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# A Comparison of the Regulation of Health Professional Boundaries across OECD Countries

Ivy Lynn Bourgeault<sup>1</sup>, Michel Grignon<sup>2</sup>

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## Abstract

Increased attention has been paid recently to the issue of the regulation of professional boundaries. In this paper, we undertake an international comparison of the regulation of health professional boundaries across the OECD countries of Canada, the U.S., the U.K. and Australia. Our case studies focus on the *inter-professional* boundary negotiation between medicine and nursing and the *intra-professional* boundary negotiation between domestic and internationally trained physicians. Our analysis draws upon the complementary interdisciplinary theoretical perspectives of institutional economics and the concept of *professional closure* from the sociology of professions. In applying these lenses to the two case studies in these four country contexts, we reveal that there has been a shift in the context of professional regulation towards a more coordinated national approach to licensure. There has also been a broad scale move towards breaking down at least the regulatory barriers to inter-professional collaboration between physicians and nurses which has included the expansion of the scope of nursing practice to take up traditionally exclusive domains of medicine. The seemingly protectionist professional regulatory policies vis-à-vis international medical graduates also seem to be breaking down primarily through government measures. Overall, there has been an increased permeability of professional boundaries both inter-professionally and intra-professionally, and market-oriented systems seem to be in a better position to overcome medical dominance than state-led ones, even though they do not change the main rules of regulation at the macro-level.

JEL: I11, I18, J44

Keywords: health professional regulation, inter-professional care, international medical graduates, Canada, the U.S., the U.K., Australia

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## 1. Introduction<sup>3</sup>

Increased attention has been paid recently to the issue of the regulation of professional boundaries. Some of this has been a result of the failure of regulation, such as the celebrated cases of Dr. Shipman in the U.K. where a General Practitioner (GP) killed several patients seemingly unnoticed by regulatory bodies (Alsop & Saks 2002) and Dr. Patel in Australia, an overseas trained doctor who undertook tasks beyond his level of competency with grave consequences. But changes to professional regulation in health care seem to be more structural and motivated by deeper social, political and economic considerations. Health care payers (*governments, insurers, or employers*) are looking for ways to make health care provision more efficient and cost effective and at the same time must be seen as responding to concerns regarding health human resource (HHR) shortages.

Two interrelated cases of the promotion of inter-professional collaborative care and the reliance on internationally educated health personnel are illustrative in this regard. First, the deployment of inter-professional health care teams has been promoted

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<sup>1</sup> University of Ottawa

<sup>2</sup> McMaster University

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as a cost-effective response to shortages, even though this means dismantling inter-professional regulatory barriers. Second, intra-professional jurisdictional barriers to mobility are increasingly seen as incompatible with labour mobility, most notably but not exclusively in Europe, and as a cause of the perceived health professionals shortages<sup>4</sup> in some OECD countries (Grignon, Owusu and Sweetman, 2012). If the trend toward the removal of barriers and better integration of health care professionals across professions and borders is clear, how well does it play out within different institutional and cultural contexts? Is the drive toward collaboration and better allocation of resources so strong that it applies similarly across jurisdictions, trumping path dependence, regulatory capture, and institutional gridlock, or do we still see differences across health care systems in the way the regulation of health care professions adjust and change?

In this paper, we undertake an international comparison of the regulation of health professional boundaries across the OECD countries of Canada, the U.S., the U.K. and Australia – countries that rely heavily on internationally trained health professionals and who have also been leaders in inter-professional collaborative care initiatives. We present findings on two case studies: firstly, inter-professional regulation between physicians (primarily family physicians/general practitioners) and nurses, and, secondly, intra-professional regulation of nationally trained versus internationally trained doctors on the other hand. These two cases illustrate the tension between professional protection afforded through different regulatory regimes on one hand, and perceived inefficiencies, inequities, and political problems (most notably, shortage of health care professionals) generated by that protection. Comparative research recognising the distinct geographic, political and economic contexts of these countries allows us to better understand the role of various institutions in the regulation of the health profession.

We begin by providing the theoretical lenses for the special treatment of health professions in light of their unique regulatory situation (namely, need to ensure and monitor quality), and how this contradicts other objectives such as efficient allocation of resources, or equality of opportunity and equal access to health care services within countries. We then describe and compare the regulatory context for physicians and nurses in our four case countries. This is followed by a discussion of our two cases across the four country contexts. What is revealed from this analysis is that despite distinct geographic, political and economic contexts, there has been an overall increased permeability of professional boundaries both inter-professionally and intra-professionally in each of our case countries.

## 2. The Unique Context Created by Health Professional Self-Regulation

Health professionals, including physicians and nurses (for whom results are presented in this paper), are licensed professions in most countries and the form this regulation takes is often (but not always) *self* regulation. As such, they are selected through specific training, the length and content of which is controlled by the

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<sup>4</sup> It is of course impossible to tell whether there is a shortage or over-supply of health professionals (it hinges on an elusive definition of how many such professionals are needed). It is clear however that populations perceive such shortages in many countries of the OECD, and that barriers to mobility can create that perception even though the overall supply of health professionals was enough to satisfy needs.

profession itself either directly through a college or indirectly through the government, but not by the market. They are granted a position once they complete training. Overall, there is a deliberate quantitative constraint on supply, or, rather, no mechanism to easily adjust supply to demand, and they are protected from direct competition. There is no advertising or comparisons of performance across members of the profession and they are paid an agreed upon amount for their services (rather than having to negotiate with their patients).

## 2.1 Profession as a means of controlling the market of expertise

Economists tend to see the “profession” as one aspect of the broader theme of regulation (and monopolies). As a result they do not tend to offer a definition of the profession in general<sup>5</sup>, but the sociological literature has been concerned with such definitions. Within this discipline, professions can be defined as a means of controlling an occupation or domain of work (Johnson 1972) and this control typically involves a system of self-government, restricted recruitment and legal sanctions for a professional domain (Parry and Parry 1976, Saks, 1983). These arguments draw implicitly on Weber's theory of *social closure* to which he referred to the monopolization of opportunities by various social groups in order to maximize their own rewards and privileges by limiting access to them (Brante, 1988; Parkin, 1979). Parkin (1979) defined professionalism as a particular type of exclusionary closure based on credentials "designed ... to limit and control the supply of entrants to an occupation in order to safeguard or enhance its market value." (p. 54). Larson (1977, 1979) introduced the concept of a *professional project* which involves two interrelated closure processes of: 1) control over a market for expertise; and 2) undertaking a collective process of upward social mobility. An upwardly mobile occupation must create a need for its services and at the same time create a scarcity of resources – i.e., its own members. This is accomplished by controlling the supply of professionals by means of a standardized, mandatory system of professional training and through professional licensing and certification. Through the process of professionalization a monopoly of expertise in the market and a monopoly of status in a system of stratification are sought.

Freidson (1970a, 1970b), implicitly drew on social closure theory in his conceptualization of *professional* or *medical dominance*. Medical dominance, he argued, is attained by establishing a powerful professional organization, by controlling the production of medical knowledge, and by the sponsorship of medicine by a societal or strategic elite that had been persuaded of the trustworthiness of the profession. Dominance consists of: 1) self-regulation over the content of medical work; 2) regulation over the terms and conditions, or context, of medical work; 3) control over other health occupations; and 4) control over clients. Expanding upon Freidson's conceptualization of professional dominance vis-à-vis other professions, Larkin (1983) introduced the concept of **occupational imperialism** to refer to occupation-based monopolies aimed at conserving particular skills and establishing advantageous relationships with allied groups. He described it as involving "tactics of 'poaching' skills from others or delegating them to secure income, status, and control" (p. 15).

