

**The Nature of the Relationship Between
Comprehensive Primary Care Nurse
Practitioners and Physicians:
A Case Study in Ontario**

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Abstract

The purpose of this thesis was threefold – First to investigate the emergence from the existing health system of nurse practitioners as a new occupation. Second to make sense of how nurse practitioners developed as primary care providers in the province of Ontario. Third to understand the nature and development of the intra-professional relationship between primary care nurse practitioners and physicians in local practice settings. I used a case study approach, with both historical (document review) and empirical (ethnography and interview) components. The empirical data was analyzed from an interpretive perspective using thematic analysis. A number of theoretical perspectives were drawn on, including Kingdon's Agendas, Alternatives and Public Policy model, Abbott's Occupational Jurisdiction model, Van de Ven et al's Innovation Journey model, and Closure Theory.

The study makes 3 contributions to new knowledge. First it documents the unfolding of events and actions over time, and thus serves as a historical summary. Second it adds an analysis of the case of nurse practitioners as an emergent occupation to the existing body of sociological analyses of professions. Third, it provides insight into how nurse practitioner - physician relationships are impacted at the local level because nurse practitioners are obligated to develop a relationship with a physician in order to be able to deliver comprehensive primary care services.

The empirical component of the thesis analyzes and describes the nature of this relationship at a practice level. It also describes the use of 'workarounds' to bypass legislated restrictions in nurse practitioners' scope of practice. It analyzes how structural differences in the manner of regulation, payment, and employment status between nurse practitioners and family physicians contribute to different styles of practice and perpetuate the hierarchical relationships between nurses and physicians.

This knowledge has potential generalization to other emerging occupations, such as physician assistants and paramedics.

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1.0 Introduction

1.1 Background and outline of argument

Nurse practitioners have practiced in Ontario for more than 40 years. Despite being part of the health system this length of time, their role in the system remains an area of confusion (Hanrahan et al., 2001). Nurse practitioners provide comprehensive primary care services in collaboration with family physicians. Until nurse practitioners began providing comprehensive primary care services, these services were provided solely by family physicians. Nurse practitioner practice straddles the boundary of two established occupational categories, nursing and medicine. Nurse practitioners train initially as nurses. They identify strongly with nursing traditions and are seen by some as the “cutting edge of nursing innovation” (Barton et al., 2012). However I will argue nurse practitioner practice is different from the practice of either nurses or physicians.

I will show that Canadians have a history of recurrent difficulty accessing primary care health services. This was present even before the introduction of universal health insurance in the 1960s. Access further decreased, and by 2003 16% of the population reported difficulty accessing routine or ongoing care (College of Family Physicians of Canada, 2004). Lack of access remains a public policy and political problem. I will present evidence that nurse practitioners were introduced into the Ontario health system as a partial solution to this problem.

The Ontario government legislates and regulates the practice of 22 different health professions (Government of Ontario, 1991c). In 1997 the provincial government introduced legislation to regulate nurse practitioners' scope of practice. The scope of practice will be shown to have been limited and restrictive. It effectively prevented nurse

practitioners from practicing independently. The restrictions made it necessary for a nurse practitioner to establish a 'collaborative' relationship with a physician. A relationship with a physician was necessary to provide a mechanism to authorize some of the acts that comprise the day-to-day practice activities of nurse practitioners providing comprehensive primary care services.

Over the last decade family physicians and nurse practitioners have been encouraged to work together in inter-disciplinary, collaborative teams (Ontario Ministry of Health and Long Term Care, 2005c). Nurse practitioners who provided comprehensive primary care services in these settings, superficially appeared to be practicing in a manner similar to that of an office based family physician. Sociological theories of professions suggested this would create a battleground of inter-professional conflict over claims and counter claims for occupational jurisdiction of work (Weber, 1978) (Abbott, 1988) (Witz, 1992). The research described in this thesis sought to understand the nature of the inter-professional relationship between nurse practitioners and family physicians and how it was enacted in local practice settings.

Nurse practitioners emerged from the health systems in many countries in the 1960s as a separate, identifiable group of practitioners. Nurses have a long history of working in situations that required expansion of traditional nursing skills and roles to meet the unmet health care needs of specific groups of people in local settings (DeMaio, 1979) (Canadian Nurse Practitioner Initiative, 2006). Sometimes the local settings were components of a larger system, such as in northern Canada where 'outpost nurses' provided medical care to people living in remote communities.

Midway through the 1960s Canada introduced a system of universal health insurance. Universal, in the Canadian health insurance context, meant coverage was available to all citizens. However the insurance did

not cover the cost of all health care services. It primarily covered hospital care and physician fees, the most costly services at the time.

Provision of universal insurance increased the role of government in payment and planning of health services. The introduction of universal health insurance was not without controversy. Physicians were granted a monopoly for their services in return for their cooperation. They were also given autonomy to self regulate the members of their own profession. Only providers recognized by the government were paid for their services by the government insurance plan, effectively eliminating the free market for health services. It restricted the ability of other professions to compete with physicians. For example a physician providing primary care services would be paid for their services by the government insurance plan while a naturopath would not. The overall effect was to create a mainstream health system paid for by the government and an alternative system that did not receive government support. This was the environment nurse practitioners were introduced into.

The introduction of universal health insurance exacerbated a preexisting shortage of physicians providing primary care services. Nurse practitioners were introduced into Ontario's health system as a result of government policy – in other words, the role was developed and formalized to address the specific problem of the lack of physicians. I will argue this was done as one of a series of measures introduced by the government to resolve its inability to meet the demand for 'mainstream' primary care services. This policy decision will be examined from the perspective of Kingdon's Agendas, Alternatives and Public Policy Theory (Kingdon, 2011).

The introduction of nurse practitioners into the Ontario health system was also an innovation in the delivery of primary care services. Despite initial enthusiasm for the idea of an increased role for nurses, the profession of nurse practitioners failed to thrive in the system. When they were first

introduced into the health system in the 1970s, the government failed to make sufficient infrastructure changes – specifically regarding the payment system – to support them. The process of the innovation and its initial setbacks will be analyzed from the perspective of Van de Ven et al.'s Innovation Journey model (Van de Ven et al., 2008).

Over the next decade, other measures taken to alleviate the physician shortage began to be effective. The medical schools increased their class sizes, training positions were increased, and immigration restrictions on foreign trained medical graduates were eased. As a result of the increased number of available physicians, interest in nurse practitioners providing primary care services abated. New positions ceased to be created and training programs were shut down. A fallow period occurred for primary care nurse practitioners during the 1980s and early 1990s. Interest in extended nursing roles changed from emphasizing primary care to exploring the use of advanced practice nurses in specialized hospital units. Primary care nurse practitioners almost disappeared from the health system during this time.

In the early 1990s, a series of health system problems, including a recurrent shortage of primary care providers, led the government to introduce a series of changes in the primary care delivery system. These changes were loosely bundled into a policy that became known as Primary Care Reform. Nurse practitioners were repackaged as a component of Primary Care Reform. The government envisioned nurse practitioners as members of multi-disciplinary teams working together to provide primary care to a roster of patients. However, even this role for nurse practitioners was never clearly articulated or agreed upon.

When nurse practitioners were reintroduced into the health system, the government also introduced new organizational models of service delivery. This produced a mechanism for nurse practitioners to become employed in a large number of funded positions. However the roles nurse

practitioners were to play in these delivery models were never agreed upon. This contributed to problematic legislation being introduced to define and regulate their scope of practice. The legislation and subsequent regulations were not broad enough to allow a nurse practitioner to practice without establishing and maintaining a 'collaborative' relationship with a physician. This relationship became necessary because a physician was required to delegate some medical 'acts' to a nurse practitioner in order for the nurse practitioner to provide comprehensive primary care services. An example of an act that required delegation was authorization to alter the dose of medication to treat uncomplicated hypertension, a common primary care problem.

The relationship was called 'collaborative' and was included as a requirement in the early versions of the nurse practitioner's "Practice Standard" of the College of Nurses of Ontario (College of Nurses of Ontario, 2005). Collaboration as defined in the Oxford Dictionary is either "the action of working with someone to produce something" or "traitorous cooperation with an enemy" (Oxford Dictionary). Some physician groups saw it as the latter (Gutkin, 2008).

Expansion of nurse practitioners' practice through delegation permitted them to provide comprehensive primary care to their own list of patients. Idiosyncratic mechanisms developed at the practice level to allow delegation to occur with a minimum of disruption to both nurse practitioner and physician practices. Investigation of the nature and consequences of the relationship between nurse practitioners and physicians at this level became one of the objectives of my research.

Nurse practitioner practice grew out of generic nursing practice, as did other areas of specialized nursing. However nurse practitioner practice was fundamentally different from other areas of specialized nursing. Nurse practitioners became demarcated from other nurses when their scope of practice expanded to include autonomous ordering of diagnostic

testing, prescribing pharmaceuticals, and carrying out other procedures that had once been the sole preserve of physicians to perform. Nurse practitioners' scope of practice spans the traditional boundaries of both nursing and medical practice. This makes the work nurse practitioners perform different from other nurses working in areas of specialized nursing.

Labour, in a sociological sense, is work. It is organized into segments that are performed by different occupations. Members of an occupation perform certain tasks but not others, and occupations are given labels that demarcate one group of workers from another group of workers. Members of an occupation perform similar tasks, while members from another occupation perform a different set of tasks. Sometimes the same tasks are performed by several occupations. Members of an occupation receive training that, when completed, allows them to perform the work of that occupation. Training is often specified as to the length of time required and the specific curriculum to be covered. Training leads to certification that recognizes completion of specified training as a qualification to perform the work of an occupation. Among occupations considered professions, the division of labour is often formalized and the right to perform certain work is protected in legislation. As work evolves to become more complicated, some members of a profession limit the type of work they do and specialize within a portion of the larger area of work that 'belongs' to that occupation. In some instances new occupations arise and divide the labour with other existing occupations. An example of this is the development of X-ray technologists. Radiologists were physicians who specialized to interpret X-ray images while the occupation of radiography technician arose as a new occupation to run the machines and make the X-ray images (Larkin, 1983).

I will make the case that nurse practitioners emerged out of nursing and became a new professional occupation, which was neither medicine nor nursing. The emergence of nurse practitioners was unusual because

unlike the example of X-ray technologists, they did not perform a new type or more complicated work than was already being performed by another occupation. I will argue the work they do is not specialized nursing but something fundamentally different. This makes it an interesting case to study.

As I will discuss in more detail in my literature review, the study and theorizing about the division of labour, occupations and professions has been an area of interest to sociologists for two hundred years. It is the subject of several 'grand' theories in sociology, such as Marxist theory and Closure Theory. The study of specific professions has been the basis of 'middle-range level' theories. Examples of these theories are Abbott's System of Professions theory (Abbott, 1988) and Larson's Professionalization Project theory (Larson, 1977). These theories are used to describe and predict how professions interact with each other. Midlevel theories seek to gain insight into how different occupations negotiate work distribution and handle uneasy equilibriums at boundaries of claimed work. It is in boundary areas where claims are made by different occupations to be able to do similar kinds of work. These theoretical perspectives will be used to develop an understanding of the nature of nurse practitioner-physician relationships at a local practice level.

1.2 Researcher perspective

Researcher background and identity

I was trained as a physician more than 35 years ago. Since graduating I have had the opportunity to practice different types of medicine in a wide variety of settings. Initially I spent almost four years practicing in Papua New Guinea and Vanuatu, two low-income countries in the South Pacific. In these countries, much of the care normally provided by family practitioners in North America or Europe was provided by a variety of

health workers with titles such as Health Extension Officer, Aid Post Orderly, and Medical Assistant. The level of care provided by these health workers would have been considered rudimentary by western standards. By the same standards, the training received by these workers would also have been considered insufficient for the level of care they provided. However my experience taught me that primary care services, normally the jurisdiction of physicians in Canada, could be provided by non-physicians.

After further training, I practiced as a comprehensive family physician for 11 years in rural and remote Canadian settings. There I experienced the interdependence of nurses and physicians working together in more egalitarian relationships than are found in larger centres. For the last 19 years I have practiced in the emergency department of a small urban, regional referral centre. I was also an administrator in a multi-site hospital corporation and provided medical oversight for the region's paramedic services. My administrative experience stimulated an interest in policy making and how health systems operate.

About 10 years ago I had the opportunity to oversee the introduction of a nurse practitioner into the emergency department I worked in. This 'experiment' ultimately ended after 18 months. I spent a considerable amount of time reflecting on that experience, trying to understand why the introduction of a nurse practitioner in that particular emergency department was not sustainable.

During that period of time I enrolled in a Masters program in International Primary Health Care, which introduced me to an academic approach to thinking and systematically analyzing problems. An opportunity to do a PhD arose. It became a chance for me to reflect on my life experiences working in various health systems while learning how to do an extended piece of disciplined academic work.

The nurse practitioner I worked with in the emergency department moved into a community practice where she began providing comprehensive primary care to a list of her own patients. I had practiced as a family physician in several settings prior to the advent of Primary Care Reform in Ontario and thought I understood what family physicians did in primary care practices. Based on superficial observation, nurse practitioners appeared to me to be doing the same thing I did as a family physician. This observation has been noted by others (Alcolado, 2000). However claims were made in the literature that nurse practitioners' practices are different from those of physicians (Birenbaum, 1994) (Burman et al., 2002). I realized I did not really know what nurse practitioners did in primary care practices. I wanted to understand the basis of claims made in the literature that nurse practitioners performed similar work differently than a family physician, that they were not substitutes for physicians.

Ontological and epistemological and position of the researcher

Before outlining my research questions and methodological approach, it is necessary to declare my ontological and epistemological positions. Ontology is the nature of being or reality (Oxford Dictionary). Epistemology refers to the philosophical assumptions about the nature of knowledge. How do we know what we know? An understanding of this allows a distinction to be made between justified belief and opinion (Oxford Dictionary). Different research traditions use different approaches based on assumptions made about the nature of reality and how we can come to know it.

The most prominent research tradition used to study the physical world is based on positivism. Positivists assume an objective reality exists independently of the people seeking to know it. Reality is believed to be a stable state that can be measured, predicted and understood, as long as the correct methods of investigation are used. Positivists use specific, structured methods to measure the properties of the world and discover

the underlying reality, which is considered 'truth'. Truth is assumed to be objective, neutral, value free, and knowable. This approach has been remarkably successful in predicting properties of the physical world with a high degree of accuracy in specific contexts. In the positivist tradition, different methods of study are graded and given variable credence according to how objective and neutral the method is presumed to be (Guyatt et al., 2008).

Despite positivism being the most common philosophical position taken by bio-physical researchers, caution is required before accepting positivist ontology and epistemology applied to the social world. While it is possible to imagine a physical reality existing without humans, human social systems – such as the processes involved in the provision of health care – are constructed by humans and don't exist independently of them. Berger and Luckmann argued that social structures are constructed and maintained through ongoing interactions (Berger and Luckmann, 1966). Health care delivery in a particular location has a contingent structure, but it is meaningless by itself and would not exist without the social interpretation of its meaning. While it is possible to argue that socially constructed concepts like health care have a contingent reality, the reality is not universal. It is ephemeral and depends on the time and place in which it occurs. Concepts such as 'nurse practitioner' and 'physician' are also social constructs. While they can be useful and instrumental as concepts, they also are not universal. They don't exist outside the social realm and don't even exist outside specific locations. Therefore they cannot be studied using the same methodologies used to understand the physical world.

