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WHO MINDS THE GATE?
Comparing the role of non physician providers in the primary care division of labour in Canada & the U.S.

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SEDAP Research Paper No. 205

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WHO MINDS THE GATE?

Comparing the role of non physician providers in the primary care division of labour in Canada & the U.S.

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Abstract: The gate-keeping role of primary care has been the most fiercely defended of the health care jurisdictions, but more recently it has become a less attractive form of medical practice. This has created an open market for the expansion of a variety of „substitute providers“. In this paper, I present comparative documentary and interview data from Canada and the U.S. on the changes and composition of the primary health care division of labour. What is revealed from this analysis is that: 1) there is a greater reliance on substitute health labour in the U.S. as evidenced by the greater number of and different kinds of primary care providers; 2) there is also a greater propensity in the U.S. towards specialization even of substitute providers; and 3) in both countries, substitute providers resist that label focusing instead on their own model of practice or niche within the primary care division of labour.

Keywords: primary care, division of labour, U.S.-Canada comparison

JEL Classification: I18

Résumé: Le rôle de premier plan des soins de santé primaires a été la compétence la plus férocement défendue des systèmes de santé, cependant, plus récemment, cette pratique médicale a graduellement perdu en popularité. Ceci a permis d’ouvrir le marché à une variété de fournisseurs de « remplacement ». Dans cette étude, nous présentons de données comparatives documentaires et d'entretiens provenant du Canada et des États-Unis sur les changements et la composition de la division du travail dans le secteur des soins de santé primaires. Notre analyse démontre: 1) que le recours à des fournisseurs de soins de santé de remplacement est plus répandu aux Etats-Unis comme le démontre l’existence d’un plus grand nombre et d’une plus grande variété de fournisseurs de soins de santé primaires 2) il existe également aux Etats-Unis une plus forte propension vers la spécialisation des fournisseurs de soins de santé y compris parmi les fournisseurs de remplacement de soins de santé primaires; et 3) dans les deux pays, les fournisseurs de remplacement résistent à cette étiquette se concentrant plutôt sur leur propre modèle d’opération ou leur positionnement dans le secteur des soins de santé primaires.

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WHO MINDS THE GATE?

Comparing the role of non physician providers in the primary care division of labour in Canada & the U.S.

The gate-keeping role of primary care providers has been a longstanding interest of scholars of the health professions. Indeed, general primary care has historically been the most highly sought after and fiercely defended of all health care jurisdictions. Although some health professions have managed to secure direct access to patients (i.e., without a medical referral), it is often at a price of severe limitations on their scope of practice (Larkin 1983, Willis 1989). More recently, however, general medical practice has become less attractive (Cesa and Larente 2004). In Canada, for example, whereas family physicians make up approximately 48% of practising, less than 40 percent of new practice entrants since 1993 are in family medicine (Hawley 2004, Kralj 1999). In the U.S., this is even lower with family physicians comprises just 20 percent of the U.S. outpatient physician work force (AAFP 2005) with some states having only 11% of their complement of physicians in family practice. This has created an open market for the expansion of a variety of what are sometimes referred to as 'substitute health providers'. This trend has an interesting gender dimension in that these substitute providers tend to be female. There is also a place dimension where there is a greater propensity to have substitute providers in rural settings. But are these providers really being substituted for physician labour; and if so, why, where and how?

In this paper, I present comparative data from Canada and the U.S. on the changes and composition of the primary health care division of labour highlighting the issue of substitution and its gender and geographic dimensions. The data include key policy documents and position statements *publicly available* from the various stakeholder groups (i.e., professional regulators at

the provincial/state level, representatives from professional associations and front line professionals) in both countries and secondary source documents from analysts writing about these issues. The primary source documents were collected through a variety of web-based searches of provider organizations and non governmental organizations who conduct health care research. Some of these data also included demographic information of primary care providers that are drawn upon to help contextualize our main argument. The data available from these documentary sources were supplemented with interviews conducted with over 30 key informants both as the national level and in the province of Ontario and the state of New York in 2004 and follow up interviews in 2006. The documents and websites were critical in the identification of the most important informants to be interviewed. Care was taken to ensure that the widest range of perspectives revealed in the documentary data (and beyond) were represented (i.e., maximum variability sampling). All interviews were taped, transcribed and along with relevant segments from the documents entered into QSR-NUDIST to assist in the thematic analysis.

Our analytical approach began with identifying the key themes that emerged from the documents to sketch out the context and dynamics which were more fully fleshed out with data from the interviews and a follow up search and analysis of additional documents. A constant comparative approach was used to identify the similarities and differences between the U.S. and Canadian cases. What is revealed from our analysis is that: 1) there is a greater reliance on substitute health labour in the U.S. than in Canada as evidenced by the greater number of and different kinds of primary care providers (e.g., nurse practitioners and physician assistants in the U.S. and nurse practitioners in Canada); 2) in the U.S., there is also a greater propensity towards specialization, even within substitute provider categories; and 3) in both countries, substitute providers resist that label – particularly nurse practitioners – and focus instead on creating their own model of practice or niche within the primary health care division of labour.