Building further upon this idea of an arena of tension between occupational groups, Abbott (1988) proposed the concept of a *system of professions*. This 'system', as he

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<sup>5</sup> The term “profession” is not mentioned in the subject index of the Handbook of Health Economics, volume 1, Culyer and Newhouse, 2000

describes, is a complex, dynamic and interdependent structural network of a group of professions within a given domain of work, constantly struggling over areas of knowledge and skill expertise, called *jurisdictions*. A profession's success in occupying a jurisdiction reflects on the situation of its competitors as much as it does the profession's own efforts. Subordination of one professional group by another occurs when a profession vacates a jurisdiction but maintains control over it through such strategies as supervising the new 'tenant'. Audiences for jurisdictional disputes include the public, the legal system (i.e., the state), and the workplace. Both audiences and professions influence the competitive process through reshaping the profession's knowledge base and/or changing the currency of legitimation.

In this sociological approach, professions compete for closure (and the material benefits accruing to it) and domination of related occupations who can supply close substitutes and threaten social closure. Success in getting closure and dominating other occupations is based on social prestige and connections, and these certainly explain why medical doctors managed to reach closure, dominance, and imperialism. It also explains why it is now challenged by better educated and prestigious allied health professions as well as more demanding audiences and evolving jurisdictions.

## **2.2 Medical professions are more protected than other professions (not-for-profit environment and licensure): suggested justifications.**

Traditionally, economists tended to share many features of this sociological perspective agreeing that medical dominance is motivated by self interest of members of the profession rather than social welfare: professions were described as anomalies of regulation, remnants of the pre-capitalist past of the guilds that professions managed to keep alive due to the capture of the regulator. This is known as the "inhospitality tradition" (Robinson, 2001) illustrated by, among others, Milton Friedman and Simon Kuznets (Friedman and Kuznets, 1954). According to such a view, doctors and nurses and other health professionals use the protection granted by licensure and self-regulation to by-pass the market and extract a 'rent' from consumers: Doctors and nurses earn more than what their human capital should allow them to earn if they were not protected by professional licensure and regulation (known as the wage premium of health professions)<sup>6</sup>. Professional protections are described as close to what unions provide workers and both professional regulation and unions entail a comparable societal welfare loss: (i) monopoly rents increase the cost of health care above its social value (ii) regulation prevents hospitals and health care systems to allocate human resources in the most cost-effective way; and (iii) the not-for-profit motive particularly strong in health care (see below) prevents hospitals and medical groups from raising the appropriate level of capital (Robinson, 1997).

Arrow (1963) challenged that tradition in his seminal article which invited economists to understand the potential role of asymmetric information and agency in justifying the special treatment of health care professionals. He developed the idea that the institutional protections enjoyed by doctors and nurses stem from the nature of

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<sup>6</sup> The existence of such wage premiums is disputed (once one includes long hours or shift work for instance), but there is some indication that the stringency of regulation in one jurisdiction correlates with the cost of a visit to a dentist (Kleiner and Kudrle, 2000) or a physician (Leffler, 1978) – see a discussion in Grignon, Owusu and Sweetman (2012)

what they have to sell, and plays a role of protecting the public<sup>7</sup>: the specificity of health care services justify licensure and scope of practice (restriction of activity to members of the profession), professional autonomy (and the not-for-profit environment that accompanies it) of health care providers, and payment of services according to fees (or collectively agreed upon wages). We now develop these suggested justifications and show how they cast health care professions apart from other professions.

### **Licensure:**

Licensure protects health care professionals and their patients from the possibly deleterious effects of asymmetrical information between providers and consumers of health care services. First, the nature of what health care professionals sell (in this case, specifically doctors or those who diagnose) means that they need some protection from competition: doctors sell information and information is easy to sell second-hand (e.g., I can visit a doctor and then treat all individuals with the “same” problem, at a discount). As a result, members of the profession need to be protected from second-hand resellers. Information is not easy to protect because it is a non excludable good, and restricting its sale to members of the profession is an effective means of protection. Licensure does not protect professionals from other members of the profession (this obtains as a result of the not-for-profit imperative described below) but is instrumental in allowing the profession to control supply and organize shortages, hence the monopoly rents denounced by the inhospitality tradition.

Licensure is also meant to protect customers/users: because second-hand resellers cannot be trusted and the value of what professions sell cannot be assessed with certainty, customers would be at the mercy of medical imposters. The protection of customer argument goes like this: members of the profession have a lot to lose if they lose their license, as a result, they will behave. It is a standard disciplining argument in the efficiency wage model: workers paid above strict marginal productivity (their value on a spot market) do not shirk because they would lose a lot if caught. This argument about licensure as protection for patients is suggested in Arrow (1963) (licensure being described as a way to develop a trust relationship between the physician and their patients) and made explicit in the conclusion of Akerlof (1970), where licensure is described as a special case of brand-name accreditation offering a protection to consumers in markets with asymmetric information on the quality of the product.

### **Not-for-profit (NFP) environment:**

Health professionals are also characterized by a particular power relationship between labour and capital. This can be seen in first approximation through the pervading NFP environment in which health care professionals work. It is conceivable for an architect or a lawyer to work for a large for-profit firm financed through equity and serving dividends. This is much less frequent for doctors and nurses – this is not to say that for-profit hospitals or medical organizations do not exist, but, in most OECD countries, they represent less than 25% of beds (AHA, 2012; OECD, 2010). Moreover, for-profit hospitals tend to specialize on a small niche of specific procedures (elective surgery, delivery). Even in these for-profit hospitals, physicians and, to a lesser extent, nurses have much more autonomy vis-à-vis their non clinician managers than any lawyer

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<sup>7</sup> Interestingly, even though developed in an orthodox economic framework, this idea is very close to the functionalist view of institutions as fulfilling some social role developed by T. Parsons (1954), which dominated sociology of the professions in the 1950s.

or architect could have in a law or architecture firm. For instance, hospitals are described as “physicians cooperatives” (Pauly and Redisch, 1973). It is often said that, in health care, it is labour that hires capital rather than the other way around.

The NFP environment can be justified on the specific nature of what doctors and nurses provide. Pauly (1988) suggests that, because we cannot infer quality from outcomes we prefer the protection of NFP regulation. In cases other than health care, customers are interested in the final product and there can be price-competition as a result (“I want the lowest price possible for the product”) and even quality competition (“I can settle on lower price - lower quality good, depending on my preferences”). If patients acted as customers they would be interested only in the final product of their interaction with physicians, and would not really care how the product is produced: as an extension, they would not mind being diagnosed by a nurse practitioner in lieu of an M.D. This could help the care-producing firm re-arrange processes within the firm in a way that would cut costs and maximize profit (and social welfare). If patients/customers were only interested in the final product they would not mind how the money they pay to get treatment is distributed (to stakeholders or doctors). This could help raise money and even add some welcomed monitoring of the activities of providers but this is resisted almost universally. Overall, the NFP motive is justified on the grounds that health care professionals are in an agency relationship with their patients (McGuire, 2000). Patients trust their doctors to act (on their behalf) rather than to produce something tangible that can be assessed. By contrast, an architect produces something that can be assessed (hence, there is competition among architects through tenders).