An alternative epistemological position to positivism is constructionism. Constructionists work on the assumption that what is called reality is constructed by and the result, of human thought (Latour and Woolgar, 1986). This opens the possibility of an ontology that consists of multiple realities and therefore multiple truths. There is a continuum of 'strength' of

constructionist beliefs. Strong constructionists believe all reality is a social construction. Weak constructionists accept some “brute facts” (Searle, 1995). Weak constructionists acknowledge the possibility of a background reality independent of human construction but maintain that most human social forms are the result of human construction and are therefore open to multiple interpretations. The goal of research in this tradition is to make sense of and understand the meaning of various social phenomena.

My stance in this study of nurse practitioners is a ‘weak constructionist’. I believe the physical world exists independently of humans but that the social world is constructed by them. As far as it can be said to exist, it does so only at a specific location and point in time. The social world is created and recreated constantly through human action. The form and features of the social world depend on the contexts in which action arises, and the influences it is subject to. Despite this, I believe, the social world can be described and attempts can be made to understand it in the short term. However the social world is constantly changing and sometimes by the time it is investigated and described, it has changed. It is difficult to say that we ever ‘know’ it.

The major implication of these ontological and epistemological stances is the impossibility of drawing firm conclusions and generalizations from the data derived from social worlds. Interpretations of data remain tentative and will be expected to change over time. Sense making was dependent upon the perspectives I brought to the research, the data analysis and presentation. Sense making for the reader will be dependent upon the perspectives they bring to reading this presentation. The implication of this is that two investigators or readers coming from different backgrounds, analyzing the same data or reading the same report, could draw different conclusions from these activities.

Reflection on how researcher perspective might have influenced the research

There were several personal perspectives I brought to this research. First I was trained as a physician and have practiced as one for more than 35 years. As such my socialization and perspective have been heavily influenced by my training and subsequent experience. Socialization to the norms and identity of being a physician is prominent in medical training (Becker et al., 1980). Strong socialization produces a particular worldview, seen as normative, that accepts without reflection many assumptions about the way the world is. As Poggi noted, “a way of seeing is a way of not seeing” (Poggi, 1965). This problem is not unique to being a physician researcher. Every researcher brings their background and contexts of their life experience to the conduct of their research. However given my research is primarily about nurse practitioners and how they interact with physicians, the potential for a weighting of a physician perspective to occur is stronger than usual.

The second important perspective is the inherent occupational differential in power between me and non-physician participants. Most of the participants knew I was a physician before I interviewed them. I was not seen as “the girl from the university” (Richards and Emslie, 2000) but rather as an experienced practitioner. As the research findings will later illustrate, physicians are in positions of power vis a vis nurse practitioners. While a physician perspective affected how situations were seen, being a physician researcher also limited what I was allowed to see. To a large extent, what I was told and allowed to see depended upon what the participants decided to allow me to hear and see. Despite my not having an existing, direct professional relationship with any of the participants, the inherent power differential between physicians and nurses in general influenced my position as a researcher with respect to the participants.

In addition to an occupational differential in power, a gender difference also existed. I am a male, researching the topic of nurse practitioners who, in Ontario, are 95.2% female (College of Nurses of Ontario, 2011a). Nursing is a gendered occupation. Nurses' work has been identified with women's work (Witz, 1990). While acknowledging the influence of the gendered perspective, I felt it was less important than the differential in occupational power between me and the participant nurse practitioners. Both perspectives – being a physician and male – were dealt with in a similar manner. I attempted to be aware of their potential effect by constantly questioning my assumptions and feeding back the analysis to participants.

My perspectives as a practicing physician also had some advantages. One of the advantages of being a physician with extensive practice experience was my understanding of the processes of primary care as practiced in Ontario. This saved many hours of observation that would have been required to understand the processes of office care and the health care system. However it also meant I was not seeing these things through fresh eyes. My assumptions about how a primary care practice should be conducted, how office routines were best organized and other preconceived ideas about the Ontario health system meant having to remain reflective.

I made a conscious effort to enter the “setting and attempt to make the familiar strange and interesting again” (Vrasidas, 2001). The impact of these perspectives was anticipated. My personal perspectives were treated as “foreground issues” (Simons, 2009) and were reconsidered throughout the data collection, analysis, and presentation. Research training encourages reflection and awareness of the researcher's perspectives. Awareness of these influences caused me to reflect on the extent to which my experience created assumptions and beliefs about nurses and the health system. The assumptions were addressed in two ways. First I attempted to be reflexive about my beliefs, particularly those

concerning issues of power. Second I sought feedback by sharing my findings and conclusions with nurse practitioner participants and others throughout the process. Nevertheless it was impossible to purge these perspectives completely. Therefore the research should be interpreted in light of my background, how this might have affected the data collected, and how it was interpreted.

The final personal perspective I wish to acknowledge is that I have never felt completely comfortable in my identity as a physician. From the beginning of my career, I have been critical of many of the assumptions and entitlements my physician colleagues seem to take for granted. Specifically I have become increasingly critical of the assumption that only physicians have the requisite knowledge, skills, and abilities to provide medical care. I began this study with an element of wanting to 'unmask' a system that I did not think was optimal or just. As Hacking noted, there is a strong element of 'unmasking' in the work of constructionists (Hacking, 1999). Hacking used Mannheim's idea of unmasking in the sense of "the unmasking turn of mind does not try to refute ideas, but to harm them by exhibiting their extra theoretical function" (Hacking, 1999).

1.3 Initial research questions

Research results are often written up to give the appearance of a clear initial research question to which a standardized, 'correct' methodology for answering the question was applied. This gives the appearance of a rational, linear, smooth approach to the research journey. In contrast to this, my journey was convoluted and iterative. My questions changed many times and new questions emerged as data and analysis accumulated.

My original interest was to understand what nurse practitioners providing comprehensive primary care did in their practices. My experience working

with a nurse practitioner in an emergency department had illustrated the regulatory limitations of a nurse practitioner's scope of practice. It had also demonstrated the difficulty of working with another category of autonomous worker who was allowed to undertake much of 'my' work yet could not function independently of me. In that situation, I had to authorize her to carry out certain actions such as prescribing narcotics to treat pain.

Despite my experience working with a nurse practitioner, I realized I did not appreciate what roles a nurse practitioner could fill in the health system. Nurse practitioner positions had been incorporated into newly formed Family Health Teams in an attempt to increase access to primary care providers. I wondered how nurse practitioners and family physicians worked together in the same practice setting when nurse practitioners appeared to be doing the same type of work as the family physicians.

An initial set of questions led me to the literature to answer the following:

1. What is a nurse practitioner?
2. Where do nurse practitioners practice?
3. Does a nurse practitioner's practice differ from a physician's?
4. Are nurse practitioners' processes of care and clinical outcomes equivalent to those of physicians, and if not, how do they differ?
5. Are nurse practitioners cost effective?

A review of the sociological literature of professions predicted conflict between professions that share or overlap roles or provision of tasks in the division of labour. This led me to modify the research questions to focus specifically on boundary issues and how nurse practitioners navigate them.

The working research questions became:

1. Are there occupational boundary issues between nurse practitioners and physicians working together in the same practice setting?
2. How are task boundaries and roles organized and negotiated in a practice setting?

Once several pilot interviews were completed, it became apparent that there was little evidence of overt conflict between nurse practitioners and family physicians. However, similar to my emergency department experience, there was tension between nurse practitioners and physicians working together regarding autonomy and equality. My focus of interest shifted to wanting to make sense of both how and why nurse practitioners emerged from the health system and developed as an occupation in Ontario. In addition I wanted to understand the nature of nurse practitioner-physician relationships and how members of the two professions worked out ways to make it possible for them to coexist in local practice settings.

1.4 Purpose of the thesis and how it contributes to new knowledge

The purpose and requirements of a PhD are to demonstrate that an individual is able to work independently and “form a distinct contribution to the knowledge of the subject and afford evidence of originality by the discovery of new facts and/or by the exercise of independent critical power “ (Queen Mary College, 2010).

This thesis contributes to original knowledge by documenting the unfolding of events and actions over time, thereby serving as a historical

summary of the emergence and development of nurse practitioners in Ontario. It adds an analysis of 'nurse practitioner' as a case of a new occupation to the existing body of sociological analyses of professions. It provides insight into how changing the structure and processes of a health system to implement a new type of service provider created barriers to the practice of the new provider. The study also documents a variety of 'workarounds' used by nurse practitioners and physicians to bypass barriers to their practices created by legislated scopes of practice. In addition it contributes to the literature on professional interaction between nurse practitioners and physicians through an analysis of the nature of nurse practitioner - physician relationships, as they are enacted in local practice settings. Finally, as a case study, it also contributes empirical evidence to support existing theoretical models of professions, innovation, and public policy formation, notably Closure Theory, Abbott's Division of Labour Theory, Van de Ven et al's Innovation Journey, and Kingdon's Agendas, Alternatives and Public Policy Theory.

Ultimately this work is about challenging physicians' hegemony in delivering primary care services. It challenges the assumption that only physicians have the knowledge, skills, and ability to provide comprehensive primary care services. Nurse practitioners provide primary care services in a variety of practice settings where a mismatch exists between their scope of practice and the roles they are expected to fill. The results of this study support making infrastructural changes to the health system in Ontario to increase the professional and personal autonomy of nurse practitioners as primary care providers.

2.0 Review of the Literature and Theoretical Frameworks

The subject matter of this thesis spans areas of interest studied by multiple academic disciplines, each one with its own literature and theoretical base. The literature was reviewed to answer specific questions and understand existing theoretical frameworks. These frameworks will be used to discuss how the research findings can be situated within the existing academic understanding of emerging occupations, public policy formation, and innovation. This chapter reports on the results of the literature and theoretical framework search. In the first part, six specific questions are asked – questions whose answers provide understanding and set the context of what nurse practitioners are, what they do and how they work. The second part of this chapter sets out theoretical frameworks that will be used to help interpret the research findings.

The literature review was broad-ranging and developed over time along with the research questions. It would be dishonest to depict the literature search as linear or highly structured. Rather it was characterized by a good deal of browsing and unstructured exploring.

Initially I searched existing databases such as PubMed, CINAHL, Web of Science, Sociological Abstracts, and the Cochrane Database. These were searched in an exploratory way using search terms such as ‘nurse practitioner’ and ‘advanced practice nurse’. These searches were refined using combinations of terms such as ‘practice’ or ‘cost’ to focus the search results. My initial search led to other related papers that pointed to theoretical frameworks and further research in the field. The majority of published literature was accessed through electronic libraries at McMaster University in Hamilton and Western University in London – both in Ontario – as well as Queen Mary University of London. Elyse Pyke, the librarian at Grey Bruce Health Services, Owen Sound, was

extremely helpful in obtaining books and papers I was unable to retrieve from university electronic libraries. References to grey literature were followed and found using Internet searches of public access Internet sites. "Grey literature" is considered to be published materials such as laws and statutes; reports from commissions, agencies, and government white papers; and reports produced by public and private institutions, professional organizations, and foundations (Bengston, 2012). The author of one seminal, out of print, discussion paper was contacted and she kindly sent me a copy by mail. E-mail correspondence was undertaken with four authors to clarify points they had reported on.

2.1 Questions the literature review sought to answer

The initial review of the literature focused on the following questions:

1. What is a nurse practitioner?
2. Where do nurse practitioners practice?
3. Does a nurse practitioner's practice differ from a physician's?
4. Are nurse practitioners processes of care and clinical outcomes equivalent to those of physicians?
5. Are nurse practitioners cost effective?
6. What barriers to nurse practitioner practice in Ontario have been identified?

What is a nurse practitioner?

The term 'nurse practitioner' began to be used approximately fifty years ago in the United States (Tropello, 2000). My initial scoping review of nurse practitioner literature quickly revealed a problem. The term 'nurse practitioner' was used widely and inconsistently in different jurisdictions to mean different types of practitioner with varying levels of training. Many labels were used to differentiate nurses with enhanced knowledge, skills or abilities from graduate or 'registered' nurses who held lower qualifications. 'Nurse practitioner' was used interchangeably in the literature with other labels such as 'extended class nurse', 'nurse clinician', 'advanced practice nurse', 'clinical nurse specialist' (Bryant-Lukosius et al., 2004). In addition to this problem, the term 'nurse practitioner' was used to define different scopes of practice in different jurisdictions (Pearson and Peels, 2002). The use of the term 'nurse practitioner' was highly context specific.

This presented a problem in trying to identify and evaluate both the research and grey literature relevant to my research questions. Differences in meaning of the term 'nurse practitioner' in different settings made it difficult to compare and generalize the results of existing research on nurse practitioners.

My research was carried out in the province of Ontario. Therefore, I used as my 'gold standard' the definition of 'nurse practitioner' employed in Ontario. This definition was produced in 2006 by the Canadian Nurse Practitioner Initiative, a multi-year, Canadian Federal Government initiative that laid the groundwork for the expansion of nurse practitioner practice in Canada:

NPs [nurse practitioners] are experienced registered nurses with additional education who possess and demonstrate the competencies required for NP registration or licensure in a province

or territory. Using an evidence-based, holistic approach that emphasizes health promotion and partnership development, NPs complement, rather than replace, other health-care providers. NPs, as advanced practice nurses, blend their in-depth knowledge of nursing theory and practice with their legal authority and autonomy to order and interpret diagnostic tests, prescribe pharmaceuticals, medical devices and other therapies, and perform procedures (Canadian Nurse Practitioner Initiative, 2006).

Another issue that arose when attempting to generalize the nurse practitioner literature was the discovery that even within the same legal jurisdiction, their naming, training, and scope of practice changed over time. Prior to 1997 nurse practitioners in Ontario were unregulated and were not allowed to prescribe medication. The ability to prescribe medication was an important change in scope of practice and therefore changed the potential practice role. Even the term ‘nurse practitioner’ was not used in Ontario as an officially recognized name until 1997. The legislation used the term ‘registered nurse – extended class’ (Government of Ontario, 1991c). The term ‘nurse practitioner’ did not receive title protection, and thus legal definition, in Ontario until 2007 (College of Nurses of Ontario, 2009c).

In other words the use of the term ‘nurse practitioner’ varied according to location and time period. The term is context dependent. It was, therefore, difficult to draw comparisons or generalize research findings when scope of practice, roles, and training varied so greatly.

Where do nurse practitioners practice in Ontario?

There have been two government commissioned reports describing the nurse practitioner experience specific to Ontario and Canada. The Ontario government commissioned a report, published in 2004, investigating the integration of primary health care nurse practitioners into the Ontario

health system (IBM Business Consulting Services, 2004). This report consisted of a literature review; surveys; and interviews with nurse practitioners, patients, and physicians; and site visits to a variety of practice settings. In the survey undertaken for the report, 99.6% of nurse practitioners worked as clinicians and spent the majority of their time (mean 73%), undertaking clinical care. They practiced in a variety of settings, the most common setting being a Community Health Centre (46.2 %), followed by physicians' offices (10.7%) and Long-term Care facilities (7.7%). The report also investigated practice models in which nurse practitioners function. It elaborated a framework for nurse practitioner-physician relationships that was further described in other papers (Bryant-Lukosius and DiCenso, 2004) (DiCenso et al., 2007).

The second major report summarized the work of The Canadian Nurse Practitioner Initiative (Canadian Nurse Practitioner Initiative, 2006). This initiative was an 8.9 million dollar project paid for by the Canadian Federal Government as part of its Primary Health Transitions Fund (Health Canada, 2007b). This report also found nurse practitioners spent the majority of their time in direct clinical care activities.

The IBM and Canadian Nurse Practitioner Initiative reports were particularly important because a large number of researchers and participants were involved in conducting the projects. In particular, the Canadian Nurse Practitioner Initiative was well funded. It included a mixed method format and was undertaken with the participation of many of Canada's leading nursing academics. Both reports were commissioned by the government to be used for policy support. This might have caused some bias in the conclusions of the reports, despite the robust methodology used. Both reports had large budgets, allowing for large sample sizes and both were carried out by reputable research and support staff.