Jurisdiction, Rationalization, and the Gender Division of Labour

Studying the issue of substitute health labour naturally evokes Abbott's (1988) concept of *jurisdiction*. Specifically, Abbott conceived of jurisdiction as an area of knowledge or skill expertise that makes up the "complex, dynamic and interdependent structural network" he called the *system of professions*. Professions are said to develop from interrelations with other professions within this system when an existing jurisdiction becomes vacant or when a new one becomes created. A vacancy or creation of jurisdiction occurs in response to external system disturbances, such as technological or organizational change, or because an earlier 'tenant' has abandoned it. A profession's success in occupying a jurisdiction therefore reflects on the situation of its competitors as much as it does the profession's own efforts. Another key factor influencing the success of jurisdictional disputes is the audience of these disputes. Abbott proposes that the key audiences include the public, the legal system (and the state) as well as the workplace. There are several drivers for instigating chance within the system of professions not the least of which are licensing legislation and funding of services. It is through these audiences that one is able to link the system of professions to the broader context of which rationalization is key.

Dramatic changes have occurred to various divisions of labours in the name of the rationalization of services, or the assignment of tasks to the "most appropriate" professional. This process of rationalization is often considered to be antithetical to the process of professionalization - or in Abbott's terms, a profession's attempt to secure a jurisdiction. Ritzer (1974), however, has argued based on Weber's writings that "professionalization and bureaucratization are related causes, and consequences, of growing rationality." p. 632. He suggests that this discrepancy may be due to the amount of attention paid in the professions literature to the case of physicians in private practice. He states further, "(u)nlike most

occupations, the physician existed apart from formal organization ... (b)ut most professions never existed outside of bureaucracies, hence never faced the conflict experienced by the physician." p. 632. Another limitation of the literature that examines rationalization and the professions is that the impact of rationalization is viewed mainly in terms of just one profession - primarily medicine - and not from a system's perspective that takes interprofessional competition into consideration. Rationalization could in fact be a process conducive to the professionalization of non-dominant professions within a division of labour as has been the case for some health professions (Bourgeault, 2005).

Gender has a noteworthy influence on the rationalization process. It is generally acknowledged that there exists a gender-based division of labour both within and between occupations assigning a secondary status to women. This is particularly salient in the health care division of labour (Armstrong and Armstrong 1992, Butter et al. 1987, Kazanjian 1993). This is relevant to the rationalization process because when we take a closer look at the move toward the most appropriate care provider, it is often a group with a greater proportion of women than the group being replaced. The reasoning behind this process is related to societal notions of skill which has been argued to be inherently gendered.

The delegation of technical skills to women has long been justified on the basis of driving down the cost of labour (Wajcman 1991), and female health professions are no exception to this observation. Historically, the poorly rewarded work of nurses, for example, was viewed as a natural extension of the caring services that women provided for their families in the private sphere; it was therefore not seen as the product of rigorous preparation or guided by an abstract base of knowledge (Coburn 1987, Kazanjian 1993). However, the notion that people are paid on the basis of their skills obscures the very nature of skilled work as a socially defined and socially evaluated set of characteristics that varies according to the gender, ethnicity, and power of

workers, as well as with historical and economic context (Gaskell 1987). Specifically, female health care providers operate within a social system of health care that devalues their skills and knowledge. Much of the knowledge that nurses possess, for example, is tacit and embodied, and they have argued that they are disadvantaged by gendered constructs of skilled and unskilled labour.

So we know that gender has an impact on the process of rationalization, but what of the impact of gender on efforts to claim a jurisdiction within a division of labour? Although this is not fully conceptualized by Abbott, the work of Anne Witz (1992) is instructive. Specifically, Witz argues that the process of professionalization is inherently gendered because largely female professions "have differential access to the tactical means of achieving their aims in a patriarchal society within which male power is institutionalised and organised." (p. 677). She elaborates on two strategies in particular: legalistic strategies directed towards the state and credentialist strategies directed towards institutions in civil society. She argues that credentialist strategies proved to be less effective at advancing female professional projects than legalistic strategies. Her analysis, albeit insightful, evolved from more historical cases. What this study aims to contribute to the literature is a comparative examination from a gender lens of contemporary cases of the struggle for jurisdiction - primary care - within the context of rationalization of the health care division of labour.