Why do health professionals act as agents rather than as producers<sup>8</sup>? It is partially due to the fact that what they do can affect health, and health as an outcome is different: Two tier architecture is widely accepted (if you cannot afford a manor, settle on a shack), two tier education seems to happen (openly in the US, surreptitiously in most other countries for post-secondary education) as well as two tier justice, but there is more reluctance toward two-tier health care in the sense of settling on a lesser quality of treatment with poorer health consequences (e.g., cutting a leg instead of treating gangrene). This is called the altruistic externality of health care. The only quality dimension on which some competition is admitted is on ease of access (wait time) and comfort (private rooms), sometimes health-related comfort (side effects of a drug). But the specific nature of health cannot be the sole reason: elective surgery also affects health but it is more easily accepted that for-profit hospitals can provide it. Similarly, we accept (albeit reluctantly) that pharmaceuticals distribute dividends to stakeholders and raise capital on the market, and that pharmaceutical capital hires medical labour, even though these firms produce goods that affect our health.

It has also been suggested that the NFP motive is due to the intervention of insurance companies between doctors and their clients but it is not clear why insurance companies would prevent the profit motive in the health care industry: insurance

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<sup>8</sup> It has to be kept in mind that the “doctor or nurse as agent” is an ideal and health professionals have theirs as well as their patients' well-being in mind. For instance, it is well documented that doctors are interested in maximizing their income, either through fees negotiations or even through manipulations of their patients' demand (the famous and disputed “supplier-induced demand”). What is important, though, is that contrary to a standard profit-motivated entity, a physician or nurse cannot be motivated by profit only (they will maximize income among options that are equivalently good for their patients only) and they are restricted from generating profits that can be distributed anonymously to non health-care professionals.

companies would certainly love to contract selectively with hospitals, physicians or nurses and would not object to cost-cutting changes in the distribution of tasks among members of the medical team (more nurses, fewer doctors).

A deeper reason for the NFP is the “professional autonomy” argument that states, again, that patients must trust doctors and nurses because they cannot monitor outcomes: they care who delivers care because this is the only thing they can assess and because the guarantee that the agent will act in the best interest of the principal is linked to the long-term and personal relationship between them. Customers do not really care who is actually doing what in an architecture firm. Law firms are certainly somewhere between architects and doctors. But the personal link to the health professional is much stronger than in most other businesses, as HMOs learned the hard way in the U.S. when clients left HMO when their family doctor was no longer in the restricted pool<sup>9</sup>.

### **Fees and non competitive wages:**

Professionals in general and health professionals in particular sell “expert goods” (also called “reputation goods” (Pauly, 1988)), and as such, it is impossible to tell the value of what they sell, not only before buying it but also, most of the time, after the fact. It is impossible to infer the value of their service from the outcome. The patient may die through not fault of the doctor or nurse, and survive without any real input from them. As a result, they are not paid on the basis of the value of what they produce (since it is impossible to tell) but rather on a conventional, socially agreed upon fee<sup>10</sup>. The fee protects both providers (*ex post*) and users (*ex ante*) against the risk of mis-evaluating the true value of the service in the transaction: before using the services of a doctor or nurse one would be ready to pay a considerable amount of wealth (to avoid death, a situation in which wealth will be useless anyway), but once cured, one may not see the value at quite the same amount.

The reason why doctors and nurses sell expert goods is the asymmetric information between them and their patients. The doctor knows more than the patient, not so much at the theoretical level<sup>11</sup> as at the statistical level: the doctor has seen quite a few cases and knows better how to interpret changes and symptoms, what the patient cannot do. It is a standard result of transaction costs economics that when the final product is not easily monitored the transaction system breaks down.

The manner in which health professionals can be paid is through wages (payment per unit of time worked), fees (payment per unit of service delivered) or capitation (payment per patient enrolled). Physicians are largely paid through fees and mixed payment schemes involving capitation and fees, whereas nurses are largely paid wages. There is an extensive literature in health economics on the consequences of various payment schemes (capitation, fees, mixed) on total spending, quality, and efficiency, but

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<sup>9</sup> This is also a reason why regulators are reluctant to regulate the geographic location of health care professionals in general and physicians in particular. In that respect, medical professions do not seek protection from competitors within the profession through geographic exclusion, and regulators cannot prevent maldistributions.

<sup>10</sup> Fees are usually set through pluri-annual contracts between a physicians or nurses union and third party payers – when the latter is a public single payer overbilling is sometimes allowed (e.g., in the U.S.) but even that is socially controlled: the overbilling physician is expected to charge the same extra amount to all their patients and to disclose it, rather than price-discriminate at the bedside.

<sup>11</sup> there is certainly anecdotal evidence that some chronic patients with a good internet connection know as much or more on their own illness than many doctors

what they have in common matters more for us here than these contrasted effects: whether paid on the basis of fee for service, capitation, or wages, the health professional is paid a socially agreed-upon amount rather than a market equilibrium price reflecting demand and supply. In the remaining of this paragraph we focus on “fees” as representing such a mode of payment, even though we recognize that pure fee-for-service is not the dominant payment scheme anymore in health systems of the OECD.

The word *fee* comes from the feudal arrangement through which the tenant of a piece of land thanked the landlord for allowing him to use the land, and it was always very clear that no transfer of ownership was involved in such a transaction – in a sense, it was not so much a transaction as it was a mutual bonding acknowledging a difference of status. The meaning of being paid a fee is that the beneficiary (the recipient of the service) does not buy or rent resources (time or effort) from the provider, but expresses their gratitude for the privilege of accessing the knowledge of the provider. The word *honorarium*, sometimes used instead of fee, is obviously built on *honour* and signals that the member of the profession is rewarded with the honour of serving the principal (the beneficiary) and not with a monetary compensation. The member of the profession is therefore thought to earn less than they could on a purely competitive market, because they are rewarded with being regarded with honour. This is moreover the origin of the word *profession*: members make a public statement (“profess”) that honours them, to provide services on behalf of their beneficiaries and with their best interest in mind. Initially, the honorarium was a sum paid to the state to get an honorary position.

What sociology and economics tell us therefore is the following: agency and asymmetrical information are necessary conditions for the key characteristics of health care professions (licensure, strict autonomy, and fee-for-service) that distinguish them from other professions (architects and lawyers) and, of course from non self-regulated occupations. However, as outlined by Robinson (2001), they are not sufficient conditions and local relationships between the state and occupations as well as between professions and their audiences condition the way health care systems are organized and health care professionals work and are compensated. In the following section we review four case studies (Australia, Canada, the UK and the US) and two specific issues of the organization of health care professions (inter-professional boundaries and international portability of credentials) to answer the question of institutional national specific histories and configurations in conditioning the organization of health care professions.