The College of Nurses of Ontario publishes the number of registered nurse practitioners in Ontario and follows their distribution in primary care settings. Nurse practitioner numbers increased from 453 in 2002 to 1666 in 2011 (College of Nurses of Ontario, 2011a). Annual surveys of workplace settings and the type of work nurse practitioners were engaged in have been synthesized and reported (van Soeren et al., 2009) (Koren et al., 2010). The most striking finding in these reports was the increase in primary care nurse practitioners working for Family Health Teams. In 2004 only 4% of nurse practitioners reported working in Family Health Teams. By 2008 the proportion of all nurse practitioners employed by Family Health Teams had increased to 30%. During the same period of time the percentage of nurse practitioners employed by Community Health Centres dropped from 38% to 30% and the “Other” category increased from 18% to 25%. The “Other” category included hospitals, nursing homes, and a Nurse Practitioner Led Clinic that opened during that time.

The available data showed nurse practitioners worked primarily as clinicians in a wide variety of settings. The IBM report also indicated that 80% of nurse practitioners reported that they “practice within full scope” (IBM Business Consulting Services, 2004). “Full scope of practice” was an ambiguous term that was used in different ways by nurse practitioners to describe their work. In the context of primary care nurse practitioners, it was observed to mean providing comprehensive primary care as the primary provider to a list of patients.

Does a nurse practitioner’s practice differ from a physician’s?

The literature did not provide a clear answer to this question. The Canadian Nurse Practitioner Initiative illustrated the reason for this:

Because NPs [nurse practitioners] perform many of the same tasks that other practitioners perform, clear role definition has been complicated and difficult. For example, CNSs [clinical nurse

specialists], RNs, [registered nurses] and physicians all listen to heart sounds. Or, another example is that they all do patient teaching. What may distinguish these practitioners one from the other is their depth of knowledge and skills, purpose in carrying out the task, and the extent of the accountability they have associated with decision-making (Canadian Nurse Practitioner Initiative, 2006).

I noted during the initial review of the literature that nurse practitioner authors took care to differentiate their practice activities from those of physicians (Mundinger, 2002) (Pearson and Peels, 2002). Nurse practitioners saw their work as an extension of nursing practice rather than medical practice. They offered a choice in how patients received care. For example Mundinger emphasized the difference from medical practice by highlighting choice, education, illness prevention, and promotion as integral to nurse practitioner care:

Patients seek them [Advanced Practice Nurses] out not as “mid-levels” but as a distinct choice for the way they want to receive their health care. Most patients will say that Advanced Practice Nurses focus on establishing knowledgeable partnerships with them, give them more time in a visit, provide clearer education about their conditions, and are more likely to engage them in illness prevention and health promotion. This differentiated style is something that many patients value (Mundinger, 2002).

Another example of nurse practitioners’ perspective on their care was provided by Cahill:

In the primary care sector, nurse practitioners are providers of care in their own right; they work alongside GPs [general practitioners], undertaking preventative care, health education, screening and counseling. In other words, rather than act as a doctor substitute,

they retain the autonomy to admit, discharge and refer to and from their own caseload. The role is clearly health-focused, patient-centred, and theoretically informed (Cahill quoted in Pearson and Peels, 2002).

Other nurse practitioner authors employed descriptions of their work as 'caring' and 'holistic', while deemphasizing curing, an activity they ascribed to a medical function (Boschma, 1994). Patient education and prevention of health problems were emphasized as important domains of their work (DiCenso et al., 2007). Most authors were adamant nurse practitioners were not physician substitutes but instead were providing a different type of care (Mitchell et al., 1993) (Arcangelo et al., 1996) (Torn and McNichol, 1998) (Martin-Misener, 2000) (Tropello, 2000) (de Witt and Ploeg, 2005). They described their role as collaborative and complimentary to the physician's role and were explicit that they do not replace physicians (Canadian Nurse Practitioner Initiative, 2006).

As the examples above illustrate, claims of a difference in practice between nurse practitioners and physicians were widely asserted. There was some empirical evidence to support these claims. Seale et al. used audio tapes to record the consultations of 8 physicians and 9 nurse practitioners in 8 different practices. Twenty-two physician and 33 nurse practitioner 'same day' primary care consultations were recorded and transcribed and their 'utterances' coded. The coding used a category scheme based on concerns that were identified in the literature or inferred from the data. A total of 21 categories were used. When nurse practitioner consultations were compared to physician consultations there were statistically significant differences in consultation length, how much patients spoke to each type of clinician, and how much more nurse practitioners spoke than physicians. Nurse practitioner consultations lasted twice as long, patients spoke twice as much and nurse practitioners spoke approximately 1.3 times more when compared to physicians' consultations. The extra time spent in consultations was taken up in

naming and explaining the disease, in explaining the treatment and in “social/emotional/patient centred” communication (Seale et al., 2005). Seale also noted that some of the time taken by nurse practitioners was spent getting prescriptions signed by a physician or seeking ‘approval’ for their treatment plans.

Campbell et al. used a videotaped observational study of 412 consultations in 60 sites in the United States to develop a framework of communication styles used by clinicians, in this case, physicians and nurse practitioners. The authors rejected the use of Bales’ Interaction Process Analysis system and Roter’s modifications of Bales’ System, claiming them to be “too specific to effectively describe general clinician activities such as taking a history or teaching” (Campbell et al., 1990). Instead they developed their own indices of “communications style”. These included 5 major categories and 30 sub categories that compared the style of communication of nurse practitioners and physicians. They found little difference in the provider behaviour based on the indices used in the study with the exception that nurse practitioners “exhibited significantly more concern with psycho-social issues than physicians” (Campbell et al., 1990).

These small observational studies lent support to further observations that nurse practitioners spent more time in consultations and gave more explanations to patients (Shum et al., 2000) (Kinnersley et al., 2000). Horrocks et al. did a systematic review summarizing 11 trials and 23 observational studies that compared nurse practitioner to physician care. In the studies reported in this review, nurse practitioners had longer consultation times and ordered more testing than physicians, however there were no differences found in the number of prescriptions, return consultations or referrals. The authors reported patients were more satisfied with nurse practitioner care. They also noted the studies included in the review were too heterogeneous to be able to do a meta-analysis of the results (Horrocks et al., 2002).

Previous studies showed the style of communication and amount of time spent in clinical encounters were important determinants of patient satisfaction (Ben-Sira, 1976) (Buller and Buller, 1987). Other studies have shown nurse practitioners spend more time than physicians during clinical encounters. They spent more time than physicians providing preventative care and patient education during clinical encounters (DiCenso et al., 2007). The fact that nurse practitioners spend more time providing information might be the reason patients are more satisfied with their care (Seale et al., 2005).

A limitation of this portion of the literature was only two of these studies were conducted in Canada. The remainder were done in the United States or the United Kingdom. However regardless of where they were carried out, all the studies report similar findings, so are likely relevant in a Canadian setting.

Are nurse practitioners processes of care and clinical outcomes equivalent to those of physicians?

Studies of nurse practitioner related care undertaken prior to 2000, appeared to have been undertaken to investigate whether clinical outcomes, markers of 'quality' of care, patient satisfaction or cost differed between nurse practitioner and physician care. These studies used physician care as the 'gold standard' to measure how nurse practitioner care compared to it. The research asked questions about whether nurse practitioner care was equivalent or 'non-inferior' to physician care. These studies measured both clinical outcomes and surrogate end points, such as processes of care. The results of these studies were used to support the introduction and expansion of nurse practitioner care. They were also used to reassure policy makers that nurse practitioner care would not reduce the existing 'standard' of care.

The nurse practitioner care studies have been summarized in several systematic reviews. The reviews themselves were methodologically sound, having used reasonable search strategies and inclusion criteria. The studies included in the systematic reviews were heterogeneous and were frequently reported to have “methodological shortcomings” (Laurant et al., 2004). Rather than analyzing individual studies though, I will concentrate on the major reviews.

In 1993 Mitchell et al. prepared a report for the Ontario Ministry of Health entitled “Utilization of Nurse Practitioners in Ontario” (Mitchell et al., 1993). As part of the report, the authors summarized the literature from 1973 to 1993. They did not identify their search strategy, but indicated they searched computer databases, surveyed nursing schools, and contacted 30 health care and professional organizations. They reviewed “more than 900 articles, research studies, and other relevant documents” (Mitchell et al., 1993). They included studies from primary care and hospital-based settings, randomized controlled trials, cohort studies, quasi-experimental studies, and descriptive studies. The review concluded that based on the outcome measures chosen nurse practitioners’ care was equivalent to physicians’ care, and in some cases better.

Patients were generally more satisfied with nurse practitioner care. The authors of the systematic reviews critiqued the studies and noted multiple methodological limitations in them. The limitations included small sample sizes, and a focus on short-term outcomes or self-limiting conditions. In addition the studies used non-standardized medical records data, and non-representative samples or sites. Finally the studies were criticized for using ‘opinion’ surveys rather than using systematically developed questionnaires or validated measurement scales. Many of the limitations the authors identified reflected their positivist ontological and epistemological beliefs. They valued sampling, standardized quantification and randomized controlled trials as the preferred methodologies and

methods of investigation. Despite the authors' identification of significant methodological limitations in the individual studies, they concluded:

in the case of the evaluation of the NP however, the impact of the methodological flaws is diluted given the remarkable consistency in the results of the many studies that have been completed (Mitchell et al., 1993).

The report concluded that nurse practitioners should be more fully utilized in primary care settings in Ontario. It also concluded that nurse practitioners should be introduced into secondary and tertiary care settings such as mental health, long term care, oncology, and cardiac care. The authors made recommendations for flexibility in reimbursement schemes and noted the necessity of setting specific performance indicators. They stressed the twin goals of autonomy of practice and becoming viewed as "equal partners" within the health care system (Mitchell et al., 1993).

In 1995 Brown and Grimes did a meta-analysis of 38 studies that met their 6 inclusion criteria. The 6 criteria were i) care provided by a nurse practitioner-physician team, ii) care provided in North America, iii) control group of physician managed care, iv) measure of outcome in terms of process of care or clinical outcomes, v) experimental or quasi-experimental research design, and vi) data that permitted calculation of effect sizes (Brown and Grimes, 1995).

The authors reported their search for published and unpublished data in "relevant computer databases" such as Medline and Dissertation Abstracts. They also surveyed all masters programs and public health schools accredited by the National (American) League for Nursing for lists of relevant theses. Twelve of the 38 studies used for the meta-analysis were randomized control trials. These were included in the meta-analysis and were also analyzed separately as a subset. The authors found nurse

practitioners ordered “slightly more” laboratory tests than physicians, and patient satisfaction was higher with nurse practitioner care (Brown and Grimes, 1995). The meta-analysis concluded nurse practitioners and physicians “were equivalent on quality of care, prescription of drugs, functional status, number of visits per patient and use of the emergency room” (Brown and Grimes, 1995).

Brown and Grimes meta-analysis was completed but unpublished prior to the writing of the Mitchell’s report. Their results were available to Mitchell et al. when they wrote their report. Brown and Grimes used stricter inclusion criteria than Mitchell in their meta-analysis. Like Mitchell, they favoured experimental controlled design studies and undervalued qualitative methodology. A systematic bias in methodology conceivably led to systematic bias in the findings.

In 2002 Horrocks et al. did a systematic review asking whether nurse practitioners provided equivalent care to physicians. They provided a clearer and more extensive search strategy than used by Brown or Mitchell in their reviews. Horrocks et al. used “Cochrane optimal search strategy for randomised controlled trials” and sought advice from librarians. They assessed methodological quality on the basis of the criteria of the Cochrane Effective Practice and Organisation of Care Group. Summarising 11 trials and 23 observational studies, the authors noted the studies were too heterogeneous to be able to do a meta-analysis of the results (Horrocks et al., 2002). Based on their review, they found no difference in health outcomes. Horrocks concluded “nurse practitioners working in primary care can provide equivalent care to doctors” (Horrocks et al., 2002).

This conclusion was problematic. It was based on studies that used outcome measures such as recovery from upper respiratory tract infections (Venning et al., 2000), “minor injuries” (Venning et al., 2000) (Shum et al., 2000), death (Sackett et al., 1974) Ware’s SF-36 survey for

general health functioning (Mundinger et al., 2000) and resolution of the condition or concern after 2 weeks (Kinnersley et al., 2000). These conditions were self-limiting or, in the case of death, rare outcomes in a primary care practice. It was illogical to use these measures to compare the care provided by nurse practitioners and physicians.

In 2004 the Cochrane Review published a paper entitled “Substitution of doctors by nurses in primary care” (Laurant et al., 2004). The review included studies involving substitution of physicians with any category of nurse and was not confined to nurse practitioners. It included 16 studies, 13 of which were randomized or quasi-randomized controlled trials while the remaining 3 were controlled before and after studies. According to the author’s prearranged criteria for quality that included power to detect a difference, unit of analysis error, 80% follow-up, comparability, baseline assessment, blinded assessment, reliable outcomes measured, and contamination – all of the trials were judged to have “methodological shortcomings”. In 7 studies the nurse was responsible for first contact and ongoing patient care.

The authors concluded that “no appreciable differences were found between doctors and nurses in health outcomes for patients, process of care, resource utilization or cost” (Laurant et al., 2004). In 5 of the studies, the nurse provided first contact care for patients seeking urgent consultations. Outcomes were similar for nurses and doctors, but patient satisfaction with nurse care was higher. In 4 studies the nurse assumed responsibility for managing specific chronic care conditions. The conclusions were the same across the categories of work performed (Laurant et al., 2004). In their search Laurent et al. found only one study powered to assess equivalence of care as opposed to difference of care between nurses and physicians.

The Canadian Nurse Practitioner Initiative was an 8.9 million dollar project paid for by the Canadian Federal Government under its Primary Health

Transitions Fund (Health Canada, 2007a). Extensive literature searches were done for this project (Jones and Way, 2004) (Tarrant and Associates, 2005) (Canadian Nurse Practitioner Initiative, 2006). Many of the same studies included in the systematic reviews previously discussed were reviewed, and the conclusions drawn were the same as reported in earlier reviews. The report concluded that there was no difference in clinical outcomes between the care provided by nurse practitioners and physicians in primary care.

A report of the recent systematic search for new papers and a re-analysis of the papers included in Laurant et al.'s 2004 Cochrane Review was presented at the December 2012 annual meeting of the North American Primary Research Group. The Cochrane Review had concluded "the findings suggest that appropriately trained nurses can produce as high quality care as primary care doctors and achieve as good health outcomes for patients" (Laurant et al., 2004). Lindbloom severely criticized the Cochrane Review and after reanalyzing the same studies came to a different conclusion: "Current evidence is insufficient to support substitution of physicians by independently practicing nurses providing comprehensive primary care, particularly in a modern American practice setting" (Lindbloom et al., 2012).

Lindbloom and his co-authors, except one, were physicians, and received a grant from the American Academy of Family Physicians to do the review. The American Academy of Family Physicians had previously published a position paper opposing independent nurse practitioner practice (American Academy of Family Physicians, 2012). Read carefully, both authors' conclusions are consistent with one another. Laurent's analysis of the evidence led him to the conclusion nurses "can produce as high quality care as primary care doctors". Lindbloom had subtly changed the question from 'can' nurses substitute for physicians to 'should' they. His critique illustrated the politicized nature of the issue and suggested to me the need for a sociological framework to help understand it.

Much of the literature produced in the first 40 years of nurse practitioner practice can be criticized for methodological shortcomings. The research and syntheses done privileged quantitative methods, in particular randomized controlled trials. Qualitative methods based research was not given prominence in the systematic reviews.