The Primary Health Care Division of Labour: Background and Demographic Profiles

Canada

The primary care division of labour in Canada is organized mainly around family physicians (FPs) and general practitioners (GPs) working in solo and small-group practices (Hutchinson, Abelson and Lavis 2001). FPs and GPs differ is in terms of their entry into the profession;

specifically, entry into general practice followed a one-year rotating internship after graduation from medical school whereas entry into family practice requires the completion of a one to two year residency program (Thurber and Busing 1999). Fee-for-service (FFS) payment is the dominant form of physician remuneration and the majority of primary care medical practices are owned and managed by physicians (Hutchinson, Abelson and Lavis 2001). Less than 10 percent of primary care physicians work in multidisciplinary practices which in Ontario include Health Service Organization (HSOs) and Community Health Centres (CHCs) (Hutchinson, Abelson and Lavis 2001).[1]

The main substitute provider for primary care physicians in Canada have been primary care nurse-practitioners. Nurse practitioners are registered nurses who have additional training in the assessment, management and diagnose of common illnesses and complaints (Birenbaum 1994). They were first introduced into the Canadian health care system in the 1970s (Banjnok 1993, Haines 1993, Mitchell et al 1994). Several educational programs for expanded role nurses subsequently opened in Canadian universities, including three in the province of Ontario (Gray 1983, Mitchell et al. 1993). Many were government-funded demonstration projects designed to prepare nurse practitioners for practice in underserved and outpost locations (Haines 1993), but a few were oriented to providing nurses with primary care skills that could be used in more general settings, such as community health facilities and family practices (Gray 1983). During the 1970s, 250 NPs graduated from provincial nursing schools across Canada; most went to work in underserviced areas, but CHCs were also a key employer (Birenbaum 1994).

The integration of primary care NPs was slow due primarily to some medical resistance as well as a lack of legal and financial support from various provincial governments until most

[1] By way of contrast 20 percent of family physicians and GPs in Quebec work in CLSCs.

recently (Van Soeren et al 2000) (*discussed more fully below*). It wasn't until 1994 that the Ontario government announced a plan for the ongoing education and employment of primary care NPs which followed a year later with the entrance of the first class of NP students into the 10-university consortium of nursing education programmes (Sidani, Irvine and DiCenso 2000). As Van Soeren et al (2000) describe,

> Programme development was stipulated at the post-baccalureate level to prevent restriction of enrolment for Ontario universities which do not offer graduate programmes. Individuals with university nursing degrees could complete the certificate programme in 1 year of full-time or 3 years of part-time study; diploma-prepared registered nurses could combine a baccalaureate degree and primacy care nurse practitioner certificate in 2 years of full-time or 3 years of part-time study. (p. 826)

Between 1995 and 2000 over 300 NPs have graduated from the program (Sidani et al. 2000).

In 1997, the Ontario government passed the Expanded Nursing Services for Patient's Act which enables NPs to practice within multidisciplinary primary care teams, to communicate diagnoses of common disorders, to order certain diagnostic tests, and to prescribe certain drugs and/or non-pharmaceutical treatments (Sidani et al. 2000). Funding for approximately 220 primary care NP positions in Ontario was announced in 2001 and initiatives to train, license, or fund primary care NPs have been implemented or are under way in several other provinces and territories (Canadian Nurse Practitioner Initiative (CNPI) 2005).

According to a recent survey, primary care NPs in Ontario tend to be experienced, middle-aged, female Registered Nurses who have post-basic training at the Baccalaureate level to undertake advanced practice (Sidani et al. 2000). Approximately half are employed in CHCs, while a smaller number practice in physician's offices and health service organizations or in

ambulatory, emergency and long-term care facilities (Baxter 2000). Only 10% work in remote out-post settings or nursing stations (Sidani et al. 2000). Because there are so few primary care NPs, specialization is not extensive but the areas of wellness care of children, women and seniors, mental health/psychiatry, urgent care triage, and long term care management are a few of the directions specialization seem to be taking (Alcock 1996).

United States

The primary care division of labour in the United States is much more complicated than it is in Canada due in large part to the smaller percentage of FPs or GPs providing comprehensive, continuous care [20% of the U.S. outpatient physician work force are family physicians (AAFP 2005) with some states having only 11% of their complement of physicians in family practice]. This has resulted in the expansion of primary care role of specialist providers - gynecologists for women, internists for men, pediatricians for children, and geriatricians for older men and women. For example, in a recent study of obstetrician-gynecologists, a sizeable minority (38%) identified themselves as primary care providers; 35% of medical students expressed similar sentiments (Kirk et al. 1998).

In addition to a more diffused medical portion of the primary care division of labour, there are also a greater number and variety of substitute primary care providers in the United States. Specifically, in addition to nurse practitioners, there are also physician assistants (PAs) many of whom have come to take on a greater role in primary care. First, with respect to NPs, there are a great many similarities to those in Canada. Like in Canada, primary care NPs emerged on the primary care landscape in the late 1960s and early 1970s (Van Soeren et al 2000). NPs in the U.S. are also Registered Nurses who have undergone additional training to prepare them to provide direct patient care in many types of settings, including health centers,

private physicians' offices, hospitals, and schools (Grove 1992). In contrast to NPs in Canada, most practising NPs in the U.S. are prepared at the Master's level and further are nationally certified within their field of specialization (Cooper, Henderson and Dietrick 1998, Sidany et al. 2000). These include adult, family, pediatrics, women's health, gerontology, and school and occupational health (Cooper, Laud and Dietrick 1998). In fact, these specialties match the specialties of the physicians NPs work most closely with – often with collaborative practice agreements.