### **3. Health Professional Regulation in Canada, the U.S., the U.K., and Australia**

#### **3.1 Licensure**

Before reviewing licensure regulation in each of the four countries under study, we provide in Table 1 an overview of the professional regulatory contexts for physicians and nurses in Canada, the U.S., the U.K., and Australia: Who sets the rules in these four more or less decentralized or federal countries? What changes or reforms are discussed or have been implemented recently? Lastly, what are the results of these rules on licensure in terms of density (*ratio of physicians and nurses to the population*) and competition (*proportion of internationally trained professionals in the country*)?



**Table 1: Comparative Context of Professional Regulation in Canada, the U.S., the U.K. and Australia**

	<b>Canada</b>	<b>U.S.</b>	<b>U.K.</b>	<b>Australia</b>
Medical & Nursing Regulation	Licensure is provincial/territorial based; Medical specialty certification is nationally based	Licensure is state/ territorial based.	Licensure is based at the UK-level	Prior to 2010, licensure was state/ territorial based.
Overarching Changes	A harmonization process is underway in response to the Agreement on Internal Trade	There are no known changes forthcoming in professional regulation in the U.S. context	There are no known changes in professional regulation in the U.K., but there has been a move towards 'nationalising' the NHS and therefore deployment of health professionals	Effective 2010, a centralized body, AHPRA regulates the medical and nursing profession through nationally consistent legislation.
Number of practicing physicians per 1,000 population (*)	NA	2.44	2.67	3.08
Number of licensed physicians per 1,000 (*)	2.50	3.19	NA	3.78
Number of nurses per 1,000 population (*)	9.30	NA (last year available was 2005: 9.8, World Development Indicator)	9.83	10.06
Proportion of foreign-trained physicians practicing in the country (**)	23.1%	25.5%	33.1%	25.0%
Proportion of foreign-trained nurses practicing in the country (**)	6.4%	3.5%.	8.0%	12.1%

(\*) Source: OECD health database, year = 2009

(\*\*) Source: Grignon, Owusu, and Sweetman (2012)

### **Licensing in Canada:**

Physicians: The process of obtaining medical license involves at the national level, the Medical Council of Canada (MCC), an organization that assesses medical candidates, evaluates physicians through exams, and grants a qualification called the Licentiate of the Medical Council of Canada, which is a requirement to gain an independent practice license in Canada. Specialty certification is handled nationally by either the Royal College

of Physicians and Surgeons of Canada, in the case of specialists and the College of Family Physicians of Canada, in the case of family physicians. Although the latter two bodies are called Colleges, they do not have regulatory powers. It is the Colleges at the provincial/territorial level that grant licenses to practice medicine in the respective provinces.

Nurses: Similar to medicine, nurses in Canada are regulated, licensed and registered to practice through provincial/territorial Colleges. Each College has its own standards for assessing qualification of nurses. At the national level, the Canadian Nurses Association (CNA) provides the competency exam for registered nurses and nurse practitioners (except in Quebec) and also provides a voluntary national nursing certification program. These regulatory bodies handle the assessment of qualifications for Internationally Educated Nurses (IENs) through the Canadian Registered Nurse Examination or, for Quebec, l'examen professionnel de l'Ordre des infirmières et infirmiers du Québec.

### **Licensing in the U.S.**

Physicians: First, in regards to medical licensure, the United States Medical License Examination (USMLE) involves a three-step examination to obtaining medical licensure in the United States. Individual state and territorial boards represented by the Federation of State Medical Boards (FSMB) grant medical licences.

Nurses: The leader in nursing regulation in the U.S is the Council of State Boards of Nursing (NCSBN), a centralized body through which state boards of nursing work in cooperation (NCSBN 2011). The NCSBN is also involved in the management of the nurse licensing examinations, NCLEX-RN and NCLEX-PN. Members of the NCSBN include the 50 states boards, the District of Columbia and the 5 territories (NCSBN 2011). The main characteristic of licensing in the U.S is the lack of portability. Most states still require state licensing and less than 20 had signed on Nurse Licensure Compacts in 2005 (and only one for Registered Nurses, Klein 2005).

### **Licensing in the U.K.**

In general, the certification and regulation of health professionals are managed at the level of the U.K. government, although they involve different organizations.

Physicians: The registration to practice medicine in the UK is controlled and regulated by the General Medical Council (GMC) (GMC, 2001). The GMC regulates the entrance to medical register, sets up the guidelines for good medical practice and regulates practicing physicians. Since April 2010, the GMC has merged with Postgraduate Medical Education and Training Board (PMTEB) and now it also regulates all medical education in the UK.

Nurses: Similarly to medicine, nursing is regulated at the UK level by the Nursing and Midwifery Council (NMC). The NMC register includes nurses, midwives, and specialist community public health nurses.

### **Licensing in Australia**

Physicians: Prior to 2010, medical licensure was controlled by individual state and territory medical boards. The state and territory boards made decisions regarding registrations (AHPRA 2010). The Australian Medical Council (AMC) was responsible for educational standards and accreditation of medical schools and specialist medical training in Australia.

Nurses: Similar to the licensure and regulation of the medical profession in Australia, the Australian Nursing and Midwifery Council (ANMC) was the national

body that worked with state and territory Nursing and Midwifery Regulatory Authorities (NMRA) in setting standards for nursing regulation. Each State had had its own regulatory authority which was responsible for regulating the registration of nurses.

Effective July 2010, a new centralized organization, known as the Australian Health Practitioner Regulation Agency (AHPRA) regulates ten health professions including doctors and nurses through nationally consistent legislation. AHPRA is now responsible for managing registration across the country for all 10 professionals. The new role of the AMC is to ensure the national standards of education, training, assessment of the medical profession through accreditation (AHPRA 2010). In July 2010, the ANMC changed its name, primarily due to the change in its role, to the Australian Nursing and Midwifery Accreditation Council's (ANMAC). The ANMAC is solely responsible for the accreditation of nursing and midwifery schools and programs while the NMBA has taken the responsibility of registration regulatory functions.

### **3.2 The case of the integration of International Medical Graduates**

#### **IMG integration in Canada**

##### **State of the Physician Supply**

In the early 1990's, it was perceived that Canada had a surplus of physicians<sup>12</sup>. During this time the enrolment to medical schools were decreased as were residency placements. Retirement incentives were offered to some physicians and restrictions on immigration of IMGs were placed. The shift in HHR policy concerning physician human resources began to gain salience in the late 1990's when professional associations, working groups and other politically active organizations started to discuss shortages of physicians. The need to increase the supply of physicians had been identified by some stakeholders, as well as the need to better plan HHR policy in general. In 2002, the Advisory Committee on Health Delivery and Human Resources (ACHDHR) was developed to monitor a pan-Canadian strategy for HHR.

##### **IMG Licensure Process.**

Usually, physicians require permanent residence status to be legally allowed to practice in Canada. Most come under the skilled worker category. There are number of federal and provincial regulatory bodies involved in assessing qualifications of incoming physicians. The following steps should be completed by IMGs willing to practice in Canada. (1) Their documents should be recognized by MCC (Medical Council of Canada). (2) They also should pass language proficiency exam, MCC (Medical Council of Canada) evaluating exam, and MCC qualifying examination part I. After that, (3) IMGs have to complete residency training (or provincial equivalence developed as bridging programs). Then (4) certification exam to the RCPSC (Royal College of Physicians and Surgeons of Canada) or CFPC (College of Family Physicians of Canada) should be passed. In addition, in order to obtain license to independent medical practice (5) MCC qualifying examination part II should also be passed. Finally, (6) an IMG has to register with a provincial College - a regulatory body.