Most of the quantitative research reported had shortcomings. Sample sizes were often too small to be powered enough to show a statistical difference in outcomes (Laurant et al., 2004). Important outcomes were difficult to choose. Spitzer, in a frequently quoted 1974 randomized control trial of patient allocation, used the death rate in the practices of 2 physicians and 2 nurse practitioners to compare care (Sackett et al., 1974). Despite death being an important clinical outcome, it is an infrequently encountered event in most primary care practices. Some outcome measures chosen to compare care were difficult to evaluate or didn't make clinical sense. For example some studies compared single encounters of patients whose conditions were minor or self-limiting (Venning et al., 2000) (Shum et al., 2000) (Kinnersley et al., 2000). It was not made clear why the authors expected to be able to measure a difference in clinical outcomes between nurse practitioner and physician care for conditions such as upper respiratory infections or minor injuries. It is my opinion that most patients with these conditions would have gotten better if they had stayed at home and not sought any care at all. In other cases instead of using clinical outcome measures, investigators used process of care measurements, such as completeness of charting, to compare care. These measures were used as surrogate markers for 'quality of care'.

Reports of most studies lacked a description of the nurse practitioner participants. Details of their training, scope of practice, and experience were rarely given. Spitzer's study, discussed above, was an exception. It did include this level of description. I emphasize this trial because it was

one of the two trials I found that have been carried out in Ontario. However it was carried out over 40 years ago. The authors did not mention that nurse practitioners were not allowed to prescribe medications at the time of the study. It was assumed the reader knew this information. Nurse practitioners in Ontario have been able to prescribe medications since only 1997. Spitzer's results are therefore difficult to apply to current practices, yet this trial has been included in all the systematic reviews of equivalence of practice done since it was completed.

Despite these criticisms, there were two striking findings in the literature review done to answer the question, "does nurse practitioner care have equivalent outcomes to physician care?" In study after study, nurse practitioner care was concluded to be equivalent, and in some cases better, than that provided by physicians, at least in the outcomes and processes chosen to compare them. However Laurent pointed out that only one study included in his Cochrane review was powered to detect equivalence of care (Laurant et al., 2004). Despite the large number of reports of studies looking at this question, there was a paucity of reported findings indicating nurse practitioner care was inferior, in any measure, to physician care. Only increased diagnostic testing by nurse practitioners was reported (Horrocks et al., 2002). This raised the question of whether there was a publication bias in the literature. The second striking finding was the consistently increased satisfaction people reported with nurse practitioner care compared to that of physicians. Despite the limitations of studies reported in the literature and the question of potential publication bias indicated by a lack of negative findings reported, researchers have concluded that nurse practitioner care is equivalent to physician care, and they have lost interest in continuing to investigate this topic. The findings appeared to have been accepted by researchers working in this area. While I think the question remains unanswered, I did not feel it was worthwhile pursuing further at this time.

How cost effective is nurse practitioner care?

Controlling costs is an important issue for funders of public payer health systems. If an innovation is added to a health system, the payers want to know if the innovation is cost effective. Studies purporting to show the cost effectiveness of nurse practitioners care were found in the literature. Examples of these studies include Spitzer et al. (1976), U.S. Congress Office of Technology Assessment (1986), Venning et al. (2000), and Hollinghurst et al. (2006). The general conclusion was that nurse practitioner care was cost effective.

The methods and assumptions used in the studies varied greatly. Spitzer for example, estimated how much physicians would have billed the provincial health insurance plan if they provided the services themselves. This amount was compared to the lower cost of nurse practitioners' salaries. It was assumed the services provided were equivalent, and the difference between what a physician would have billed and a nurse practitioner received was money saved (Spitzer et al., 1976). The U.S. Office of Technology Assessment used case study comparisons (U.S. Congress Office of Technology Assessment, 1986). Venning calculated the difference in consultation length and calculated costs based on the payment rates of physicians and nurse practitioners (Venning et al., 2000). Hollinghurst estimated costs per consultation, including ancillary costs such as testing, practitioner training, referrals, arriving at an estimated cost per minute for nurse practitioners and physicians (Hollinghurst et al., 2006).

One limitation of cost effectiveness studies is that cost of care calculations are highly dependent on context. It is almost impossible to generalize a conclusion of cost effectiveness from one setting to another or even during different time periods in the same setting (Richardson and Maynard, 1995). Cost effectiveness calculations required many variables

and are subject to value decisions about the benefits (Kernick and Scott, 2002). According to Richardson, cost benefit analyses are sensitive because of their dependence on salary changes, training costs, and other incentives to retain practitioners (Richardson, 1999).

The second key limitation of these types of studies was the assumption nurse practitioners were substitutes for physicians. Nurse practitioner care was being compared to physician care. However as the literature indicated, nurse practitioners considered what they did was both different from what physicians did and “added value” (Mundinger, 2002). Assuming this was correct, it was difficult to determine what cost effectiveness really meant when two different types of practice were compared. What monetary ‘value’ should be placed on measures such as increased patient satisfaction with a certain kind of care received? Introduced value judgments about the services provided confounds the potential conclusions of these types of studies and makes the question of cost effectiveness difficult to answer.

What barriers to nurse practitioner practice have been identified in Ontario?

In the 1990s the Ontario government made policy decisions to broaden the employment of nurse practitioners in its health system. Between 1998 and 2002 it provided funding for 402 new nurse practitioner positions (IBM Business Consulting Services, 2004). A few years later a government funded report provided by an outside consulting group looked at the integration of nurse practitioners into the Ontario health system. The consulting group received surveys from approximately half the nurse practitioners working in primary care in the province and half the physicians who worked with them. In addition they surveyed physicians who did not work with nurse practitioners and visited 27 primary care practice sites. The report identified 14 key barriers hindering integration of

nurse practitioners into the system. These were grouped into 5 major categories:

1. **Nurse practitioner role within the practice setting** – defining and implementing the role
2. **External influences** – liability, lack of role clarity, legislation barriers, limitations in funding
3. **Collaboration and team dynamics** – ‘resistance’, structure of physician-nurse practitioner relationship, practices in isolation, lack of understanding of the role
4. **Workplace satisfaction** – lack of access to continuing education, inadequate funding for salaries and expenses
5. **Decision making** – nurse practitioner role is narrowly defined (IBM Business Consulting Services, 2004)

Hanrahan et al. completed a similar study in 2001 (Hanrahan et al., 2001). This study looked at the nature of the extended, expanded nursing role in Canada. The report focussed on three provinces, one of which was Ontario. It identified many of the same barriers as the IBM report but emphasized role confusion within the health system. The report noted a lack of “shared vision” with regard to the nurse practitioner role. Funding was identified as an area of concern for 33-46 % of the survey’s respondents. Limitation of the scope of practice was also frequently identified as a barrier to full integration of nurse practitioners into the system. The Canadian Nurse Practitioner Initiative also discussed barriers to integration, although no new barriers were identified in its report (Canadian Nurse Practitioner Initiative, 2006).

These comprehensive reports consistently identified many barriers to nurse practitioner integration in the health system. The barriers seemed to coalesce into three major areas, infrastructure support, reaching a common vision about the role of nurse practitioners and their relationships with other practitioners.

2.2 Introduction to some theoretical frameworks

The literature review undertaken to answer the initial questions pointed to issues that later emerged from the data. The literature search helped develop a deeper understanding of the occupation of nurse practitioner and how nurse practitioners practiced. I explored various frameworks in order to gain further insight into how and why the new occupation emerged from the health system, developed in the manner it did, and eventually became embedded in the system. The frameworks included sociological perspectives of professions, innovation, and public policy. This section will explore these frameworks, while the Synthesis and Discussion (Chapter 6) will cover the application of theoretical frameworks to the case of nurse practitioners in the Ontario health system.

A sociological analysis of profession applied to nurse practitioners

Inter-professional relationships between nurse practitioners and physicians were identified as a barrier to implementation of nurse practitioners in the Ontario and Canadian health systems. Barriers occurred at the institutional level (Hanrahan et al., 2001) and between individuals at the practice level (IBM Business Consulting Services, 2004). An academic, sociological analysis of occupations and professions provided insight into inter-professional relationships at both an institutional and an individual level.

The study of professions has been an area of active interest for sociologists for more than 100 years. Professions are collectives – comprised of individuals – that exist at an institutional level. Individual members of a profession become socialized to adopt the normative beliefs and values of the collective (Becker et al., 1980).

The sociology of labour recognizes a profession as a special category of occupation. Originally the only occupations considered professions were

medicine, law, the clergy, and sometimes the military (Freidson, 1970). Early writings in the sociology of professions emphasized the function professions play in society and on what constitutes a professional (Hafferty and Light, 1995). There was a notion that professionals were experts who organized themselves into associations of colleagues, thereby becoming a “moral authority”, buffering the public from the onslaught of industrialization (Durkheim and Halls, 1997). Carr-Saunders and Wilson described professions functioning to:

inherit, preserve and pass on a tradition...they engender modes of life, habits of thought and standards of judgement which render them centres of resistance to crude forces which threaten steady and peaceful evolution... The family, the church and the universities, certain associations of intellectuals, and above all the great professions, stand like rocks against which the waves raised by these forces beat in vain (Carr-Saunders and Wilson, 1936).

Dramatically stated, but illustrative of why members of occupations wanted their occupation to be considered a profession. Based upon the esteemed function of professions, individuals who belonged to them could make claims for status, monopoly, and protection from competition (Larson, 1977).

The idea that professions functioned to stabilize society from the forces of change, and that professionals were the embodiment of service to society was famously articulated by Talcott Parsons. His post World War II writings showed an idealized view that described how the medical profession should act. He argued that restraint of self-interest in a professional guild was the key to its economic, cultural, and institutional power. Therefore according to Parsons, a profession serves the collective interests of its members (Macdonald, 1995).

Structuralist and functionalist approaches to studying professions catalogued characteristics of occupations that were recognized as professions. These approaches ascribed purpose and function to professions rather than defining what they were. They sought commonalities among professions. Examples of this are found in (Goode, 1957), (Barber, 1963), (Hickson and Thomas, 1969). Despite creating lists of characteristics, a widely agreed upon definition of profession was elusive.

In 1963, Everett Hughes summed up what professionals do:

Professionals *profess*. They profess to know better than others the nature of certain matters, and to know better than their clients what ails them or their affairs. This is the essence of the professional idea and the professional claim (Hughes, 1963).

This statement is true, however it neither defines what a profession is nor does it suggest a way to study the question empirically.

In 1972, Johnson wrote a critique of the functional and trait theories of professions:

Not only do 'trait' approaches tend to incorporate the professional's own definitions of themselves in seemingly neutral categories, but the categories tend to be derived from the analysis of a very few professional bodies and include features of professional organization and practice which find full expression only in Anglo-American culture at a particular time in the historical development of these professions (Johnson, 1972).

He also criticized the "checklist" approach used by authors such as Hickson and Thomas that measured whether occupations were professionalized enough to be called professions. This approach led to

disputes about whether an occupation met enough criteria to be called a profession. Johnson's critique helped change the view of professionalization as a benign, altruistic way of organizing occupations. His analysis helped change the perspective of sociologists to view professions as a way for members of an occupation to organize their expert labour so as to control the source of the profession's claim for power: their understanding of a specific area of knowledge to the unique needs of individual clients.

Freidson wrote extensively about the nature of professions. He used the American medical profession as the exemplar of a successful profession. In his view the nature of professional work is not routine. Esoteric knowledge is applied to the unique situation of a client (Freidson, 1970). Because the body of knowledge and skills are esoteric, they can only be mastered by long and arduous training. Only those who have had the prescribed training have the ability to safely apply the knowledge and skills received through training. As professional work is not routine, the individual practitioner must have autonomy to apply their knowledge and skills as they see fit to the unique situation of their client. In addition only a fellow member of the profession can properly evaluate the application of knowledge and skills. Therefore the collective profession claims a need to be able to determine and control its own work as well as regulate itself (Freidson, 1994). Freidson emphasized that the achievement of organized autonomy is the major goal of a profession. Autonomy gives a profession and its individual members considerable control over how that profession is practiced in local settings.

Freidson, Larson, and Abbott described ways professions seek to legitimate their claims for autonomy and special status (Freidson, 1970) (Larson, 1977) (Abbott, 1988). Training programs to obtain and utilize the esoteric knowledge of a profession are controlled by the profession. The number of training positions is restricted, and the application process is competitive. Training programs are made long and arduous and their

content is determined by the profession. At the end of training students must pass examinations to become certified. Ideally for a profession, the government enacts legislation that permits only appropriately trained and certified members of a profession to undertake the legally defined work of that profession (Hughes, 1963). Self-regulating professional Colleges are established to register practitioners, provide licenses to practice, and oversee practitioners' work. One view of these artefacts of a profession, certification, registration, licenses, and Colleges is that they serve to legitimate the claims that the knowledge and skills controlled by the profession are esoteric and dangerous if applied by anyone not appropriately trained certified, licensed, and governed (Freidson, 1970) (Abbott, 1988).

Larson introduced the concept of the “professional project” (Larson, 1977). She saw the goal of professionalization as a collective project undertaken by an occupation to control its area of expertise and raise the status of its members both socially and economically.

[P]rofessionalization is a process by which producers of special services sought to constitute and control a market for their expertise ... Professionalization is thus an attempt to translate one order of scarce resources – special knowledge and skills – into another – social and economic rewards (Larson, 1977).

The “professional project” is a way to ideologically legitimate the exclusion of competitors, and is therefore a justification for closure against others. Larson focussed on how power, which she saw as derived from the control of a specific body of knowledge, was used to secure a linkage between the control of the production of practitioners (training), the members of the occupation and a monopoly of the market for the profession's services. Larson emphasized monopoly of the market for a profession's services as its ultimate goal. She saw control of the market through a monopoly on services as a mechanism to control the supply of

services, thereby increasing the value of those services. The threat of losing its monopoly and the power associated with it is of great concern to a profession and its members.

Larson's analysis concentrated on the power to derive economic gain that comes from a profession's monopoly over its services. Writing from an American perspective, Starr recognized this point and noted that with a profession's authority came its prestige and an ability to shape and control the social world (Starr, 1982). Thus recognition of an occupation as a profession was important because it provided an implied basis for making claims for professional privilege. For an individual, being a professional was highly desirable.

Theoretical perspectives of profession help explain why occupations such as nursing sought to become recognized as professions. Autonomy of practice, increased social status, and the ability to monopolize the market for an occupation's services are desirable goals. Nurse practitioners, as will be discussed in greater detail in Chapters 4 and 5, have achieved many of these goals. They created many of the artefacts of a profession, such as special training, certification, registration, legislated scopes of practice, and a self-regulating professional College to oversee their practices. The term profession will be discussed in more detail in Section 6.1, page 233, where I will argue that the occupation nurse practitioner is a profession. The term 'profession' itself has turned out to be hard to define (Cogan, 1955) (Freidson, 1994). Its use and its attributed status have changed over time and its use as applied to various occupations, including nursing, has been disputed (Brown et al., 1987). As I will argue, the practice of nurse practitioners is professional in nature and the theoretical models of professions and professional behaviour are therefore applicable to it.

The shift of perspective in professions theory that occurred in the 1970s and 1980s is relevant to an analysis of the case of nurse practitioners.

Since then profession theorists have been preoccupied with questions of how professions obtain and maintain monopolies for their professional work. Granting a monopoly to a profession to perform specific work is based on the claim that only a member of that profession has the necessary skills and ability to understand and properly apply a body of esoteric knowledge to a client's unique needs.