In terms of size, NPs are the largest group of non physician primary care provider and they have experienced the greatest amount of recent growth. According to the American College of Nurse Practitioners, there were an estimated 141,209 nurse practitioners with credentials as NPs in the United States in March 2004, an of 38,560 from 2000. Further it was projected that the number of NPs in clinical practice in 2005 would equal the number of family physicians (Cooper, Laud and Dietrick 1998). This rapid growth is due in large part to the increase in the number of educational programs. Specifically, in the five-year period between 1992 and 1997, the number of master's level programs for NPs grew from less than 100 to more than 250 (Cooper, Laud and Dietrick 1998).

As noted above, PAs are the other group of non-physician primary care provider. Although the first PAs in the United States emerged from a fast-track three-year medical curriculum that was developed to educate physicians for military service during WWII (PA History Office 2003), the birth of the profession is generally dated to the 1960s with the return of medical corpsmen from Vietnam (Hooker and Freeborn 1991, UCSF Center for the Health Professions 1999). PAs practice medicine under the supervision of a physician in a variety of roles and settings. Their educational programs admit students with a wide variety of previous education and experience and their training is 24 months in length offered at a certificate,

associate degree, bachelor's degree or a Master's degree level (Davis, Johnson and Werdegar 2000). Often considered a "condensed version of medical school," the first year of the program involves didactic training in the medial and biological sciences whereas the second year is devoted to clinical training (UCSF Center for the Health Professions 1999). Before entering practice, all PA candidates must pass a national certification exam (Davis et al. 2000).

Similar to the NP profession, albeit less dramatic, the PA profession has experienced a recent surge in growth due to the expansion of training programs. For example, Cooper, Laud and Dietrick (1998) found that the number of PA training programs increased by 50% to 76 in the five-year period between 1992 and 1997. In 2002, there were over 42,000 PAs practicing in the U.S. (American Academy of Physician Assistants www.aapa.org/research/clinprac2002.html). There are, however, some important differences between the NP and PA professions. First, whereas PAs are trained in the medical model, NP training evolves from a nursing background. Further, the vast majority of NPs practice primary care (95%), but only slightly more than half (55%) of PAs do (Cooper, Laud and Dietrick 1998). The others provide technical and specialty support in areas such as pathology, radiology, surgery, and orthopedics. Demographically, there are more male PAs than there are male NPs, due in large part to its historical evolution from military service, but the PA profession has more recently become feminized such that the 1996-1997 entering class is 61% (UCSF Center for the Health Professions 1999). Entrants into the PA profession also tend to be younger than recruits into the NP profession (Davis et al. 2000).

---- Insert Table 1 Here ----

"Substitution" as a Response to Medical Shortages

Historically, the tasks of various workers within the health care system were determined by the medical profession but increasingly these decisions are being made by health care managers

(Deuben 1998, Sutherland and Fulton 1994). To a large extent, management initiatives were related directly to the fluctuations in the supply and maldistribution of physicians. That is, interest in shifting the provision of what were acknowledged to be medical tasks to others was considered in times of physician shortage. This is particularly salient in primary care and as alluded to previously, it has had an enormous impact on the expansion of non physician primary care providers in both Canada and the U.S.

Canada

> "Because NPs can offer some services typically provided by physicians, such as ordering tests, diagnosing illness and prescribing drugs, they play an important role in isolated or inner city communities, including where physician shortages occur" (Hawley 2004: 11)

The Ontario case is illustrative of the relationship between the fate of NPs and medical human resources. NPs were introduced in Ontario in the early 1970s within the context of a perceived shortage of family physicians (Elder and Bullough 1990, Haines 1993, Mitchell et al. 1993). This shortage of family physicians was largely attributed to a trend towards increasing specialization in medicine. At the time, attempts to define the role of NPs seemed to be made in terms of the relationship of that category of worker to medicine rather than as a new and distinct health care occupation (Haines 1993). For example, at the 1970 annual meeting of the RNAO, it was resolved that the concept of the expanded role of the nurse "be identified, defined, and interpreted by the nursing profession *in collaboration with the medical profession*" (RNAO Supports 1970, in Haines 1993, p.7). A 1971 government-sponsored conference, entitled the National Conference on Assistance to the Physician, engaged representatives from nursing and

medicine in discussion about new and *complementary* arrangements between medicine and nursing that would address the physician shortage.

By the end of that decade, however, there was no longer believed to be a shortage of physicians, and a powerful medical lobby directed its attention to NPs. A Canadian Medical Association (CMA) committee on 'allied health personal', for example, insisted that there was no need for nurses to provide primary care (York 1987). Subsequently, the medical profession exercised political pressure to have the funding for NP programs at Canadian universities cancelled, the last of which closed in 1983 (Spitzer 1984). There was also a consequent decrease in practice opportunities for NPs which quickly led to the near collapse of the initiative.