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<sup>12</sup> See footnote 1 on the issue of real versus perceived shortages of health professionals.

## **Government Involvement/Responses**

In 2002, the Canadian Taskforce on Licensure of International Medical Graduates was developed to tackle some of the challenges experienced by IMGs in garnering licensure. The Task Force proposed recommendations to different levels of the government in 2004. In 2005, the federal government allocated \$75 million dollars to improve the integration of IMGs and other Internationally Educated Health Professionals coming to Canada.

The major problem related to integration of IMGs is the limited ability to secure residency training which is necessary to obtain medical license. Currently, however, the number of IMGs residing in Canada far exceeds the number of residency openings or bridging programs' positions allocated to IMGs. In Canada, residency training positions are allocated centrally through CaRMS (The Canadian Residency Matching Service) in which Canadian Medical Graduates compete over existing residency positions: their preferences are matched with specific requirements of medical schools in two consecutive iterations. Until 2006, IMGs were only eligible to apply for residency in a second iteration which considerably lowered their chances of being picked by a medical school.

To facilitate the process of integration of IMGs, several provinces have increased residency spots specifically for IMGs and have also developed bridging programs which allow IMGs to acquire necessary experience with Canadian medical culture. The process of getting into these programs is highly competitive, requiring passing additional examinations and assessments. In addition, the spaces in the programs are limited. IMGs coming through these programs are required to sign Return of Service Agreements stating their readiness to practice for two to five years in under-serviced or rural areas upon completion of the program.

## **IMG integration in the United States**

### **State of the Physician Supply**

The U.S. has had a history of predictions of surpluses and shortages of physicians. The predictions of physician oversupply as early as the 1980s but well into the 1990s resulted in many recommendations regarding the production of physicians in the U.S. as well as the number of IMGs which should be accepted into the U.S. medical system. The surplus projections resulted in a recommendation to decrease the nation's production of physicians by 25%. In 1995, the Association of American Medical Colleges (AAMC) recommended a reduction in GME slots to IMGs to deal with physician surplus, instead of reducing medical school enrolment.

A decade later (2005), the Council on Graduate Medical Education (COGME) predicted a significant shortage of physicians by 2020 and in the same year, the AAMC recommended that the number of U.S. medical graduates increase by 15% by 2015 through increased enrolment and the establishment of new schools. The key drivers for these shortages include on the demand side, the aging U.S. population; and on the supply side, the aging of the physician workforce and a new generation of physicians who do not work as long hours as previous generations of physicians. COGME recommended a multi-pronged strategy must be undertaken including modest increases in medical education and training capacity over the next decade and other efforts to increase physician productivity.

### **IMG Licensure Process.**

IMGs who wish to seek entry into the U.S. must obtain a visa that permits clinical training through programs of Graduate Medical Education. The most common visa used to participate in U.S. graduate medical education programs is the J-1 Visa but H1-B visas are increasingly being used. In addition to these specific immigration requirements, there are medical licensure requirements for IMGs to practice in the U.S. There are three steps to begin practicing medicine in the U.S – applicable to physicians who have received their medical degree outside of Canada and the U.S. These steps include: Education Commission for Foreign Medical Graduates (ECFMG) certification, residency program requirements and state licensure. ECFMG certification requires the candidate to make an application, passing the first two steps of the USMLE (clinical knowledge and clinical skills) and then submitting their medical diploma for primary source verification and verification of medical transcripts. After completing the ECFMG certification, physicians who wish to practice medicine in the U.S. must complete an accredited residency training program in the U.S. regardless of the training they have received overseas - this process takes at least three years. Every resident must then apply for a license in the state(s) in which they intend to practice.

### **Government Involvement/Responses**

Many different stakeholders have noted the impact of the fragmented organizational context around IMGs in the U.S. - lack of coordination between government (federal/state) and medical communities. A major source of discontinuity occurs at the state level due to the inconsistency of the process and requirements. More specifically, the variation of state requirements for IMGs, and the fact that they have to apply and meet requirements for each state individually is identified as a key policy disjuncture. The variation in state licensure processes and requirements also create obstacles for IMGs who want to move from state to state, especially those from war-torn countries that do not have their original documentation (often a requirement of state licensure).

### **IMG integration in the United Kingdom**

#### **State of the Physician Supply**

In 1997, the UK began to implement measures to increase health worker capacity and, along with other strategies, it embarked on heavy recruitment of international health professionals. Further, the need to modernize medical educational training, improve infrastructure, and improve lifestyle and working conditions for NHS Staff culminated in a series of massive reforms commencing in 2000. From 2001-2004, ethical concerns and debates over the intensive active recruitment of health professionals from poorer countries topped the policy agenda but by 2005 these waned as there was a marked reduction in active recruitment and notably fewer overseas doctors were registering for work in the UK. Fiscal restraint has since resulted in hiring freezes, staff layoffs, and concerns over the bleak prospects for junior overseas doctors residing in Britain.

#### **IMG Licensure Process.**

International doctors coming to the UK have to satisfy UK immigration requirements which are independent of the medical registration process. Currently, overseas doctors qualify under the highly skilled migrant program (HSMP) but this is

being replaced by the ‘Tier I General Highly Skilled Migrants’ category of the five-tier immigration points system. The changes largely affect (and deter the entry) of IMG’s who wish to train in the UK.

Prior to applying for registration an Identity check must be done by the GMC. Under the new registration framework implemented in October 2007, IMGs must qualify for either provisional, full, specialist or GP registration. Provisional registration is granted to newly qualified doctors who need to undergo clinical training prior to being granted full registration. Doctors with full registration can practice in the NHS or private sector in an unsupervised medical practice. To qualify for specialist registration the doctor must be on a specialist register to work as a consultant and doctors working in general practice, except those in training, must be on a GP register. Whether an IMG can apply for provisional or full registration will depend on their previous postgraduate experience. IMG’s who can provide proof of an acceptable postgraduate clinical experience, i.e., overseas internship, can apply for full registration. IMGs applying for either provisional or full registration must then provide proof of their basic medical qualification, knowledge and skills, evidence of good standing, and meet the English language requirements. Necessary knowledge and skills may be demonstrated in a variety of ways but is most commonly done through successful completion of a language and skills competency test.

### **Government Involvement/Responses**

By 2002, strategies shifted and policy proposals designed to tighten UK entry ensued. Interestingly, the introduction of a Highly Skilled Migrant (HSMP) program continued to ensure the entry of *highly skilled* doctors. Additionally, in 2005, a new ‘points based system’ designed to ‘streamline’ the migration process of people from outside the European Union (EU) and European Economic Area (EEA) was proposed and then introduced in 2006. The strategy reduces the more than eighty routes of migrant entry to the UK into five tiers based on skills. Under the new system the migrant initiates the application process and does a self assessment through a point calculation formula. Overseas doctors are considered in the first tier and do not require a job offer in order to gain entry to the UK. While the immigration policy and rule changes have eased the entry of highly skilled and economically vibrant overseas doctors the changes have caused problems for the less experienced junior doctors; in particular for those who are in the midst of postgraduate medical training programs within the UK or those trying to enter the UK to pursue training.