However what happens when a new profession challenges this claim and makes a counter-claim that its members are able to do this work as well? How are competing claims reconciled and how is this reflected in day-to-day work relationships among individual members of different professions in a practice setting? These were the questions faced when nurse practitioners and family physicians began providing comprehensive primary care in the same local practice setting.

Abbott - "The System of Professions" - understanding competing claims to control areas of professional practice

Profession theorists generally agree that understanding and controlling the application of a unique body of knowledge is the major basis of claims for professional status and privileges by members of a profession (Freidson, 1970) (Larson, 1977) (Abbott, 1988). To make a claim for the existence of a unique body of knowledge, there is an implied limit or boundary for what lies inside and outside of this body of knowledge. Boundaries require demarcation. In the 1980s, understanding how boundaries were demarcated and controlled was seen as a problem that needed theorizing (Gieryn, 1983).

In 1988 Abbott published a theory he called "The System of Professions". He called an area of work controlled by a profession its "jurisdiction" (Abbott, 1988). Jurisdiction could occur over the interpretation of a body of knowledge, the application of skills or the ability to use either of these.

Abbott claimed a profession sought jurisdiction over a core, central area of 'pure' knowledge. The strength of professional jurisdiction rested "in the processes of actual professional work" (Abbott, 1988). These processes tied particular tasks to a profession. An example would be the surgical removal of brain tumours by neurosurgeons. No other profession makes a serious claim about its ability or right to do this work. The professional core knowledge, skill, and jurisdiction of neurosurgeons to perform this work are generally not disputed. However cores of 'pure' knowledge controlled by a profession are surrounded by boundary areas: places where occupations contest the exclusive jurisdiction of others to interpret knowledge and perform skills (Abbott, 1995). In boundary areas members of a dominant profession assert claims that only they have the ability to interpret specific knowledge, perform the certain skills, and apply these to their client's problems. Challenging professions claim that they also have the knowledge, skill, and ability to do the same work.

Abbott claims the ultimate goal of a profession is to have its jurisdiction legitimated in legislation. This protects a profession from encroachment and brings the force of the state to the defence of its jurisdiction claim. This frees a portion of the profession's resources to defend or expand into other areas (Abbott, 1988).

Boundary areas are dynamic and fluid places. Abbott's theory of occupational jurisdiction implied there was constant tension and conflict in the boundary areas between occupational jurisdictions. If an occupation either voluntarily vacated areas of its occupational control or was unable to provide the services over which it previously had jurisdiction, another occupation would adapt and attempt to move into the weakened occupation's territory.

Larkin provided empirical support for this theory. Larkin claimed professions imperialistic and opportunistic – that they attempted to

enlarge and maintain control of 'their' territory (Larkin, 1983). He supported this claim with detailed case studies of opticians, radiology technicians, chiropodists, physiotherapists, and chiropractors (Larkin, 1983). On occasion an occupation voluntarily vacates an area they previously had jurisdiction over. When this occurs, the occupation attempts to supervise the work done by others (Abbott, 1988). The case of midwifery in Ontario is an example of this. Midwifery became a recognized autonomous profession in Ontario in 1994 (College of Midwives of Ontario, 2012). Despite this, obstetricians in some local hospital settings sought to limit midwifery practice and required mandatory consultations for conditions that do not require consultation in other hospitals (Eby, 2012).

Abbott described his theory as being "ecological" (Abbott, 1988). However he did not elaborate on how useful the ecological metaphor is in investigating how occupations interact with each other. This metaphor can be used at different levels and units of analysis. It can be used at an occupation (meso) level of analysis or at the individual (micro) level, of a member of an occupation working in a practice setting. In the metaphor the collective occupation is a species, and an individual member of an occupation is an organism seeking out niches in the labour market environment to provide its services and thereby prosper. When the species has an opportunity to expand its home range it moves into new areas. When conditions become harsh the species dies out or remains in safer territory. There are also territories where conditions allow it to thrive alongside other organisms and even develop a symbiosis. Such a metaphor recognizes conditions of survival and prosperity are fluid and dynamic. Territories have transition zones or boundary areas between them where the area is actively contested. Such an ecological perspective is useful to compare how occupations mimic the natural world.

Boundary theories, such as Abbott's, can be used to provide insight into how and why occupations appear to compete with other occupations for

control of occupational territory. Boundary theories assume occupations are demarcated i.e. they have an established definition of membership. Boundary theories do not explain how this occurs. Recognition of membership in an occupation allows a group to claim its exclusivity over a jurisdiction of role and work. Closure Theory can give insight into how this occurs.

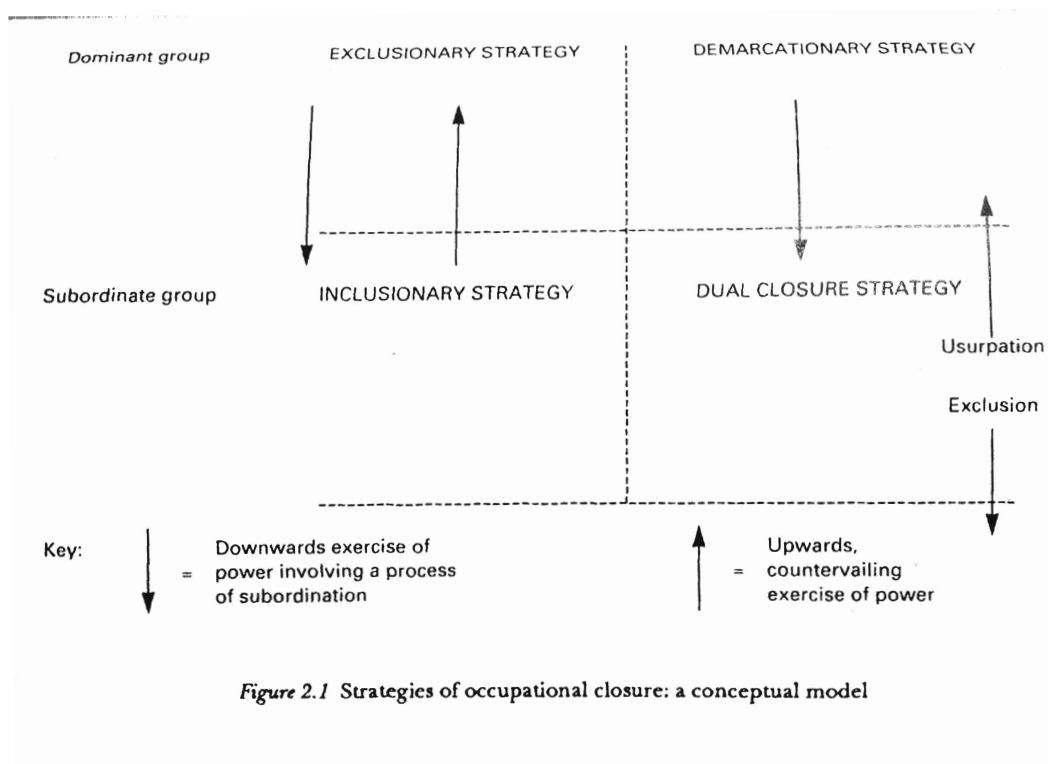
Closure Theory - an explanation why nurse practitioners demarcated their roles and relationships

Social Closure Theory, as formulated by Max Weber, theorized mechanisms used by groups to maintain their role and status in society. Weber believed closure was the mechanism by which members of a “status group” achieved “monopolization” of social and economic opportunities. Like Marxist theory, occupational closure was used to provide insight into situations where competition for a livelihood created groups collectively interested in reducing competition and pursuing monopolies for themselves (Weeden, 2002). However the conception of “group” and “advantage” in Closure Theory was much wider than “class” terminology and economic advantages of Marxist theory. Originally Weber conceived Closure Theory as a ‘grand’ theory, meant to explain major forces in society. In Weber’s terminology a “status group” was any group that shared characteristics such as formal education, gender or race. When used by a status group, closure created a barrier to outsiders, making them ineligible to belong to the group. It thus closed off opportunities for outsiders to participate (Weber, 1978). According to Weber the primary goal of a status group was to gain advantages for its members. Theorists since Weber have provided specific empirical observations of occupations involved in expert labour using Closure Theory as a perspective. Some examples include opticians, physiotherapists, radiology technicians, and chiropodists (Larkin, 1983) (Larkin, 1988). Other examples include gendered professions such as midwives and nurses (Witz, 1992). These cases all supported Weber’s

general theory. Theorists described the mechanisms whereby occupations excluded and closed off other groups from open competition. Examples of these theorists include Kreckle (Kreckel, 1980), Larkin (Larkin, 1983) and Witz (Witz, 1992).

Closure Theory is ultimately useful in understanding how groups exercise power in order to dominate and subordinate other groups. Four closure strategies have been described. These include exclusion, inclusion, demarcation, and dual closure, which combines exclusion with usurpation (Witz, 1992). See Figure 2.1

Figure 2.1 Strategies of closure: a conceptual model



(Figure copied from Witz 1992)

One of the subordination strategies used by dominant groups is demarcation. Outsiders, once labelled as such, are prohibited from

participating in activities of the status group unless they agree to act as subordinates. If they accept subordination, they perform some of the work previously performed by the dominant group but often under the supervision of the dominant group. Or if an outside group is in a strong position they might attempt to usurp some of the work jurisdiction of another group. The outside group might then employ a dual closure strategy described by Witz (Witz, 1992). The group in question usurps some activity of a previously dominant group and uses both demarcation and exclusion to prevent other groups from sharing its territorial gains.

Two examples illustrate these closure mechanisms. According to Larkin, medical diagnosis and prescription was traditionally considered the work of physicians (Larkin, 1988). The development of X-ray and laboratory technology represented an opportunity for some physicians to specialize and control this knowledge. An opportunity also arose for others to be employed running the machines used in the new technology. Physicians were prepared to permit technologists to operate the machines making the images and producing the numbers while they maintained control of the interpretation of the images and numbers (Larkin, 1983). Technologists were subordinate to the physicians who controlled their work. The work of technologists remained within the physicians' broader area of work jurisdiction and under their control.

Midwives became autonomous practitioners in the province of Ontario when family physicians gradually stopped doing obstetrical deliveries. There were not enough specialist obstetricians to perform the work previously provided by family physicians (Ontario Maternity Care Expert Panel, 2006). Midwives began doing normal deliveries. In terms of Closure Theory, midwives usurped the traditional area of work done by family physicians.

Closure theory is relevant to an analysis of the case of nurse practitioners becoming incorporated into the health system. The delivery of primary

care services was traditionally the jurisdiction of family physicians. Similar to the example of midwives in Ontario, nurse practitioners began providing primary care services when there was a shortage of family physicians providing those services. Closure Theory can be used to provide a theoretical perspective on how roles were determined and relationships developed between nurse practitioners and family physicians.

Van de Ven et al. - “The Innovation Journey”

In order to develop an understanding of how and why nurse practitioners emerged from the health system in the 1960s and were subsequently introduced in a planned manner into the health system, I found it beneficial to turn to a theoretical perspective on innovation. Van de Ven, Polley, Garud, and Venkataraman outlined a model of innovation they called “The Innovation Journey”. This can be used to inform the introduction and development of nurse practitioners into the Ontario health system. The model was developed from a series of case studies Van de Ven and collaborators carried out as part of the Minnesota Innovation Research Program (Van de Ven et al., 2008).

This program tracked the innovation process in 14 longitudinal case studies over a 17-year period “in their natural settings from conception to implementation or termination” (Van de Ven et al., 2008). The innovations model was based on products and processes developed and implemented by industries.

The model consists of three phases and twelve common processes. See Table 2.1

Table 2.1 Elements of The Innovation Journey Model

Period	Elements	Explanation
Initiation Period	Gestation	Extended period lasting several years where seemingly random events preceded and set the stage for the initiation of innovations
	Shock	Concentrated efforts to initiate innovations are triggered by 'shocks' from internal or external forces
	Plans	Plans are developed and submitted to resource controllers to obtain the resources needed to launch innovation development
Development Period	Proliferation	Proliferation of ideas and activities that proceed in divergent, parallel, and convergent paths
	Setbacks	Setbacks and mistakes are frequently encountered as plans go awry and significantly alter the ground assumptions of the innovation
	Shifting criteria of success	Criteria of success and failure often change, differ between resource managers and innovation managers, and diverge over time, often triggering power struggles
	Fluid participation of organizational personnel	Personnel involved in developing and implementing an innovation often change, become part time and experience emotional reactions to the innovation process.
	Participation by top management	Occurs throughout the development process acting as check and balance, and is essential to resolve significant problems that arise

Period	Elements	Explanation
	Relationships with others	Innovation development involves relationships with other organizations that lock into specific courses of action often leading to unintended consequences
	Infrastructure development	Involvement with others to create a wider infrastructure to support the development and implementation of the innovation
Implementation/ Termination Period	Adoption	Occurs throughout the development process by linking the new and the old, and reinventing the innovation to fit the local context
	Termination	Innovation stops when implemented or when resources run out. Attributions about its success or failure occur and this significantly affects the fate of the innovation

Adapted from The Innovation Journey (Van de Ven et al., 2008)

The model was described as a non-linear, dynamic path. It included three sequential phases: initiation, development, and implementation/termination. Despite the linearity implied in 3 sequential phases, the elements contained in each phase were non-linear. An innovation might have taken many different pathways before it becomes adopted or terminated.

The initiation phase of the model was not time dependent. It could occur over a period of years and involved a series of seemingly coincidental events. At some point a “shock” occurred and acted as the initiating impetus to propel an innovation forward. Once the decision to introduce the innovation was made, it entered the development phase. Resource managers were required to give direction and or provide the resources that allowed further development of the innovation to occur. The

development phase was characterized by proliferation, set backs, changing criteria for success and a fluid participation of organizational personnel involving top management, investors, and others. This was the most non-linear and unpredictable part of the model. The innovation could develop in many different directions and change from its original conception.

The implementation phase of the model included linking the new and the old as the innovation was adapted to the local situation. Finally an innovation either became integrated or was terminated at which point the people involved in the implementation attributed it with a series of characteristics. The impressions of the history, usefulness, and value of the innovation were established in this phase.

The Innovation Journey model contributes to an understanding of complex innovations by recognizing the non-linear, dynamic nature of the processes of innovation. This is in contrast to models such as Rogers' that described the innovation process as a linear, sequential path (Rogers, 2003). Rogers referred mainly to adoption of innovations by individuals whereas Van de Ven et al were referring to the development and assimilation of innovations by organizations, hence these theoretical perspectives on innovation are not as polarized as sometimes assumed (Greenhalgh et al., 2004). The Innovation Journey model stresses the messy nature of innovation development and implementation. The process involves frequent setbacks as well as convergent and divergent development. The model also recognizes the necessity for the presence of infrastructural and leadership supports in order for innovations to proceed. The authors' program of research was known as the Minnesota Innovation Research Project. The strength of the model is that it provides a large body of empirical evidence to support it.

Innovation, as defined by Van de Ven, is "the process of developing and implementing a new idea" (Van de Ven et al., 2008). The emergence of

nurse practitioners as a demarcated occupation and their incorporation into the health system was an innovation. It was a new idea that led to a fundamental shift in thinking about the traditional work and role of nurses and family physicians in the Canadian health system. It challenged normative beliefs about health care delivery, such as who should deliver primary care services and how they should do it. The Innovation Journey model was based on case studies of primarily medical technologies undergoing innovation and did not include cases from the public sector. This was a potential limitation of using it to model a public sector innovation. Despite this the model proved useful in examining the innovation of nurse practitioners.