Curiously, in the 1990's at a time when the tide turned to deal with a perceived oversupply of physicians, the NP subspecialty again received government interest and sponsorship. In Ontario, this was the time when many legislative gains by NPs were made. More recently this perceived oversupply of physicians has turned to a shortage in the past few years due to the decreases in medical school enrolment and residency placements; an increase in the average length of FP training from 1.8 to 2.3 years between 1993 and 1998 (Thurber and Busing 1999); and increasingly many primary care physicians are now choosing different practice patterns, specifically shorter working hours and lighter workloads. Some of the reasons behind this latter trend is related to the increase in the number of women in family medicine which now stands at 60.5% (Hawley 2004). Specifically, it has been found that female physicians work on average 10 fewer hours per week, due in large part to childcare and domestic tasks (Kralj 1999). In the face of this shortage, NPs have again been promoted as an important source of additional primary care labour.

Thus, despite the blip in the 1990s, it is widely believed that the supply of NPs is linked to the supply and distribution of physicians (Clements 1999). Clearly the early wave of NPs was

intended as a temporary solution to the physician shortage, and once adequate numbers of physicians were available, these workers constituted a form of competition. This suggests that NPs are sometimes regarded as a sort of "reserve army of labour" when physicians are in short supply.

United States

As already noted, one of the key reasons for expansion of opportunities for non physician primary care providers in the U.S. is because there are so few general primary care physicians in the first instance. Indeed, as is the case for NPs in Canada, it is generally accepted that the development of both the NP and PA professions were to fill the void left by a dramatic undersupply of physicians (UCSF Center for the Health Professions 1999). For example, in a recent report comparing NPs and PAs, Davis, Johnson and Werdegar (2000: 7) state that both professions ...

> ... [were] established in response to concerns about access to primary care, particularly in impoverished rural and inner city communities ... During the mid-1990s, perceptions of a shortage of primary care physicians prompted renewed interest in these professionals to augment the primary care workforce. Experts called for doubling the numbers of NPs (and) PAs ... in the United States.

A recent survey of NPs and PAs in California, found that 39% of NPs and 39% of PAs work in underserved settings in both rural and inner city areas (Davis et al. 2000).

Others, however, feel that the rise in the number of non physician providers in primary care “are occurring at a time when there is increasing concern about an impending oversupply of physicians” (Cooper, Laud and Dietrich 1998 p. 788). Kassirer (1994: 205), for example, argues that “The assumption that nurse practitioners will gravitate toward the inner city and rural sites is

based on the observation that many practice in these areas now. In fact, less than one fifth of nurse practitioners are based in such locations and many are there because those were the places where they could find work." What is also known is that there has been a dramatic increase in the number of nurse-practitioners and nurse-practitioner training programs, with the greatest concentration in those states that already have the greatest abundance of physicians (Cooper, Laud and Dietrich 1998). So PAs and NPs tend to follow similar patterns of distribution as physicians with the greatest density in the Northeast. Some of the reasons for this distribution pattern were related to state support of the practice of these non physician providers (which includes enabling legislation - discussed more fully below) and the location of the educational programs.

"Substitutes" as Alternative or Complementary Care?

> "Further study to skill mix changes and whether non-physician personnel are being used as substitutes or complements for doctors is required urgently." (Richardson et al. 1998)

Given that it is largely believed that increased interest in NPs and PAs occur during times of physicians shortage, it is therefore critical to ask whether these 'substitute' providers are being used as an alternative to or complementary to general medical practice.

Canada

Both alternative and complementary perspectives are evident in the Canadian context. For example, some health economists estimated that between 20% and 32% of general practitioners in Ontario could be replaced by an NP (Lomas and Stoddart 1985). This lends credence to the alternative hypothesis. A complementary approach, however, is most salient, particularly at both

the political and medical level. For example, one family physician who has worked extensively with NPs noted that "The family practice and nursing models should mesh very nicely to fulfil the demand that NPs' strengths in patient education, counselling and health promotion be linked with family physicians' strengths in diagnosis, treatment and prevention of disease." (Dr. Daniel Way in Birenbaum 1994: 77)

Representatives from the Ontario Medical Association are even more forceful when it was stated that "Physicians cannot be expected to accept the proposal to create another health care provider when that creation is based on their own devaluation." (Dr. Ted Boadway in Birenbaum 1994 p. 77). More recently with the discussion of various primary care reform models, there has been a greater emphasis on teamwork where NPs are considered to be part of the team [ideally a ratio of 1 per 5 family physicians (*cf.,* Graham 1999)] but family physicians would have a 'coordinating' role. For example, OMA representatives "have recommended the reorganization of primary care towards an integrated health care system (with the) family practitioner as the cornerstone and gatekeeper for the health care system ...the physician is best able to provide comprehensive, continuous primary care services and should remain as the principal co-ordinator of access to publicly funded medical services." (Graham 1999: 37 … 23). Again, more forcefully, "The OMA oppose any primary care model which includes rostering with anyone other than a physician" (Graham 1997: 47). Because of this particular stance of the medical profession, Seguin (2001: 13) has concluded that primary care reform is as much about "the promotion and aggrandizement of the family medicine specialist, rather than on the dilution and degradation of primary care by multiple paramedical personnel."