### **IMG integration in Australia**

#### **State of the Physician Supply**

Australia has moved from a perceived oversupply of doctors to a perceived shortage in health professionals. As is the case in Canada, the perception of shortage holds most acutely for rural and remote areas. As in Canada and the US HHR Policy initiatives in Australia during the mid-nineties were aimed at reducing the growth rate of the medical workforce. Federal government policy attempts at central planning of the health care workforce then contributed to a slowdown in the increase of physician to population ratio (through a reduction in the numbers of medical school positions by the 2000s) and, as in the other three countries discussed here, a perception of physician shortages and a shift in the policy focus. Government policy is now focused on growing the medical workforce. Policy strategies now aim to increase the numbers of physicians

through the establishment of new medical schools and through the temporary and permanent migration of a significant number of overseas trained health workers. It must be noted, however, that the Australian Medical Workforce Advisory Committee (AMWAC) responded to calls for increasing the doctor to population ratio by stating that any perceptions of shortages in doctors were a result of a maldistribution of the medical workforce rather than any overall doctor shortage in Australia.

### **IMG Licensure Process.**

The General Skilled Migration (GSM) Program offers a range of permanent and temporary visas designed to attract medical professionals to Australia. Permanent resident IMGs require credential assessment through the AMC, but IMGs can bypass this process to a certain extent by entering Australia as *conditional residents*; in this case, they are required to practice in an area of need. Specifically, the Five Year General Practice Scheme allows IMGs to migrate to Australia to work in an area of need with the aim of completing the Fellowship of the Royal Australian College of General Practitioners (RACGP) and obtaining full registration in two years. English language proficiency is required to apply for permanent medical registration though exemptions are possible for temporary migrants.

### **Government Involvement/Responses**

A number of recent government initiatives to better address the integration of IMGs are evident in Australia. For example, initiatives designed to improve access to the workforce for IMGs include *Medicare Plus*, cultural orientation programs and educational support programs to prepare doctors for AMC examinations. The recently established government agency, *Health Workforce Australia*, has prioritized the examination of issues related to the migration and integration of IMGs and other internationally educated health professionals.

### **Common Themes**

Some of the common themes across these four case studies of issues surrounding the integration of IMGs into a highly regulated medical labour market are that 1) IMGs face sometimes insurmountable barriers to practice but that through government involvement (and some might argue countervailing powers vis-à-vis local medical dominance), these barriers can be challenged; 2) the ease or difficulty of IMG licensure and integration is strongly tied to the 'market' of physician supply; and 3) at least three of the four country case studies (Canada, the U.S. and Australia) promote IMG licensure in low supply markets of rural and remote locations. As we shall see in the next set of case studies, similar waxing and waning of regulatory barriers of professional boundaries are evident in the success of inter-professional initiatives.

### **3.3 Inter-professional care boundaries between medicine and nursing (scope of practice):**

Health care teams are not a particularly new phenomenon but there has been a recent push in many health care systems towards their more extensive use at the primary, secondary and tertiary care levels (Dieleman et al. 2004, Patel et al. 2000). It has been argued that governments across several countries are moving in the direction of breaking down the boundaries between provider groups with the intention of making

HHR more responsive to a changing practice environment (Bourgeault & Mulvale 2006).

The use of inter-professional teams raises several issues related to the management of professional boundaries. Although the bulk of the literature has focused on the more micro, interactional level, it is important to also attend to the organizational and policy level factors that either facilitate or impede inter-professional models of care that cut across professional boundaries. Indeed, the health professional regulatory context has been identified as having a critical impact on the ability of health professionals to work together in the provision of inter-professional care (Bourgeault & Darling 2008, Bourgeault & Mulvale 2006; Mulvale & Bourgeault 2007). Some models of professional regulation can prove to be a barrier – particularly those which regulates health care providers by *exclusive scopes of practice* – whereas models which enable overlapping scopes of practice and the substitution of available providers to perform certain activities help foster teamwork (Hall 2005).

One of the most controversial professional boundaries examined with respect to the provision of inter-professional care has been that between primary care physicians and nurses, and nurse practitioners<sup>13</sup> in particular. Below we outline the primary care division of labour, models of care and regulatory allowance for nurse prescribing. Table 2 presents in brief these data for each of the four case studies.

**Table 2: Comparing Inter-professional Boundary Negotiations between Medicine & Nursing in Canada, the U.S., the U.K. and Australia**

	<b>Canada</b>	<b>U.S.</b>	<b>U.K.</b>	<b>Australia</b>
Provision of Primary Care	Largely dominated by family physicians with a small but growing cadre of NPs	Equally dominated by family physicians, NPs and physician assistants	Largely provided by GP run primary care trusts which also include practice nurses (not to be equated with NPs)	Dominated by GPs as NPs are relative newcomers to the provision of primary care
Form of Professional Regulation	By ‘controlled acts’ enabling overlapping scopes of practice	Typically by scopes of practice	By ‘protected function’ which enable overlapping scopes of practice	Not clear
Nurse Prescribing	Allowed but limited by drug type and health condition	Allowed but limited through collaborative practice agreements	Allowed even beyond NP roles to include general nurse prescribing	Allowed but limited by drug type and collaborative arrangements with GPs

<sup>13</sup> Nurse practitioners are registered nurses who have additional training in the assessment, management and diagnosis of common illnesses and complaints (Birenbaum 1994).



### **Inter-professional primary care & nurse prescribing in Canada**

In Canada, the primary care division of labour is still largely organized around family physicians (FPs) owned and managed solo or small-group practices where they are remunerated by fee-for-service (FFS) reimbursement (Lavis & Shearer 2010). Primary care nurse practitioners (NPs) have been reintroduced into the system, but their numbers remain relatively low in comparison to FPs; specifically, there were a total of 1,000 NPs (CIHI, 2006) versus 26,000 FPs across Canada (excluding Quebec for which no data were available on NPs in 2006) (CIHI, 2011). New institutional models of inter-professional primary care have emerged out of primary care renewal initiatives at both the federal and provincial/territorial levels. In the province of Ontario, these initiatives include Family Health Team (FHT) which broadens the disciplinary base beyond medicine to also include nurses, pharmacists, social workers, psychologists and other health care providers (Ontario Ministry of Health and Long Term Care 2004). FHTs are often initiated and led by physicians but more recent models have included NP-led teams, and both models require each FHT have at least one physician.

Supporting the development and implementation of these new models of primary care provision are not only significant financial incentives for GPs/FPs to join, but also a regulatory model which fosters overlapping scopes of practice. Several provinces now have professional regulation by some form of ‘*controlled acts*’<sup>14</sup> which could be shared by more than one profession. In Ontario, health professional regulation specifies 14 controlled acts that can be differentially undertaken by over 20 health professions. Physicians are able to perform most of the acts. NPs have three additional ‘controlled acts’ beyond that of what a registered nurse is allowed – communicating a diagnosis, prescribing and ordering a form of energy, such as an x-ray – which they share with medicine (Bourgeault & Mulvale 2006).