Kingdon - “Agendas Alternatives and Public Policy”

I found Kingdon’s “Agendas, Alternatives and Public Policy” model helpful in making sense of public policy creation and implementation (Kingdon, 2011). Kingdon argued public policy decisions resulted from the convergence of three streams, which he identified as problems, policies, and politics. These streams converge when certain conditions he called “windows of opportunity” occur. All three streams have trajectories of their own and are mostly independent of one another. Kingdon’s model acknowledges a problem – such as lack of access to primary care – can exist for a long time without rising high enough on the political agenda for policy makers to turn their attention to it. It does not even become defined as a problem until it becomes a political liability large enough for policy makers to seek a solution for it. Sometimes a problem is ignored because it does not have an obvious solution.

“Hidden experts”, such as academics, researchers, and bureaucrats develop proposals, gradually molding and preparing them to be coupled with a problem when it arises. “Policy entrepreneurs” lobby for their proposals, bringing attention to them and recombining elements from different proposals. They make sure their proposal gets heard by decision

makers at the correct time and is available to implement when a “window of opportunity” opens (Kingdon, 2011).

Proposals often take a long time to develop and become viable policy options. Windows of opportunity in government policy making open briefly so proposals need to be developed in advance and be ready to be presented. There are often multiple proposals lying in wait for the right problem to come along. A specific proposal becomes coupled with the problem and is grasped by policy makers as a solution. Kingdon used the metaphor of a “primordial soup” to describe this process. The streams boil together and from time to time the three streams converge in the soup and a new public policy is the result. Support for his theory comes from empirical study of American Congressional policy development over several decades (Kingdon, 2011).

Kingdon’s general theory provided a useful perspective to think about how, why, and when the Ontario government made the decision to introduce nurse practitioners into the Ontario health system. Ontario has had a recurrent public policy problem in accessing primary care services. In the 1960s this was explained as a shortage of physicians. Defining the problem in this way made it difficult to envision nurses as a solution. However a proposal was developed to expand the scope of practice for a group of nurses, to allow them to delivery primary care services. Once the problem that had been perceived as a shortage of physicians became reframed as difficulty to access primary care services, a solution was already available.

Tuohy, a Canadian political scientist, offered an insight into how public policy problems are set in local historical contexts and how adoption of policy sets off a chain of logic that results in the development of a particular set of circumstances (Tuohy, 1999). Problems framed in specific contexts converge with proposed solutions and politics. These result in policy “accidents” (Tuohy, 1999). This is similar to the concept of a “shock”

that Van de Ven et al used in their model of innovation. Once an “accident” occurs, and a policy emerges, the policy acts like a proposition in an argument. The chain of events that follow appear to be based on an internal “logic”. The policy and its consequences make sense once the unquestioned assumptions of the underlying proposition are understood (Tuohy, 1999). While Tuohy’s theory is similar to Kingdon’s, her insight was to appreciate how the historical context defines the problem and how the current local conditions can be understood as a logical consequence of the underlying assumptions. Tuohy applied this to an analysis of health care reform in the United States, the UK, and Canada. Accidental Logics provides a similar perspective to Kingdon with regard to policy development.

2.3 Summary

This chapter summarized a review of the literature undertaken to answer some preliminary questions, listed in Table 2.2

Table 2.2 Preliminary Research Questions

Preliminary Research Questions
1. What is a nurse practitioner?
2. Where do nurse practitioners practice?
3. Does a nurse practitioner’s practice differ from a physician’s?
4. Are nurse practitioners’ processes of care and clinical outcomes equivalent to those of physicians?
5. Are nurse practitioners cost effective?
6. What barriers to nurse practitioner practice have been identified in Ontario?

The review answered many of the original questions but raised others. Nurses with an expanded scope of practice emerged from the profession of nursing and began providing primary care services previously provided by family physicians. The expanded scope of practice included the ability to independently order diagnostic testing, make diagnosis, and prescribe pharmaceuticals to treat patients. In Ontario most nurse practitioners were found to provide clinical services and practice in primary care settings.

The literature claims that nurse practitioners did not replace physicians and that they practiced differently. The reported research from multiple settings indicated nurse practitioners spent more time with patients and communicated with them in a different way than physicians. Multiple studies have investigated equivalency of clinical outcome. For the most part these have shown nurse practitioner care, within their scope of practice, was equivalent to – or at least non-inferior to – clinical care provided by physicians.

The body of literature used physician care as the ‘gold standard’ to which nurse practitioner care was compared. While nurse practitioners claimed their care is different from that of physicians, the qualitative and quantitative aspects of this claim have little empirical support in the existing literature. Comparative studies used self-limiting conditions to compare care, were too small to have the power to show differences, and lacked negative findings, thus raising the issue of publication bias. Despite these gaps, it appeared this question had lost its academic appeal and will remain beyond the scope of my current research.

In cost-effectiveness analyses nurse practitioner care has been favourable to physician care. However costs are sensitive to assumptions made about them. This made cost-effectiveness studies difficult to generalize.

Barriers to nurse practitioner integration in Ontario have been well investigated. The results of multiple reports consistently point to infrastructure problems, role definition, and relationships with physicians as being the major barriers to nurse practitioner integration in the health system.

The academic study of professions has been an active area of sociological study and theorizing. I reviewed several models that will provide perspectives to apply to the data and their interpretation. The emergence and development of nurse practitioners in an existing publicly managed health system offered an opportunity to investigate this as a case study and contribute to the academic literature on professions and inter-professional relationships.

3.0 Methodology and Methods

3.1 Development of the definitive research questions

As already noted in Section 1.3, page 20, my research was not undertaken in a straightforward or linear manner. This is in contrast to presentations that make it appear that precise, specific research questions were decided upon a priori and the correct methodology was used for answering the questions chosen [Knorr-Cetina 1981 cited in] (Golden-Biddle and Locke, 1993). My research questions changed many times.

The initial set of research questions were directed at developing an understanding of what nurse practitioners were, and the nature of their practices. They were formulated prior to my initial interrogation of the available literature. Attempts to answer these questions led to further questions concerning health system issues, such as barriers to nurse practitioner practice. The available literature identified three major barriers to the integration of nurse practitioners in the health system. These included problems in infrastructure support, agreement on the role of nurse practitioners, and nurse practitioner relationships with physicians in practice settings. Sociologists have studied and theorized about how two occupations performing the same expert work divide it up and protect their right to perform it. However this work has largely focused its analysis on the collective members of a profession and the profession's institutions. It was less often focussed on how individual members of different professions interact in local work settings. This is the level where work relationships and roles are enacted.

A comprehensive analysis of the history and development of nurse practitioners in Ontario does not exist. Therefore the first question was: What is the history and development of the occupation of Nurse Practitioner in Ontario?

In spite of well-documented barriers to such a policy, nurse practitioners were introduced into Ontario's health system as a government policy innovation. The second question was: How did decisions made during implementation of nurse practitioners affect their role development and relationship with physicians?

Once my analysis of the history and development of nurse practitioners began, I discovered something unexpected. Nurse practitioners perform work that straddles the traditional boundaries of nursing and medical practice. However due to the context of their development in Ontario, nurse practitioners were required to have a relationship with a physician in order to practice as providers of first contact and ongoing comprehensive primary care. Profession theories and models predict competition and conflict will occur when boundaries of expert work change. This led to consideration of my third definitive question: How do nurse practitioners and family physicians work out their professional roles and relationships in practice settings to allow nurse practitioners to be able to provide comprehensive primary care services?

Table 3.1 Definitive Research Questions

Definitive Research Questions
1. What is the history and development of the occupation of nurse practitioners in Ontario?
2. How did decisions made during implementation of nurse practitioners affect their role development and relationship with physicians?
3. How do nurse practitioners and family physicians work out their professional roles and relationships in practice settings to allow nurse practitioners to be able to provide comprehensive primary care services?

3.2 Case study

This section explores choices I made in the conduct of this research. All research consists of a series of choices made in the course of the research process (McGrath, 1981) (Wald, 1995). Readers of research use specific criteria to judge its quality. Measures used to determine quality include the authenticity, plausibility, and criticality of claims made, as well as the veracity of the findings. Choices made in the design and conduct of research need to be justified and accepted by the reader (Golden-Biddle and Locke, 1993). Some choices made in this research were deliberate, some serendipitous, and some were made as compromises due to particular circumstances encountered along the way.

Case study is variously described as a methodology, a strategy or an approach to the study of a particular policy, program or institution in a real-life context (Simons, 2009). It is also a product of research. As an approach, case study has been used by multiple disciplines to study phenomena of interest to them. The general approach is commonly used in diverse disciplines such as sociology, anthropology, education, policy, business, and organization studies. Despite case study having been used as an approach in multiple research traditions, it has no universally agreed methodology (Marinetto, 2012). Each discipline has a specific tradition of how it uses the case study approach (Simons, 2009).

The general purpose of case study is to gain an in-depth understanding of a phenomenon from multiple perspectives. It is particularly useful to answer how or why questions to describe, evaluate, interpret or explain what is defined as the case (Simons, 2009). According to Stake a case is an entity, a noun (Stake, 2006). It is important to be clear about what the case is an example of. Both the unit of analysis and the boundaries of a case need to be clearly defined (Simons, 2009).

In-depth study of a single case illuminates a phenomenon in only one setting. This creates an epistemological and methodological dilemma (Stake, 2006). Decisions must be made about what is worth knowing and what it is possible to know. As Stake explained, cases are the study of 'the particular'. Most research traditions place more value on results that can be generalized than results from a particular, albeit interesting, example. However Flyvberg notes: "predictive theories and universals cannot be found in the study of human affairs. Concrete, context-dependent knowledge is, therefore, more valuable than the vain search for predictive theories and universals" (Flyvberg, 2006).

Stake categorizes three types of case study: intrinsic, instrumental, and collective. An intrinsic case is of interest in and of itself. An instrumental case is used to gain insight into something else. A case can also be of collective interest, as part of a collection of cases used to make sense of a collective phenomenon (Simons, 2009). By investigating multiple cases of a phenomenon of interest and then comparing them, a broader understanding can be obtained. However this approach sacrifices depth and the ability to obtain a detailed understanding. Results from multiple case studies can be used to generalize in a conceptual sense rather than a statistical sense (Stake, 2006).

The purpose of a case study determines the methods used to collect and analyze data. Case study encourages the use of mixed methods of data collection and analysis. This provides different perspectives on the case (Burke-Johnson and Onwuegbuzie, 2004).

It is impossible to fully represent all of the features of even one case (Stake, 2006). A researcher has limited resources and therefore it is necessary to make choices in the conduct of a research project. I had to decide initially what the case was and what aspects to focus on. Initial choices included what the case was and what aspects to focus on.

I became interested in three aspects of the nurse practitioner story. How did the new occupation emerge from the existing health system? How was the occupation integrated into that health system? Finally how did nurse practitioners practicing primary care enact their roles and relationships with family physicians in local practice settings?

In approaching the first two questions the occupation of nurse practitioner was my unit of analysis. Nurse practitioners were analyzed as a case of a new occupation developing within an existing system of expert labour. This was of intrinsic interest but I approached the case to understand how a new occupation arose and became embedded in an existing publicly funded health system.

The literature review suggested the nurse practitioner-physician relationship was a poorly understood and problematic area. Once I had collected the data describing the emergence and development of nurse practitioners, this issue was highlighted. An anomaly emerged from the data and from the theoretical perspectives derived from the academic study of professions. According to Closure theorists, a nurse practitioner would be characterized as usurping the occupational jurisdiction of the opposite member of the nurse practitioner-physician dyad. As previously mentioned on pages 8, 21, and 51, the theoretical perspectives on professional behaviour predicted a conflict in the nurse practitioner-physician relationship, yet the data showed little overt conflict at the practice level.

I had to modify my original conception of the case. For the first two questions, the case remained nurse practitioners as a group or collective. In order to investigate the third question, the phenomenon of interest was defined as the relationship between nurse practitioners and physicians in local settings. Stake referred to this target of interest as a “quintain” (Stake, 2006). He used the word quintain to distinguish the phenomenon of interest from ‘cases’ of it. The practice setting, where the

nurse practitioner-physician relationship is enacted, was the case or example of the quintain in my research. This is where the relationship between nurse practitioners and family physicians was enacted. The unit of analysis was the practice setting, and multiple practice settings acted as cases of the phenomenon. Rather than use the practice setting as a case, I could have chosen an individual relationship between a particular nurse practitioner and a physician. However I chose not to, because most of the practice settings had either one physician working with several nurse practitioners or several physicians working with one nurse practitioner. The relationships were similar within a given practice but varied between practice settings. Thus I chose to use practice settings rather than individual relationships as my unit of analysis or case.

The types of data and the methods used to collect them were not determined a priori. As I observed new phenomena, I employed different methods in an iterative process of data collection and analysis. The research methods used in this case study come from both the traditions of sociology and anthropology. The specific methods will be discussed later in this chapter.

The case sites chosen had to be accessible. They also had to offer an opportunity to learn about the nurse practitioner-physician relationship. This was more important than attempting to achieve a statistical sample or include an example of each variation of the phenomenon. This approach was consistent with acceptable case study theory (Stake, 2006). I chose to study 9 practice sites, consistent with Stake's recommendation to include between 4 and 15 cases in a multiple case study (Stake, 2006). According to him, "two or three cases do not show enough interactivity...whereas 15 to 30 cases provide more uniqueness of interactivity than the research team and the reader can come to understand" (Stake, 2006).

Given that both time and financial resources were finite, I had to decide what data to collect. As my research evolved I placed greater emphasis on certain themes that emerged from the data.

3.3 Sources of data

Four different approaches were used to collect data. Data was collected from documents, ethnographic observations, and guided conversational narrative interviews. In addition my own reflections on my experience as a researcher and health care practitioner were used as data. I categorized data types as documentary, observational, and experiential. The types of data and the methods of collection were not determined a priori. Data collection was iterative and depended upon questions that arose and issues that emerged during the course of the investigation. Collected data were turned into text and systematically analyzed on an ongoing basis.

Table 3.2 Sources and Purpose of Data

Type of Data	Purpose	Applicability to Research Question		
		1	2	3
Documents	to collect and understand: <ul style="list-style-type: none"> – the history and development of nurse practitioners as an occupation, – relevant legislation, regulations, – College sanctioned scope of practice, – official views of professional organizations and government 	XXX	XX	X

Type of Data	Purpose	Applicability to Research Question		
		1	2	3
Observation	to collect and understand: <ul style="list-style-type: none"> – the history and development of nurse practitioners as an occupation – relevant legislation regulations – College sanctioned scope of practice – official views of professional organizations and government 	O	XX	XXX
Interviews	to understand: <ul style="list-style-type: none"> – how the nurse practitioners and physicians see themselves – how the nurse practitioner role was developed in specific practices – processes developed at a local level that facilitate the practices of nurse practitioners and physicians 	X	X	XXX
Reflections and Experience	to understand: <ul style="list-style-type: none"> – office routines – health system structure and function 	X	XX	XXX

Data source applicability to research questions O - none, X-minimal, XX-medium, XXX-high

Documents

Documents were obtained from a variety of sources. The original search came from a general literature search conducted to answer the first questions described in Section 2.1. The detailed search description was given in Section 2.0, page 24. Academic literature and commentary

obtained from this search contained references to grey literature. Whenever possible it was obtained and read. Published papers and grey literature were obtained from public access web sites and electronic databases. Electronic libraries at University College London, Queen Mary College University of London, McMaster University and the University of Western Ontario were accessed remotely. Assistance was also received from the librarian at Grey Bruce Health Services, Owen Sound to procure documents, books and academic papers not available to me from electronic libraries or public websites. In one case a paper copy of a difficult to obtain report was requested from the lead author, who sent it to me directly. E-mail correspondence between me and several authors was exchanged seeking clarification of their work. Websites of professional organizations and government ministries were searched for information or material referenced in the website.