At the practice level, Way et al. (2001) found from and analysis of a total of 122 encounters involving NPs and 278 involving FPs that the most frequent reason for visiting an NP was to undergo a periodic health examination (27% of reasons for visit), whereas the most

frequent reason for visiting an FP was cardiovascular disease other than hypertension (8%). Delivery of health promotion services - usually considered a mainstay for NPs - was similar for NPs and FPs (11.3 v. 10.0 instances per full-time equivalent (FTE)). Not surprisingly, the delivery of curative services was higher for FPs than for NPs (29.3 v 18.8 instances per FTE), as was provision of rehabilitative services (63.7 v 15.0 instances per FTE). In contrast, NPs provided more services related to disease prevention (78.8 v. 55.7 instances per FTE) and more supportive services (43.8 v. 33.7 instances per FTE).

United States

> "Some people in the health care field regard NPs as "physician extenders," augmenting the services provided by physicians, while others insist NPs are autonomous professionals, able to work independent(ly) from physicians." (Grove 1992: 143)

Even in the U.S. where there is much more extensive use of NPs and PAs, there is debate over the alternative versus complementary role that they play. Druss (2003) for example, argues that more patients are seeing both physicians and non physicians whereas relatively fewer patients see only non physicians. This is more evidence of a complementary rather than substitute model:

> "There's not that much evidence of nonphysician practitioners taking the place of physicians since our study shows that more patients are seeing both while fewer patients are seeing only nonphysicians. ... we didn't see much evidence of nonphysicians practicing independently as clinicians but rather conjointly" (Barclay 2003)

Similar to what health economists argued in Canada, however, it has been argued in the U.S., that mid-level providers could do 80 percent of the work of primary care physicians

(Kindig 1996). So increasingly PAs and NPs are largely considered substitutable in the U.S. context. Further evidence of this is that the U.S. Bureau of Primary Health Care recently revised the regulations used to designate primary care shortage areas to now include the number of NPs and PAs when enumerating a community's supply of primary care providers (Davis et al. 2000).

In addition to the basic lack of general medical practitioners or family physicians in the U.S., another key factors leading to the greater recognition of the substitutability of NPs and PAs for GPs/FPs is the role of state licensure laws. For example, Shi and Samuels (1997) argue that "[s]tate decision makers may reduce legislative and regulatory barriers to practice as a way to improve the practice environment for nonphysician primary care providers, particularly NPs and PAs." As a result,

> "Changes in state laws and regulations are enhancing the practice prerogatives of [NPs and PAs] ... Their breadth of clinical responsibility is expanding as their regulated scope of practice, prescriptive privileges, and independent authority are increased." (Cooper, Laud and Dietrich 1998: 788 ... 793)

There are some differences, however, between how NPs and PAs are able to practice. NPs, for example, tend to be more independent in that physicians are often not even there whereas PAs are required by law to have more supervision. According to Cooper, Henderson and Dietrich (1998):

> "NPs have independent practice authority in 21 states ... in other states their practice authority is contingent on physician delegation or oversight. However, the direct involvement of the delegating physician may be at intervals extending from a few days to 2 weeks, and only 2 states require that a physician be physically present ... In contrast, PAs practice with physician direction and within the scope of practice of the supervising physician, as with NPs, this supervision

> may be intermittent and at a distance, and the autonomy of PAs may be substantial." (p. 796)

NPs also have greater coverage by private health insurers than PAs do (see Table 1).

In terms of the content of care, Cooper, Henderson and Dietrich (1998) noted that the services provided by NPs and PAs in the aggregate, overlap a subset of the services that physicians generally have provided, encompassing levels of care than can be characterized as "simple licensed general care" (p. 795). For example, most states permit NPs and PAs to perform physical examinations and make diagnoses throughout the range of disease and dysfunction that falls within their training expertise." Substitution of tasks is particular salient in the hospital setting where the work of NPs and PAs was previously provided by resident physicians. Some warn that this increasing overlap is likely to cause even greater pluralism in the U.S. health care system. Mundinger (1994) for example, noted how

> "Earlier in this century Abraham Flexner confronted an analogous problem of heterogeneity and oversupply among physicians. What followed was an effort to link education, regulation, and clinical practice within a single discipline. The circumstances are different today, but the requirements are no less. It is time for interdisciplinary regulation and clinical integration so that a health care workforce that includes a diversity of disciplines can be assured of providing a uniform level of care in the future."

Saving Through the Greater Use of Non Physician Primary Care Providers?

A key driver of the rationalization of the health care division of labour has been a concern over rising health care costs which, as mentioned above, has resulted in care being provided by the lowest cost care provider. As noted by Deuben (1998), "Managed care plans make use of the

substitution of labour personnel and the use of multidisciplinary health care delivery teams as cost saving measures." (p. 72). Similarly, state administered health care systems, such as the one in Canada, are also interested in the potential cost saving benefits of substituting less for more expensive health care providers.