Having prescribing authority is critical to NPs, although this can be limited. Some provinces/ territories may only allow NP prescribing as a delegated authority from physicians, whereas in others where independent prescribing is allowed, there are limits on the types of drugs they are able to prescribe or the conditions for which they are allowed to prescribe. Only a few provinces have moved towards a more open formulary for NP prescribing (Bourgeault & Mulvale 2006). Recent reforms to liability coverage of non-physician providers undertaking what were previously restricted medical practices has fostered collaborative practices between physicians and other health professionals not just in primary care (Mulvale & Bourgeault 2007).

### **Inter-professional primary care & nurse prescribing in the United States**

The primary care division of labour in the United States is more inter-professional than it is in Canada with provision of care by FPs, NPs and physician assistants (PAs), which are health care providers licensed to practice medicine under physician supervision. Collectively, there are more NPs and PAs providing primary care than there are FPs (Green et al. 2004). U.S. health system reform efforts have attempted to emphasize the importance of primary care and have been the impetus for the recent growth in PA and NP programs (Mullan 2002). Although the rather pluralistic

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<sup>14</sup> Controlled acts include such things as communicating a diagnosis, prescribing a therapeutic pharmaceutical agent, ordering a form of energy (e.g., ultrasound, x-ray, etc), managing labour and childbirth, and other physical procedures such as inserting a needle below the dermis, administering a substance by injection or inhalation, etc. The development of the “controlled acts” policy instead of “scope of practice” in Ontario in the 1980s is detailed in Coburn (1993).

organization of primary care in the U.S. fosters the development of new practice models, most of the FPs are in private practice, many of which are still in solo practice (Bindman and Majeed 2003:631). The Health Maintenance Organization (HMO) model, whereby a wide range of comprehensive health care services are available to a prepaid group of clients, is one of the most popular inter-professional models bolstered by the growth of managed care (Mullan 2002).

Although the typical regulatory model in the U.S. is by scope of practice, it is also often written into regulations in most U.S. states that NPs require collaborative practice agreements with a collaborating physician and that PAs must practice under the supervision of a physician. This is particularly detailed for prescriptive privileges. Whereas PAs have dependent prescribing rights (i.e., they are only allowed to do so under the supervision of a physician), NPs tend to be more likely to have independent prescribing rights in a quarter of states and some form of collaborative or supervised prescribing rights, albeit under their own name, in the remainder (Hutchinson, Marks & Pittilo 2001). The need for supervision may be seen as fostering greater collaboration but under stricter medical authority. The requirement for supervision is often not strictly enforced and as such, there may be greater flexibility in everyday practices in the U.S. than indicated by professional regulations (Bourgeault & Mulvale 2006).

### **Inter-professional primary care & nurse prescribing in the United Kingdom**

Primary care services in the UK are largely provided by General Practitioners (GPs) working in Primary Care Trusts (PCTs). In England, these Trusts include around 36,000 GPs working in over 8,000 practices which directly employ around 22,000 practice nurses (not to be confused with NPs) (Dept. of Health 2012). Although the NP role has been part of the NHS since the early 1970s, it wasn't until a 1999 report by the Department of Health that the potential of their increased role in primary care was emphasized. This suggestion was secured by recommendations of the 2002 Wanless Report to move towards a more integrated view of the health care workforce (Humphris 2011). As Humphris (2011) details, Wanless "noted that the strong demarcation of roles and responsibilities between different staff groups, often reinforced by legislation or regulation, was getting in the way of the skill mix changes likely to be required." (p. 2). It was specifically suggested therein that NPs could take on about 20% of work currently undertaken by GPs and junior doctors (Bourgeault et al., 2008).

As noted in the quote above, professional regulation is seen as a barrier to more flexibility in professional roles necessary for inter-professional provision of care. There has been significant reform to the manner in which the health professions are regulated in the U.K. including increasing oversight beyond professionally regulatory bodies through the Council for Healthcare Regulatory Excellence. Similar to Canada, the U.K. regulates by *protected act* or function, which is defined as "a task, or series of tasks, which may only be carried out by an individual who is registered in the relevant profession by a statutory regulator." (Health Professions Council 2012).

One such protected function includes prescribing medicines. As early as 2001 the U.K. government announced the extension of prescribing to more groups of nurses (beyond just NPs) and for a wider range of drugs. By 2006, there were almost 7,000 Extended Formulary Nurse Prescribers who have independent prescribing responsibilities to treat a defined list of conditions. In that same year, this role was further expanded creating a cadre of 'Nurse Independent Prescribers' who can prescribe

any licensed medicine for any medical condition within their competence. Nurse Independent Prescribers must meet the eligibility criteria as determined by the Nursing and Midwifery Council. Once these criteria are met, it is then a matter for local decision, in the light of local NHS needs and circumstances (Bourgeault et al. 2008).

### **Inter-professional primary care & nurse prescribing in Australia**

Similar to Canada, primary health care services in Australia are largely provided by GPs in private practice. Nurse practitioners are a relative newcomer to the provision of primary care, their development being spurred on by recent health reforms, so many practice environments have not been fully prepared to integrate their role (Gardner et al 2004). Ongoing challenges to more effective teamwork between GPs and other health care providers include the split responsibility for primary health care between Commonwealth and State jurisdictions leading to incompatible systems of funding and accountability (Bowers 2010, Powell-Davies et al 2009). Recent reforms, including Australia's Primary Health Care Strategy, have identified the integration of services as a priority and better coordination of care has been encouraged through specific Medicare items to facilitate inter-professional case conferencing (Department of Health and Ageing 2009, McDermott & Schmidt 2001).

Specifically in regards to NP prescribing, NPs do have prescriptive authority in legislation where they are registered. The format varies by State/Territory. In Victoria, for example, there is a specific formulary with lists of categories of drugs. In New South Wales, each NP negotiates a specific formulary approved by local stakeholders and the CEO of the health authority. The main issue is, however, that if they are in independent practice they are not able to get a provider number for the Pharmaceutical Services Benefit (PSB) which is regulated at the Commonwealth level. This in effect means that if an NP makes a prescription their patient would have to pay out of pocket for it. This is less of an issue for institutionally based NPs, such as tertiary care NPs in hospital – that cover medication costs. So far only physicians have provider numbers but there has been lots of agitation on the part of NPs and other prescribers to get PSB provider numbers.

## **4. Discussion**

In sum, we see that professional social closure strategies adopted by the medical profession is increasingly being challenged in each of the four countries (in varying degrees) and for both professions (nurses and doctors). There are calls for portability of credentials (at least within national boundaries, but also for some internationally educated doctors), and a broad scale move towards breaking down at least the regulatory barriers to inter-professional collaboration between physicians and nurses which has included the expansion of the scope of nursing practice to take up traditionally exclusive domains of medicine. Indeed, we are witnessing an overall increased fluidity or permeability of professional boundaries both inter-professionally and intra-professionally.

Some differences remain strong, though: in the U.S, macro-regulation (at the legislative level) remains constraining and protects the professions (even preserving strong *de jure* medical dominance) but the numeric growth of non medical professions (NP's and PA's) combined with the role of consumer choice has led to an overwhelming decline of medical dominance (Pawlson and O'Kane, 2002, Cooper, 2001). As a result, prescribing by non physicians is more common in the U.S despite scope of practice

regulations than in the three other countries. In the British NHS, medical dominance remains very strong despite numerous calls for a primary care reform and patient-centered care: the only way to go around scope of practice limitations in a centralized, universal and free public system with a perceived shortage of providers (at least a limit on the amount of choice faced by consumers) was to reinforce medical dominance and to force collaboration under the supervision of physicians. They lead and control the PCT's and hold the funds that are spent locally on secondary and tertiary care. The other two systems with public universal coverage for nurses and physicians services (Canada and Australia) share the same features and evolution as the British system, indicating that it is the difference between the state and the market that matters to explain differences in regulations of the professions.

