultural competency training for all health-care professionals.

24. We call upon medical and nursing schools in Canada to require all students to take a course dealing with Aboriginal health issues, including the history and legacy of residential schools, the *United Nations Declaration on the Rights of Indigenous Peoples*, Treaties and Aboriginal rights, and Indigenous teachings and practices. This will require skills-based training in intercultural competency, conflict resolution, human rights, and anti-racism.

Source: Truth and Reconciliation Commission of Canada: Calls to Action, 2015.

received was significantly inferior to that received by European settlers, often involving abuse at the hands of medical staff who did not understand Indigenous cultures or languages. After the Second World War, the federal government aggressively expanded Indian hospitals focused on completely replacing traditional healing practices, medicines and midwifery with Western medicine. In 1979, after decades of resistance, the federal government closed most Indian hospitals or converted them to primary care clinics, but their damage was already done.

Both the Royal Commission on Aboriginal Peoples (1996) and the Truth and Reconciliation Commission Calls to Action (2015) brought attention to the ways colonial practices harmed the health and wellbeing of Indigenous peoples through the decimation of their healing knowledge and practice. These commissions also focused on the need to increase the number of Indigenous health workers. Historically, Indigenous people had not been admitted to settler health worker training programs, nor were they allowed to practice traditional healing practices for people in their community.

In 2005, the federal government funded the Aboriginal Human Health Resources Initiative to increase the number of Indigenous people entering health careers through two key streams: a scholarships and bursaries program and a community-based cultural competency training program for health workers and managers.

Census data from 2006 found that 1.57% of Canadian healthcare providers identified as Indigenous. Of this, 50% were First Nations, 43% were Métis and 3% were Inuit. By 2016, Indigenous people made up 2.2% of the Canadian health workforce—an increase of just 0.63%. For reference, Indigenous people represented 4.9% of the total population in 2016.

Although census data can be informative, it is not the most accurate: provincial/territorial licensing and health professional regulatory bodies generally offer more precise data. These bodies do not routinely collect data on the Indigenous status of health professionals. This information is also not included in CIHI's guidance on key elements of health workforce data for planning (2013).

GENDER

The division of labour in healthcare is highly gendered and influenced by complex gender dynamics. Over 80% of health workers in Canada are women (Bourgeault et al., 2018), but this is not reflected in key leadership roles. This is due partly to intersection of gender and profession with more prominent professions like medicine, dentistry and pharmacy having fewer women, until recently. Related to this are social-cultural assumptions around the gendered distinctions between caring and curing, formal and informal work, and skilled and unskilled work (Kuhlmann et al., 2012).

These distinctions are clear in the types of health professions that are dominated by women and typically considered "female", such as midwifery and nursing. These professions remain distinct and separate from the dominant medical professions, typically through the use of gendered ideology surrounding women's societal role as "carers" as opposed to "curers" (Davies, 1996). They are often in positions subordinate to those of the more male-dominated professions, as their skills are undervalued, reflective of the broader societal undervaluing of women's work. Gender divisions are also linked to differences in hours of work, career chances, remuneration and work-life balance (Armstrong & Armstrong, 1996).

The dominance of the medical profession and the lower status of traditionally female health professions are structurally embedded in multiple layers of legislation and regulation governing the healthcare division of labour. The medical profession has been privileged in terms of both policy and remuneration (Bourgeault & Mulvale, 2007), while "female" health professions have historically had to negotiate their work as well as their integration and recognition within the male and medically dominated healthcare system (Witz, 1992).

This dominance of the medical profession within the healthcare division of labour was achieved in part through the exclusion of women (Witz, 1992). And while there is a growing number of women entering into traditionally male-dominated healthcare professions, medicine is still very much a male-dominated profession, particularly in its leadership roles. There have, for example, only ever been eight female deans of the 17 Faculties of Medicine in Canada.

All these issues have implications for the complex dynamics in the health workforce (George, 2007). For example, due to varying work patterns and practice approaches, the feminization of the Canadian health workforce could have an impact on the availability and provision of care. Future health workforce planning in Canada must take into account the diversity in working patterns of male and female healthcare professionals, along with measures of supply, mix and distribution and changing population demographics.

INTERNATIONAL EDUCATION

Immigration has played a significant role in Canada's healthcare system since the country's founding. The first local medical education program was established in 1824 in Montreal, Quebec, and it was another 50 years before a nursing program was started in 1874 in St. Catherines, Ontario (Coburn et al., 1983; Coburn, 1988). It would take many more years for the growing Canadian healthcare system to lose its dependence on health workers trained abroad. Even today, waves of immigration continue to bring healthworkers trained in a wide variety of countries: currently, there are more than 22,500 internationally educated physicians (CIHI, 2018) and more than 36,000 internationally educated nurses (CIHI, 2019) practising in Canada, representing 26% and 8.5% of Canada's physicians and regulated nurses, respectively.

Although internationally educated health workers were able to enter practice directly upon moving to Canada, today they must undergo a lengthy and complex credential recognition and professional recertification process that makes integration into the Canadian system challenging. For those who have not been actively recruited or who have not investigated the recognition and recertification process prior to arrival, can be particularly challenging. Early system navigation programs and bridging programs have been identified as promising practices that can help internationally educated health professionals navigate the recognition and recertification process, sensitizing them to the culture and context of healthcare in Canada, and strengthen their communication skills.