Canada

Arguably one of the key reasons for this resurgence of interest in the recent NP initiative has been the cost-effectiveness argument. Health economists in Canada, for example, estimated that Canadian taxpayers could save more than $300 million a year by increasing the use of nurse practitioners (Lomas and Stoddart 1985). Paralleling this argument, Ontario Minister of Health officials stated "nurse practitioners can provide a wide range of effective services at a lower overall cost to the health care system." (as cited in Birenbaum 1994: 78). Cost-savings would result because: 1) practices that employ NPs could provide more services for a fixed amount of health care dollars; 2) length of hospital stay could be reduced by having NPs provide more community care; and 3) it is cheaper to train a NP than it is to train a physician (Gray 1983). This is consistent with our earlier argument that primary care NP initiative can be seen as a product of the state's interest in containing rising health care costs (Angus and Bourgeault 1998/99).

United States

It is important to preface the discussion of potential cost savings of employing non physician primary care providers by stating the important gatekeeping role that primary care providers play in limiting access to more expensive specialty care and how these are in great demand in managed care organizations (Deuben 1998). Beyond this, many argue that NPs - and by

extension, PAs - were embraced by health planners for it "potential in improving care, lowering costs and increasing accessibility, especially for people living in rural areas and the urban inner cities (Grove 1992: 143). Indeed, analysts Inglis and Kjervik (1993) report that if NPs were used more extensively and to their full potential, an estimated $6.4 to $8.75 billion would be saved annually in the U.S. in part due to the fact that average cost per visit for NPs is $12.36 whereas it is $20.11 for physicians. Much of these saving, however, are based on the much lower salary for NPs than for physicians. This pay equity issue has been picked up by physicians who are critical of this expansion of care substitution. Kassirer (1994) for example, argues that "we cannot expect nurse practitioners (mostly women) to do comparable work and yet be paid less than physicians (still mostly men). Indeed, many NPs are already calling for equal pay for equal work." (p. 205).

Resistance of the 'Substitute Provider' Label & Clarifying Roles

Canada

Although part of the impetus for the development of the NP role in Canada was a perceived physician shortage, it was also influenced by the changing role of the nurse. Bajnok and Wright (1993) specifically argue that Canadian nurses saw the NP role as an opportunity to expand their scope of practice and to demonstrate the impact nurses have on the health status of Canadians. So instead of considering themselves as 'substitute' providers, NPs focus instead on creating their own model of practice or niche within the primary health care division of labour. NP Linda Jones (as cited in Birenbaum 1994) expressed the following:

> "I have no desire to be a pseudodoctor. The bottom line is client safety and respect for my knowledge base. ... I will always choose to be in a collaborative practice. ... working in collaborative practice I have the best of both worlds: a full

> autonomous role in nursing where I can use all my nursing knowledge, plus immediate backup of medical knowledge" (p. 77)

Some are particularly aware of the precarious political context in which they practice. Byrne et al. (1997: 20) for example argues, "Replacing physicians with nurse practitioners would only perpetuate the reactive, on demand, piecemeal structure of care that now prevails. More complete and proactive care aimed at all factors that determine health ... can be provided by nurse-physician teams."

But in focusing on their complementary, many NPs stress that they are still independent practitioners. One of the architects of the Ontario NP initiative, Dorothy Hall, states, "nurses ... are tired of the nonsense of doing something, prescribing, treating, sending the patient home, and then the next morning walking pieces of paper down the hall for the doctor to sign. It's idiocy. If she diagnoses physical illness within the realm of nurse practitioner, she doesn't need any orders from a doctor." (as cited in Birenbaum 1994).

United States

In the U.S. context where there seems to be a greater degree of substitution happening, it is interesting to see that consistent with what was found of NPs in Canada, there is resistance of the 'substitute' label for similar reasons:

> But then you can use that rationale 'Well we don't need nurse practitioners cause we've got plenty of primary care docs', and I'm not sure that that's really true. The thing that we bring to this is that we have the nursing perspective … and that combination is very valuable in terms of providing primary care services and should make physician groups want to team up with nurse practitioners. US NP key informant

Part of the reasoning behind the resistance of the 'substitute' label may be due to how NPs have had to struggle to establish their roles from a position of marginality in a context of conflict and negativity - particularly from physicians with which they were seen to be in competition (Martin and Hutchinson 1999). This is also consistent with the reasoning behind the choice to go on to become an NP - specifically, because of the dissatisfaction of working as nurses and the need for professional recognition (Grove 1992). Some of these complexities, however, may be due to different aspects of the two distinct philosophies of practice between PAs and NPs. Cooper, Henderson and Dietrich (1998), for example, noted how ...

> "PAs ... generally share with physicians the 'medical model' of care ... NPs ... care for patients within a 'nursing model' that emphasized prevention, case management, patient education and counselling ... These different philosophical orientations lead to differences in both the characteristics and content of care for identical disorders, and they add complexity to any direct comparisons of the spectrum of services provided." p. 801

So it seems more natural for PAs to consider themselves complementary - because their profession has been created to assist physicians within a medial model. The resistance of the substitute label on the part of NPs, however, is likely due more to the different model or philosophy from which they practice and seek to provide care.