If the general trend is toward external elements (the state or the market) to increase their interference in the relationship between health professionals and patients, as well as to arrange the provision of care in a way to minimize costs for a given quality, it seems that the market (through its overwhelming strategy) is able to decrease professional autonomy faster than the state. In the U.S this is the result of the so-called "managed care" revolution. When someone manages care, the autonomy of the professional in the delivery of care has to be limited; similarly, the manager intervenes to make sure that services are delivered at the lowest possible cost for a given level of quality, hence relaxing the rules of scope of practice. Lastly, managing care entails some monitoring of the quality of services delivered.

Managed care is hard to describe because plans differ from each other in their processes and philosophies (Glied, 2000). In the U.S., where managed care is pervasive, plans tend to cover more services, specifically preventive services, and rely less on consumer cost-sharing, than traditional indemnity plans used to do. They tend to put the emphasis on controlling providers rather than patients. The logic of managed care is that the plan bears the financial risk (rather than the patient/insured) and sells a product (health maintenance and restoration) rather than mere coverage for a range of services provided or prescribed by autonomous professionals (Choné et al. 1999). Health professionals therefore become resources in the production of health maintenance and restoration and, as a result, they lose their autonomy and resemble employees of the management unit. Health care tends to become another business, where capital (those who own, manage, and run the plan) hires labour.

The main transformation in labour relations following from such a logic is called selective contracting (Glied, 2000): whereas indemnity plans tended to reimburse care provided by any willing and locally licensed physician, managed care plans restrict access to a panel of physicians. The typical and pure managed care plan is fully and vertically integrated: providers who work for the plan work for its patients only and patients are not covered at all if they seek care outside of the panel; however, the vast majority of plans rely on more flexible contractual arrangements through which providers are allowed to contract with several organizations and patients can get reimbursed (albeit with a higher co-payment rate) if they seek care from a non contracted provider (Preferred Provider Organizations). The other transformation is the change in skill mix that managed care imposes: a patient enrolled in a managed care plan will have to share access to a given physician with more people but will have easier access to non-physician professionals such as nurses or physician assistants (Cooper, 2001). As a result, medical dominance will be overwhelmed by the sheer number of allied health professions: the number of nurse practitioners in the U.S will have increased almost six-

fold between 1990 and 2015 (Cooper, 2001), bringing their number to the same level as that of family physicians. Similarly, the number of physician assistant is expected to reach 100,000 in 2015 in the U.S.

Managed care also entails various paying schemes and departures from the traditional fee-for-service: capitation, salaries, pay-for-performance. These alternative payment mechanisms (alternative to fee-for-service) pay for an outcome (health maintenance of a given patient or population for a given period of time) rather than reimbursing the provider for whatever they incur. A capitated physician is paid for delivering care to a given patient (rather, a given category of risk) over a given period of time – this is an outcome, not a resource that the physician uses (such as their time, effort, and knowledge) and for which they are compensated. Similarly, pay-for-performance makes clear the link between the payment received and the outcome delivered by the professional. Last, salaried providers are accountable for the time they spend delivering services and working for their employer. Whatever the alternate scheme, therefore, they all reduce professional autonomy and increase the ability of the payer to monitor what the provider delivers. They also transfer the risk to providers: under capitation, providers have a clear incentive to deliver quality at the lowest possible cost, whereas under fee-for-service quality will always trump costs considerations and providers are encouraged to provide inefficient quality to their patients. Last, the monitoring relationship between the payer and the provider is also affected by the payment scheme: whereas under fee-for-service the payer must monitor and control total costs per provider, under capitation they must monitor quality (the provider has an incentive to cheat on it) and, if the payer is the agent for a large sponsor covering a group (for instance, an employer), they must also monitor case selection (the provider will try to discourage patients who tend to be high users within a given category of capitation value).

Glied (2000) shows that “managed care” (pre-paid plans with restricted panels of providers) are not new in the U.S and were even popular in the 1920s but were killed by the medical profession (doctors agreeing to work for these plans were denied hospital privileges and states passed laws prohibiting pre-paid plans). According to her, changes in the 1970s were the result of the federal government having to foot the bill of the federal programs enacted in the 1960s (Medicare and Medicaid), which motivated it to override states legislation and even to encourage managed care organizations in the 1970s. This is in accord with the first strand of thought presented in the introduction to this paper about professional autonomy and clinical governance in the 21<sup>st</sup> century: the cost of health care is now too high to be left under the control of the profession alone. Payers took control in order to limit cost inflation in health care. Ironically, in the U.S, health care is not really managed in public programs and legislative changes in the 1970s mostly allowed employers (who can be considered third party payers) to use managed care plans.

Overall, then, a market-oriented system seems to have a better ability to promote inter-professionalism and team work between doctors and other health professions than state-oriented ones. The market seems to overwhelm medical dominance under a wave of allied health professions supplying a close substitute that can be chosen freely by plans reflecting consumers' preferences. The state usually relies on doctors themselves to promote primary care reforms and lead family health teams, thus reinforcing medical dominance (or, at least, governance). This current 'success' of the market to dampen medical dominance might not be the guarantee of future such success. If one believes

that professional autonomy and dominance, as well as the social closure that accompanies it, must recede due to the “death of the asymmetric information” (Robinson, 2001), then the market is certainly in a better position than the state to erase scope of practice regulation and produce a more efficient health care system. As a matter of fact, the consumer, being better informed, will make better choices and promote primary-care led plans that have managed to better allocate human resources to produce health maintenance. However, if one believes that the end of social closure must be the result of increased complexity of care (due to increased complexity of needs of an aging population with co-morbidity and chronic, non life-threatening, conditions) rather than better informed patients, the state might have taken the right route toward efficiency in health care delivery: physicians-led systems certainly exhibit more dominance and closure, but might also be in a better position to respond to the needs of their patients. A key feature here is the level of trust patients place in their physician relative to their managed care plan. The failure of vertically integrated plans in the U.S (the Health Maintenance Organizations) to convince more than 20% of U.S potential insured, as well as the success of the more flexible PPOs, guaranteeing access to the family physician of choice to the consumer/patient seems to indicate that selective contracting, the main tool of managed care, reaches its limit when patients have to make a choice: they will, so it seems, follow their physician rather than their care manager, which seems to indicate that the market-driven ability of managed care to overwhelm social closure might be limited after all.

One last word: this comparison focuses on the public-private divide as well as on primary care reforms and the increasing complexity of health care as the main drivers toward the demise of medical dominance and professional autonomy in health care. It must be acknowledged that scholarly debate over how to plan and manage HHR more effectively largely ignores the fact that the healthcare division of labour is structured by gender and that any change in the sector is imbued with complex gender dynamics. Gender also plays a critical, if invisible role in the rationalization of the health care division of labour particularly when tasks are shifted from higher skilled and paid to lower skilled and paid workers, the latter group being predominantly female.

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