A study of internationally educated health professions found that international medical graduates face the most significant difficulties. Their certification process is lengthy and expensive, and there are few opportunities for professional integration largely because of the tight control over the number of medical residency positions available to them (Bourgeault & Neiterman, 2013; Covell, Neiterman & Bourgeault 2016). Internationally educated nurses are more likely to be practising because they are more likely to have been recruited. However, many of them feel they are practising below their qualifications and experience (Covell, Neiterman & Bourgeault 2015). Internationally trained midwives experience challenges related to the unique model of practice in Canada, where midwives are primary care providers for both home and hospital births. There are also few bridging programs available and an overall lack of teaching capacity (Bourgeault, Neiterman & LeBrun 2011).

International recruitment

There is growing multilateral recognition of the ethical dilemmas surrounding active international recruitment of health professionals, which can exacerbate pre-existing workforce shortages in developing health systems. Nonetheless, high-income destination countries like Canada continue to attract and sometimes recruit health professionals from low- and middle-income source countries. In 2010, all WHO member nations signed onto a voluntary code of practice regarding the international recruitment of health personnel.

WHO GLOBAL CODE OF PRACTICE ON THE INTERNATIONAL RECRUITMENT OF HEALTH PERSONNEL

1. Objectives

The Code aims to establish and promote voluntary principles and practices for the ethical international recruitment of health personnel and to serve as a reference for all Member States.

2. Scope

The Code is global in scope, and sets out to guide governments of all Member States and interested stakeholders in matters relating to the international recruitment of health personnel.

3. Ethical international recruitment

The Code discourages the active recruitment of health personnel from developing countries facing critical shortages of health personnel.

4. Fair treatment of migrant health personnel

The Code emphasizes the importance of equal treatment for migrant health workers and the domestically trained health workforce. All health personnel should have the opportunity to assess the benefits and risks associated with different employment positions.

5. Health personnel development and health systems sustainability

Countries should implement effective health workforce planning, education, training and retention strategies to sustain a health workforce that is appropriate for the specific conditions of each country and to reduce the need to recruit migrant health personnel.

6. International cooperation

The Code encourages collaboration between destination and source countries so that both can derive benefits from the international migration of health personnel.

7. Support to developing countries

Member States are encouraged to provide technical assistance and financial support to developing countries or countries with economies in transition that are experiencing a critical health workforce shortage.

8. Data gathering

Member States are encouraged to strengthen or establish health personnel information systems, including information on health personnel migration, in order to collect, analyse and translate data into effective health workforce policies and plans.

9. Information exchange

Member States should periodically collect and report to the WHO Secretariat data on laws and regulations related to health personnel recruitment and migration, as well as data from health personnel information systems. Member States are encouraged to promote information exchange on international health personnel migration and health systems both nationally and internationally.

10. The Code's implementation

For purposes of international communication, each Member State should, as appropriate, designate a national authority responsible for the exchange of information regarding health personnel migration and the implementation of the Code.

11. Monitoring of the Code's implementation

Member States are encouraged to implement the Code in collaboration with all stakeholders. All parties should strive to work individually and collectively to achieve the objectives of the Code.

12. Monitoring the implementation process

With regard to implementing the Code, Member States should periodically report measures taken, results achieved, difficulties encountered and lessons learnt to the WHO Secretariat. The WHO Director-General will subsequently report to the World Health Assembly on the effectiveness of the Code in achieving its stated objectives and make suggestions for improvement.

Source: WHO. User's Guide: The WHO Global Code of Practice on the International Recruitment of Health Personnel.

CONCLUSION

Much like the health systems within which they practice, health workers form a dynamic network of stakeholderswhose interactions are informed by social, political and technical legacies. Enacting the change required to develop an optimal supply, distribution and mix of health workers is, therefore, a complex process susceptible to resistance generated by opposing interests. Because the health workforce is indispensable to the functioning of all of Canada's health systems, we must recognize this complexity and strive to gain a more thorough understanding of the underlying causes of these persistent and pervasive challenges to find effective ways forward. Through the use of appropriate planning tools, management practices and policy levers, health systems can align the available health workforce to the needs of the populations they serve while increasing efficiency, efficacy and equity.

The chapters in this text present some of the key patient-facing healthcare professions in Canada. For each, we have asked authors to cover their professions' history, education and training, scope of practice, regulation, and demographics. Each chapter was either co-written with key partner organizations or reviewed by members of partner organizations. This enabled us to highlight some of the key topical issues facing each profession. In many cases, these same partner organizations have provided financial support for the chapter's production.

It should be noted that the organization of this text is not intended to reinforce uni-professionally focused siloes. Rather, it is meant to provide an initial foundational base to inform a subsequent more interprofessional and sector-focused analysis.

ACRONYMS

ACHDHR	Advisory Committee on Health Delivery and Human Resources
CFHI	Canadian Foundation for Health Improvement
CHWN	Canadian Health Workforce Network
CHW	Committee on Health Workforce
CIHI	Canadian Institute for Health Information
GHWN	Global Health Workforce Network
HHRP	Health human resources productivity
HWA	Health Workforce Australia
MDS	Minimum dataset
NWHA	National Health Workforce Accounts
OECD	Organisation for Economic Co-operation and Development
WHO	World Health Organization

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