Discussion

As noted by the title of this paper, one of our key concerns was regarding the changing nature of gatekeeping in primary care, and in particular who would be in charge of this role. In Canada, GPs/FPs are clearly guarding the gate with only a few NPs at the margins. In the U.S., however, this is a much more crowded gate that includes not only primary care medical specialists but also

a greater percentage of NPs and PAs, both groups which are rapidly expanding. The question remains in the U.S. case as to whether this results in duplication and medical pluralism or simply a filling of the void left by too few GPs/FPs.

Indeed, non physician providers in the U.S. are far more integrated into the primary care deliver system than is yet the case in Canada. Ongoing challenges for Canadian NPs include the lack of a clear definition or consistently protected title for people calling themselves "nurse practitioner" and as a result, the term takes on different meaning to different people in different jurisdictions (Birenbaum 1994). There are also difficulties experienced in Canada due to a lack of universally accepted standards of education and practice for NPs or other advanced practice nurses (Alcock 1996: 25) though there have been some recent movement in this direction. In those jurisdictions where NPs have been successfully introduced in Canada, they are able to practice with more independence – at least as indicated in their regulations – than in many parts of the U.S. Everyday practice patterns would need to be analysed to see if this is indeed the case.

Although there is less of an indication of collaborative work force planning and policy in the U.S. (*c.f.,* Robert Graham Center 2001) in comparison to the nationally and provincially coordinated primary care reform initiative in Canada, the end result in both cases has been the expansion of educational programs and practice opportunities. As Hutchinson, Abelson and Lavis (2001) argue, the direction of primary care reform will clearly require interdisciplinary practice involving an expanded nursing role. There is, however, the practical problem of solving the crisis in primary care with NPs where there is an even larger projected shortage of nurses than there are of physicians (Hawley 2004). In light of this, it is interesting to see that in a recent communique from the College of Physicians and Surgeons of Ontario (June 2004), that they felt the need to look into the possibility of developing a PA option for the first time in the Canadian health care system.

At a more theoretical level, these cases of non physician primary care providers do highlight the underlying notion of a 'reserve army of labour' but somewhat inconsistently. It seems to be the case that when the jurisdiction of primary care becomes vacant - i.e., through medical shortages or maldistribution of services - it becomes easier for it to become occupied by other providers. There is evidence that non physician primary care providers are utilized most extensively in times of shortages, but some of the cases of where NPs and PAs work in the U.S. and to a lesser extent in Canada, contradict this. Specifically, in terms of distribution we tend to find NPs and PAs in the U.S. where there are also a sizable proportion of physicians. This may be a direct cause of the regulatory rules around collaborative practice agreements which are employed more extensively in the U.S. This limits the independence and therefore distance with which non physician providers can be from their collaborating physician. So from a policy perspective, whether these non physician primary care providers will really be a solution to the crisis of underserviced areas seems quite unlikely.

The broader context of rationalization is a key frame for this jurisdictional dispute - and economic rationalization in particular where the lowest cost care provider is considered ideal. But this is a double edged sword for non physician primary care providers. Whereas on the one hand the argument for being a cost effective primary care provider has bolstered the expansion efforts of NPs and PAs, it is based on a contradictory pay equity issue where roughly equal work is not compensated equally. With such a sizable proportion of women in both these professions, this becomes a salient gender issue. Is primary care provided by a largely female profession paid less because it is valued less? Consistent with this, is the nursing model NPs adopt as a way to distinguish what they do from GPs/FPs in particular feeding into the gendered notions of skill? These are critical questions to be explored in future research.

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Table 1 Comparison of Nurse Practitioners and Physician Assistants in Canada and the United States

	Nurse Practitioners Canada[1]	Nurse Practitioners U.S.	Physician Assistants U.S.
Entry to Practice	Largely Master's training (n=18) but some post RC certificate (n=3) and post BScN certificate (N=2) programs	Largely Master's training after basic nursing training and one year practice as an RN[2]	Certificate, Baccalaureate or Master's level
Prescribing Rights	NPs can independently prescribe from a limited formulary in 3 provinces, an open formulary in 2; in 3 other provinces they prescribe but this is not covered in regulations - have to be negotiated in such as in collaborative practice agreements	NPs' prescribing rights are either independent (in 12 states) or collaborative (the remainder); formularies are negotiated in the latter case	PAs can only prescribe under the supervision of a physician in 47 states
Test Ordering Privileges	NPs can independently order tests from a limited list in 3 provinces, an open list in 2; in 3 other provinces they prescribe but this is not covered in regulations - have to be negotiated in such as in collaborative practice agreements	There are no regulatory limits on the diagnostic and laboratory tests that NPs can order.	There are no regulatory limits on the diagnostic and laboratory tests that PAs can order.
Reimbursement	NPs are not able to directly charge Medicare; most are funded through the organization they work within (e.g., hospital, CHC, etc.) or through specially targeted provincial funding	Medicaid reimbursement in 48 states; private health insurance reimbursement in 29 states; Medicare reimbursement[3]	Medicaid reimbursement in 49 states; private health insurance reimbursement in 3 states; Medicare reimbursement

[1] Source CNPI 2005.

[2] Hutchinson, Marks and Pittilo 2001, Table 1.

[3] Source: Cooper, Henderson and Dietrick 1998 table 4

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