A total of 14 pieces of legislation, 106 reports, policy statements, position papers, and other non-peer reviewed documents were examined. In addition 28 web site pages containing information and 4 theses were consulted. See Appendix 3, Section 9.3, page 287, for a list of the sources consulted.

Observations

Nurse practitioners claimed to practice differently from physicians (Munding, 2002) (Pearson and Peels, 2002). I did not initially understand these claims. At the outset of this study, I had planned to rely solely on interviews to collect practice data, but it quickly became apparent this would not be sufficient to understand what happened in practice settings. The ethnographer Orr highlighted one of the drawbacks of relying solely on interviews and existing research literature by arguing that the literature concerning work fails to capture or adequately explain what is actually done to accomplish a given job (Orr, 1996). A further drawback of relying on information about practice, gathered during

interviews, is that there is often a difference between what participants self report and what occurs during objective observation of practice (Adams et al., 1999).

During two pilot interviews, Roberta, a nurse practitioner, and Norma, a family physician, agreed that nurse practitioners and physicians practice differently. However they had different views on what each other's practice consisted of. I concluded that to understand what nurse practitioners actually did, I would need to observe them in their practices. Observation provided a richer understanding than what could be gained through interviews alone, and it also provided a way to cross check information obtained from interviews. Asking questions of a nurse practitioner at the time of an observation offered the opportunity to triangulate data.

These realizations lead to a decision to spend time undertaking ethnographic observation of nurse practitioners' practices. Through field notes, these observations were turned into sources of data, and led to an understanding of how nurse practitioner practices were affected by the barriers they faced on a day-to-day basis.

This part of the study consisted of ethnographic observation of nurse practitioners and physicians in their offices. The type of observation is defined as:

small scale social research that is carried out in everyday settings; using several methods; evolving in design throughout the study; and focusing on the meanings of individuals' actions and explanations, rather than their quantification (Savage, 2000).

Direct observation, using an ethnographic approach, yields rich detail about practices but is very time-consuming and requires highly developed reflexivity on the part of the researcher (Hammersley and Atkinson, 2007). The traditional ethnographic approach involves prolonged observation of a

setting. However this approach, like multiple case study, produces a trade off between depth of understanding in one setting and breadth of understanding across many settings. Interpretation derived from data gathered in one setting makes the possibility for generalization less certain.

I approached several nurse practitioners and a physician to ask if they would allow me to observe them in their practices. Over a period of 16 months between July 2009 and September 2010, I observed 5 nurse practitioners in 3 case practices by way of 8 direct observation sessions. See Table 3.3 below. The sessions lasted between 3 and 9 hours, and the total time spent in direct observations was 60.5 hours.

The 3 case practices chosen for observation were within a 40 kilometer radius from where I lived. Ash practice was the best known to me before hand. Beach practice was a Family Health Team and was my first choice to potentially undertake observation sessions in. Access to this practice became complicated, and the details of this are explained on Section 5.2.3, page 211. Cedar practice was chosen as another Family Health Team but turned out to be a “black swan” (Flyvberg, 2006). A black swan was a reference to Carl Popper’s example of being able to falsify a proposition that all swans are white by finding a single black swan. Cedar practice was a very atypical Family Health Team and hence a “black swan”. The remaining case practices were a considerable distance from where I lived and it was impractical to spend time observing in them.

Table 3.3 Observations of Practice by Nurse Practitioner and Family Physician

Participant	Time Spent Observing (hours)	Number of Patient Consultations Observed
Nurse Practitioner A	8.5	17
Nurse Practitioner B	9	13
Nurse Practitioner C	8.5	11
Nurse Practitioner D	8.5 alone +14 with Physician A	8 + (10 with physician)
Physician A	14 with Nurse Practitioner D	22 + (10 with nurse practitioner)
Nurse Practitioner E	12	20
Total	60.5 hours	101

The time spent on direct observation was admittedly small compared to anthropological style ethnography. My experience as a family physician gave me a good understanding of office routines and the general context of the Ontario primary care system, thus saving time that would otherwise have been needed to understand the processes of an office practice. Another researcher, naive to the routines and processes of primary care office practice, would have had to spend a considerable amount of time to understand the day-to-day routines of office practice. On the other hand, having been a family physician meant I brought my personal and professional (i.e. physician) perspectives about how I thought an office should be run. To overcome this I needed to be reflexive and consciously try to look at the familiar and make it strange (Vrasidas, 2001).

During my observation sessions I accompanied nurse practitioners around the office while observing them in their daily routines. Observations also

included 101 patient consultations, 69 with nurse practitioners alone, 22 with a physician alone, and 10 with a physician and a nurse practitioner together. In one case practice I observed 2 weekly formal chart review meetings involving the nurse practitioners, office staff, and physician I was shadowing. In other practices I observed examples of informal physician-nurse practitioner 'corridor consultations'. These unplanned consultations occur when individuals cross-paths with each other in a corridor and one of them asks the advice of the other about a case they have seen. At other times nurse practitioner students were observed consulting nurse practitioners about patients they had seen. Finally I observed nurse practitioners consulting each other on problem cases.

In addition to observing patient consultations, I spent time observing and talking with nurse practitioners about office routines, making referrals, ordering diagnostic tests, paper work, consulting with physicians, office staff, and interacting with other health system providers. One afternoon I observed a video teleconference that one of the nurse practitioners participated in as part of a regional planning group for diabetes services. One evening I observed a portion of a Family Health Team governance board meeting.

I recorded my observations of the office setting and practices in short, hand-written notes and memory joggers made at the time of the observations. Within 24 hours of the observation period I typed a formal field note based on these notes. Appendix 4, Section 9.4, page 298 contains an example of a field note. While on visits to other practice settings to conduct interviews, I also recorded my observations.

Interviews

Interviews are one of the mainstays of social science research (Hammersley, 2008). I used a guided conversation interview style. I had a list of questions to cover but allowed each interview to develop into a

guided conversation, depending on what the participant wanted to expand upon in their answers. They became “conversations with a purpose” (Atkinson and Pugsley, 2005). The guided conversational nature of the interviews allowed me to direct each interview to cover specific topics and questions but also allow participants to speak about what they wanted to as well. This meant no two interviews were alike. Data was collected recursively and the approach was not held rigid throughout the data collection period. This allowed new areas of interest to be explored as data was collected. However this meant areas of interest were identified in later interviews that was not discussed in earlier interviews. Often it was not possible to go back and re-interview participants.

Interviews have a “performative” character to them, [Atkinson cited in] (Hammersley, 2008). They are “essentially contextually situated social interaction” (Murphy et al., 1998). This means that all interviews need to be interpreted with attention to the context of how they were undertaken. One of these contexts is the identity of the interviewer. The identity of the interviewer affects how the information is presented to the interviewer and the way data are interpreted. This will be discussed in detail later in this chapter. Interviews therefore represent a perspective rather than an absolute picture of the world. This limitation of interview data influenced the choice to include direct observations as part of the overall method of data collection.

A total of 26 guided conversation interviews were completed. See Table 3.4 below. Interviews lasted between 30 and 80 minutes and were usually carried out in the office of the participants. Some were conducted in another place agreed upon with the participant. Three interviews were conducted by telephone. These were done for the convenience of the participant.

Interviews were digitally recorded as MP3 files using a handheld Sony recorder. The recordings were transcribed verbatim with intent to

emphasize content rather than manner of speaking. Not all spacer expressions such as “umms” and “ahs”, or dialect were transcribed. Pauses were not timed. I transcribed 4 interviews and the remainder were done by a transcriptionist. Transcription is very time consuming. It is expensive if done by a paid transcriptionist.

Table 3.4 Guided Conversation Interviews

Category	Number
Nurse Practitioner	13
Family Physician	9
Administrator	2
Board Member	1
Academic Nurse Practitioner	1

Transcription by the researcher has the advantage of the researcher spending a lot of time getting to know the data. However it is labour intensive and I found it boring to do. The use of transcriptionists for the majority of the interview tapes was a compromise. After transcription, I listened to recordings to verify their accuracy. I made corrections to the transcription based on the review of the recordings.

Personal reflection

A research diary was maintained from the beginning of the project until the write up began. The diary recorded thoughts about the project as they occurred. It also included dates of interviews and important milestones. Some e-mail exchanges with my principal and secondary supervisors were included. Research memos were also written and developed on certain topics as my thinking and reflection on them developed. These were used for the final write up. Feedback was obtained throughout by

describing my research to interested colleagues. Formal presentations describing my work were made to constructively critical groups of academics at University College London and physicians and nurse practitioners at Grey Bruce Health Services. Discussion was held after the presentations and comments received. A summary of the main findings was sent to the research participants for information and feedback. Portions of the draft thesis were fed back to some of the participant nurse practitioners for comment.

3.4 Research administration issues

Access

Access to participants was, on the whole, straightforward. I began by approaching practices where I was known personally. Nurse practitioners who were initially approached knew I was generally sympathetic to the introduction of nurse practitioners into the health system. Their personal networks helped assure other nurse practitioners I was 'OK' and not hostile to the profession's goals and aspirations. Nurse practitioners were generally eager to talk about their practices, work situation and occupation. I encountered difficulty obtaining access in 2 Family Health Teams. Both these Family Health Teams were physician governed. In one of these Teams, 2 of the physicians agreed to be interviewed but the nurse practitioner refused, citing being "too busy" to participate. Concerns were raised in 2 of the case practices about how the research would be used. In one case practice this was discussed with the administrator prior to members of the practice being given permission by the administrator to participate. In the other case practice I made a mistake. I approached individual nurse practitioners for permission to allow me to observe and interview them. They readily consented and allowed me to do so. However the administrator of the Family Health Team raised an objection to this. In order to continue, I was asked to make a presentation to the

governing board of the Family Health Team. This took almost 6 months to arrange. With these exceptions, I had little difficulty obtaining access to practice sites. Participants were generally willing to speak with me and allow me to observe them.

Time and resources

The research was self funded and I did not receive any research funding or grants. This constrained the amount of travel and logistical support possible. During the period of data collection, I worked part time and had an irregular schedule of time commitments. This proved to be a major constraint for completing the data collection. Working part time while collecting data made it difficult to spend the extensive hours required for undertaking a traditional ethnographic enquiry. All of the participants in this study generously gave their time to allow me to observe or interview them. However I had to fit into their schedules. It occasionally took several months to find a time that both a participant and I were available at the same time. This led to a protracted period of data collection. This provided me with an opportunity to follow the practices over an extended period of time and time to analyze and contemplate the data in small batches as it was collected. It also allowed me to be able to read extensively around it.

3.5 Ethics board approval and consent

Ethical issues are discussed at length in Section 7.6, page 275.

Research ethics board approval

Two Research Ethics Boards reviewed and approved the research proposal and methods prior to the collection of participant data. Approval was initially received from University College London Research Ethics Committee and renewed as necessary. The proposal was reviewed and

approved by the Grey Bruce Health Services Ethics Committee that acted as the local Research Ethics Board. See Appendix 5, Section 9.5, page 302, for copies of the approval letters.

Consent

Prior to beginning an interview or period of observation, nurse practitioner, physician, and administrator participants were given an opportunity to ask questions, discuss the research and the level of participation being requested of them. I obtained written consent from participants prior to starting the data collection. The consent form used is found in Appendix 6, Section 9.6, page 306.

Issues that arose about consent are discussed in detail in Section 7.6, page 275.

Data storage and security

Interviews with participants were recorded as MP3 files on a digital recorder. Any observations that involved patient consultations did not have information that could identify a patient recorded. Interview data were downloaded to a computer that was password protected. Data was collected and stored in compliance with the Canadian Personal Information Protection and Electronic Documents Act 2000 (Government of Canada, 2000), the Ontario Personal Health Information Protection Act (Government of Ontario, 2004) and the UK Data Protection Act of 1998 (Government of the United Kingdom, 1998). These were consistent with the data protection policies of the two universities with which I was registered as a student.

3.6 Identity of the researcher

The researcher's identity affects the research process (Hammersley and Atkinson, 2007). I discussed features my own identity in Section 1.2, pages 13-20. In this section I will discuss how my identity affected the research process.

Identity includes physical aspects, life experiences, values, and philosophical stance. Identity affects how a researcher sees and analyzes the world. As Hammersley argues, it is impossible to negate the influence of the researcher's identity, therefore the research process is not neutral (Hammersley and Atkinson, 2007). The reader is therefore encouraged to consider my identity and how this might have affected how I carried out my research and reached conclusions.

I feel my training and identity as a physician was the biggest issue of identity in this research. Four main questions arose from this. How did my professional background affect the information presented to me? How did I 'see' what was presented to me? How did this affect my analysis? And finally how did the hierarchical power difference between a physician and nurse practitioner affect the research?

The researcher's professional background can affect the information collected. Richards and Emslie compared the impact of professional backgrounds of researchers on the responses from participants during interviews in primary care (Richards and Emslie, 2000). One of the researchers was a doctor and one was a sociologist. They concluded that "who the respondents think you are affects what you get told" (Richards and Emslie, 2000). Chew-Graham discussed two studies where the researcher was either known as a fellow physician, an "expert" in the field or assumed to be "just" a researcher (Chew-Graham et al., 2002). The identity attributed to the interviewer played an important part in determining the data that were collected. When respondents knew the

interviewer was 'non-clinical' the interview was narrower in focus, had less discussion and diversion, and was much less emotionally-charged. "Accounts were formulated as 'public' representations of attitudes and activities, intended to be open to scrutiny" (Chew-Graham et al., 2002).

Checkland noted that professional respondents view colleagues undertaking interviews as confidants, experts, and judges. "Interviewees gave information that might have been difficult to share with a non-professional interviewer; 'you know what it is like' was a frequent refrain" (Checkland et al., 2007). This can be an advantage as Chew-Graham reported. "Where respondents recognized the interviewer as a clinician, they shifted between treating her as a professional peer and a private confidante" (Chew-Graham et al., 2002). This permitted a degree of vulnerability to be shown in professional company, a communication between equals that lead to rich intuitive responses. Checkland cautioned against the danger of developing a conceptual blindness that is shared between the professional as interviewer and the participant. This shared blindness potentially allows the interviewer's own feelings and opinions about the field to govern the dialogue and interpretation (Checkland et al., 2007).

My personal experience has produced a perspective on the health system that could be read skeptically by a critical reader. While acknowledging that my experience has produced a particular point of view, my experience has also produced opportunities that would not have been available to other researchers. Thus for the purposes of my research, my experience in the health system was both a limitation and an advantage.

One opportunity that occurred was the chance to pitch my research in settings where being the "girl from the university" (Richards and Emslie, 2000) might not have allowed me to do so. On the other hand the existence of inter-occupational tension between nurses and physicians (Holder, 2004), caused some nurse practitioners to be initially suspicious

about my motivation for doing this research and wondered what my angle was. Winning the trust of participants can be a problem in ethnographic research (Hammersley and Atkinson, 2007) and my identity as a physician sometimes made it easier and sometimes harder to do so.

An important limitation of my identity as a physician is the possibility that the data is selected and “pre-analyzed” to conform to my worldview (Van Maanen, 1988). The reader will have to weigh this possibility in their evaluation of the plausibility of my results. Throughout my research, I attempted to be reflexive about this and sought outside reading and comments of the findings by non-physicians, who I specifically asked to look for systemic or particular bias.

I wish to address one aspect of my identity that might have been the most influential in this research. The traditional power differential between physicians and nurses probably affected the information provided to me by both nurse practitioners and physicians. I cannot change the fact that this might have affected my research; I can only reflect how it might have influenced the data, the analysis, and the veracity of the conclusions drawn from them.

Reflexivity is noted to be an important aspect of the research process (Emerson et al., 1995) (Richards, 2005) (Hammersley and Atkinson, 2007) (Denscombe, 2010). I might be belaboring the issue about identity and reflexivity, however it is an important methodological point. Even reflexivity is not a straightforward process. Accounts of reflexivity are a form of rhetoric. American ethnographer Duneier discusses the use of reflexivity to establish “innocence of the researcher” and illustrate their ‘enlightenment’ (Duneier, 1992). “He warns against the trend of using accounts of reflexivity to establish the researcher's innocence and enlightenment. One of the dangers in doing this is that it becomes an illusion that both allows the researcher to make “unfair...stereotypes and excuses them for doing so” (Duneier, 1992).

3.7 Individual practice cases

Choosing the case sites and enrollment

The initial case practice sites were chosen purposively with attention to the practicalities of access. Further case practices were chosen as examples of alternative practice organizations, organization funding structure, or unusual situations. I live in a small city, surrounded by smaller towns and rural areas. Initially I approached the 3 organizations that employed nurse practitioners practicing comprehensive primary care within a 40 km radius of my home community to seek their participation. The rationale for this choice was explained on page 75.

Organizations employing nurse practitioners not delivering comprehensive primary care services, such as Public Health agencies, Home Care, or nursing homes were not included as cases. This limited the cases to settings where nurse practitioners provided comprehensive primary care services. Because of my own professional practice, at the outset of my research I was already aware of all the local practices where nurse practitioners were employed. I confirmed this information both by word of mouth from participant nurse practitioners and from the Ministry of Health and other web sites (Ontario Ministry of Health and Long Term Care, 2012a) (Victorian Order of Nurses, 2011).

During the data collection phase, suggestions were made by participants to approach other practices. This was an example of purposeful, “snowball sampling” (Biernacki and Waldorf, 1981) (Lopes et al., 1996). This resulted in the addition of 1 large urban practice, 2 Underserved Area Program practices, and a Nurse Practitioner-Led Clinic to the list participant practice cases.

In order to supplement data provided by documents, I contacted people with potential information via e-mail. This group consisted of academic nurse practitioners and other researchers, who were chosen purposefully because I believed they could provide insight into what was not recorded in available documentation.

I used several strategies to contact potential individual participants. Initial contact was made by e-mail or telephone and an introductory letter was attached or sent by mail. The letter outlined the purpose of the research, who I was, and what was being asked of them. See Appendix 6, Section 9.6, page 305, for the introductory letter. I followed up and negotiated access either by e-mail or more commonly by telephone. In one case I gave a formal presentation to the Board of Directors of a Family Health Team as part of the negotiation required for access to its team members and premises.

In the tradition of multiple case study methodology, I selected cases that would provide information about relationships and roles. This methodology produced a rich picture of individual practices.

Description of case practice organizations

The characteristics of the participant practice organizations are summarized in Table 3.5. These include organizational type; number and type of practitioners; geographic setting; and an assigned pseudonym.

Table 3.5 Description of Participant Practice Organizations

Organization Type	Staffing	Setting	Practice Pseudonym
Family Health Team	17 MDs, 4 NPs	small urban, 4 sites	Beech
Family Health Team	4 MDs, 1 NP	rural, 2 sites	Dogwood
Family Health Team	1 MD, 2 NPs, 2 part time NPs	rural, 1 site	Cedar
Family Health Team	21 MDs, 5 NPs	rural, 5 sites	Echo
Under-Serviced Area Program	1 MD, 2 NPs	rural, 1 site	Ash
Under-Serviced Area Program	1 NP, 1 off site MD	rural, 1 site	Fir
Under-Serviced Area Program	1 NP, 1 off site MD	rural, 1 site	Ginkgo
Nurse Practitioner Led Clinic	4 NPs, 1 off site MD	small urban, 1 site	Hawthorne
Aboriginal Health Access Centre	4 NPs, 1 off site MD, 1 on site MD	urban, 1 site	Ironwood

Notes

MD – family physician, NP – nurse practitioner

Practitioners are full time unless otherwise indicated

Off site – means the physician does not have an office within the practice and does not visit the practice setting on a regular basis.

When considering its governance and funding, the case practice's organizational type will be important. The observational portion of the research was undertaken in the offices of 2 nurse practitioners in the Ash practice, 2 nurse practitioners in the Beech practice and 1 nurse

practitioner and 1 physician in the Cedar practice. These settings will be described in greater detail in Section 5.1, page 156.

3.8 Progression of the research

After doing some preliminary reading to familiarize myself with the general field, I had several informal conversations with two nurse practitioners who had worked for several years as primary care practitioners. They both practiced in a community clinic financed by the Underserved Area Program. They identified several frustrating issues; one of which was the limitation of their scope of practice and the other was the system of rostering patients that allowed physicians to get paid for work the nurse practitioners did. Rostering is a term used to describe the practice of registering patients in the name of a physician or group of physicians. It is used primarily to count patients to pay physicians per person, a fee for the provision of a “basket of services” to them. Rostering as a term is used frequently in this thesis and will be discussed fully in Section 5.2.3, page 217.

During this period I was searching and reading the academic and grey literature, which included various government reports concerning nurse practitioners. The emerging picture led me to ask further questions about why the scope of practice was legislated and regulated the way it was. An iterative process of conceptualizing the general field led me to analyze the legislation. At this point I developed further questions to pose to participants who had been in practice when the legislation was enacted, so as to probe their understanding of why the regulations were written the way they were.

I collected data recursively. The following is an example of this process. In early interviews and from reading the academic literature I noted nurse practitioners frequently made the claim that their practices were different

from that of physicians. This led to a decision to spend time in ethnographic observation of nurse practitioners-in-practice. I thought it was important to supplement and check information obtained from interviews through direct observation, because it provided a richer understanding than what could be gained through interviews alone. My findings turned into sources of data, which helped further my understanding of how nurse practitioners dealt with the barriers encountered in their day-to-day practices.

Case research assumes each case is unique and sheds a different perspective on the phenomena being studied (Stake, 2006). Because of this it is difficult for the researcher to know when to stop collecting data. A researcher must neither exceed their own ability nor that of their reader to understand the unique interactivity that multiple cases provide. For this reason the number of cases in a multiple case study does not usually exceed 15 (Stake, 2006).

Data from all non-text sources were turned into written text. Field notes were typed and interviews transcribed, and I had to choose what data to collect and how to represent them in text. For example I collected and analyzed newspaper stories concerning the development and opening of Hawthorne practice, the Nurse Practitioner-Led Clinic, to understand the local reaction to opening this new form of clinic. I did not follow the same process for other practices. Data collection involved a filtering process. I paid attention to some things while ignoring others. While I was collecting data, it was difficult for me to know what was important and what was not. Indeed the same could be said about interview questions. I was constantly making choices. Even the manner in which transcription occurred involved choices of what to represent in the transcription. For example I decided not to record length of pauses in speech. Similarly “ums” and “aws” and dialect were not transcribed. I felt these were not important data for the purpose of the particular research questions and methodology. The aspects I chose to leave out might be important in other contexts; this

would depend upon the purpose for producing the transcript. (Bucholtz, 2000) (Green et al., 1997).

3.9 Specific approach to analysis

The approach I took in analyzing the data was abductive and pragmatic in nature. This means there was an interplay of observation and conceptualization during the analysis. There were many false starts and cul-de-sacs that led nowhere. Van Maanen describes the process as:

Moving back and forth from data-based theorizing to intuition resting on experience and habits of mind, the research context plays an important role in generating interesting theory, as does absorbing what one can of the scholarly literature, in the field and working through conjectures without being tethered to data (Van Maanen et al., 2007).

In keeping with a mixed methods approach, I used different types of analyses for different types of data. See Table 3.6.

Table 3.6 Types of Data Analysis and Use of Analysis

Type of Data	Analysis	Use
Reports and White Papers	Critical reading for: – underlying rhetoric – assumptions	Understand the: – historical context – motivations at the time of writing
Academic Literature	Critical reading	Background
Guided Conversation interview transcripts	Thematic content	Understand: – individual practice – interactions

Type of Data	Analysis	Use
Direct observation field notes	Thematic content	Understand: –individual practice –interactions
Newspaper articles	– Thematic content	Understand rhetoric used for: public support for or — objection to a Nurse Practitioner Led Clinic
Personal Reflection	Reflexion	Reflexivity

I read historical documents to understand what the thinking of the authors was at the time they were written. Through searching references in other works, I sometimes serendipitously discovered reports and other grey literature, such as oral history accounts of the emergence and early development of nurse practitioners. Whenever possible I sought out and read those documents. I critically read documents and position papers produced by professional bodies to determine their arguments and their use of rhetoric in stating their official positions on the introduction of nurse practitioners.

I began analyzing interviews and observational data by repeated careful reading of the transcripts and field notes. Statements and observations were coded into categories that seemed to pertain to common subjects. Themes emerged from these preliminary categories as first order themes. First order themes expanded the more specific preliminary categories. For example statements in transcripts made during guided conversation interviews and direct ethnographic observations of patient consultations noted nurse practitioners used a variety of processes such as medical directives, telephone orders, confessionals or blank prescription pads pre-signed by a physician to make their practices more efficient if a physician was not physically present to delegate an act to them. Thus categories such as a) medical directives b) verbal orders c) confessional and d) pre-

signed prescriptions became preliminary categories that were able to be expanded into a first order theme of commonalities called 'workaround'. Workaround as a theme was noted to occur because nurse practitioner's scope of practice was restricted and prevented nurse practitioners from carrying out their practices autonomously or independently. A similar theme of common categories was called 'structural features of the health system'. This was comprised of multiple categories including things such as inability to refer directly to a specialist physician, employment relationship, and liability for patients. These themes led to an emergent overarching theme that concerned the relationship with the collaborating physician. Reflection upon and reworking of the themes ultimately led to an understanding of the characteristics of this relationship.

The following 3 transcript extractions are examples how this was done at the initial stages:

Example 1. Brenda (nurse practitioner, Gingko practice) in reference to how she dealt with consultations when a physician is not physically present in the practice:

"Dr. [name of physician] has set it up so that he's given me permission to use his name and his billing number on any of the consults that I do. If I have a query about a consult – and normally I don't send the consult to him – normally I just put his name and his number on the referral."

This statement was put into the following preliminary theme categories a) **intra-professional talk** (use of the title Dr. and surname of the physician when referring to their collaborating partner b) **structural** (he gave me permission - non delegated act but funding rule of insurer) c) **verbal understanding** (permission to use his billing number d) **specialist consultation** (a method for making a consultation with a specialist physician without direct referral to the collaborating partner).

Example 2. Roberta (nurse practitioner, Ash practice) referring to starting a patient on a medication not within her scope of practice to do so:

“...following his cholesterol and he is now impaired fasting glucose and and he's a diabetic and he's off target for his lipids I'm going to write a prescription for Lipitor and we call that at the end of the day - when I talked to [physician's first name] that these are confessions as opposed to consultations. And then they get the blessing... (laugh)... and I have not had one that hasn't been blessed yet.”

This vignette was coded into the themes a) **delegation** (inability to order the medication Atorvastatin (“Lipitor”) independently - needed permission of physician that she obtains after she has done the action) b) **confessional** (use of a “confession” for an after the fact consultation to perform a delegated act) c) **consultation with collaborating physician** d) **method of communication with collaborating physician** (telephone call at the end of the day - not contemporaneous to the action undertaken) d) **intra-professional talk** (use of physician's first name when speaking about him to me) and e) **trust** (illustrates trust in each other to do the right thing and not abuse the workaround

Example 3. Laura (nurse practitioner, Beech practice) when talking about how she deals with prescribing routine medications:

“We do have some medical directives that have recently been passed, but I would say that, say somebody with newly diagnosed hypertension, I follow the clinical guidelines with certain medications, and what I would have to do is write a verbal order for that initial amount of medication and then I'm able to do the renewals, so I do touch bases with physicians, but not with everything.

Interviewer: Yes. Few people do. You do this as a verbal order on a directive or just a verbal order as an understanding?

Laura: An understanding.”

This section was coded in the following themes a) **medical directive** b) **verbal order** (uses both medical directives and verbal orders. Uses verbal order more commonly than a medical directive and c) **communication** (communicates with physician after the fact - does not always tell the physician what she has done nor seeks specific ‘permission’ for a delegated medical act) d) **autonomy** and e) **scope of practice - need for delegation** (acting outside of the scope of practice with verbal understanding that it was permitted by the physicians.

There were approximately 30 initial categories that emerged into first order themes. These were collected and expanded into 12 sub-themes that later became 4 major themes. These are summarized in Table 5.3 p. [to be filled in when final pagination occurs] and discussed at length in Chapter 5. These themes were merged into overarching themes related to the nature of the nurse practitioner role and relationship with the collaborating physician. These included workarounds, trust, power and the nature of the nurse practitioner - physician relationship. These themes are discussed in the Synthesis Chapter 6.

Some of the data and the thematic categories they represented were not used in the developed analysis. For example 4 nurse practitioners specifically spoke about their motivation to provide care to patients based on their belief that if they did not provide care to the patients no one would. This represented an example of a theme that had to do with motivation to reduce social inequity and assure care was available to everyone. This data was not ultimately used as it became beyond the scope of the final research questions.

As noted in Table 3.6, in one case I sought out newspaper accounts of the development and opening of the Nurse Practitioner-Led Clinic to understand the perspective of opinion makers in the community.

Newspaper reporting forms discourse linking historical, cultural, and socioeconomic contexts and is used rhetorically (Van Dijk, 1988). The newspaper articles were analyzed in a similar manner to the guided conversation interviews and observational field notes using a thematic framework in a similar manner as the one described above. In addition to simply determining the themes represented in the newspaper stories, I analyzed the rhetoric used in the newspaper stories to understand the basis for the antagonism physicians in that community showed for the concept of a Nurse Practitioner-Led Clinic. This was helpful in understanding the process the nurse practitioners in that clinic developed to ensure participation of a physician to collaborate with them.

While thematic framework analysis is a recognized method of analysis (Charmaz, 2006), it does have weaknesses. Unless the researcher approaches the analysis with as open a mind as possible, there is potential to bring preformed conclusions to the process of analysis (Hammersley and Atkinson, 2007) (Hammersley, 2008). Forcing data into preconceived ideas for codes and theories can be a problem. In cases where the research is carried out by a team of researchers, coding is frequently done by separate researchers and then combined, and disagreements in the coding of a particular passage are dealt with through discussion until consensus is reached. In these situations all the coders have to understand the context of the research environment.

The data were solely collected by me. As I was the only person immersed in the data I was able to analyze and interpret some of the nuances present in the data that someone else less familiar with the context of the data would have had difficulty understanding (Riessman, 2008). However the details of the developing analysis were repeatedly discussed with my supervisors, colleagues, and participants. The progress of the research was presented at an academic department seminar at UCL and at a hospital rounds in Owen Sound. Several nurse practitioners including some participants were in attendance at the later rounds. The analysis

was discussed individually with some of the participants in more detail and all the participants were sent a summary of the findings and given an opportunity to provide feed back on the findings.

The analysis and conclusions are contingent. The reader must understand that I both accept and point to the caution given by Argyris and Schön about the themes and conclusions reached:

Other inquirers or yourself – at another point in time – could come to the situation with different assumptions, perceive a different constellation of data, go through a process comparable to your own, and emerge with a different confirmed perspective (Argyris and Schon, 1974).

3.10 Reporting issues

Authenticity, plausibility and validation

A researcher who seeks to produce a constructivist analysis of reality must convince the reader of 3 dimensions of the work: its authenticity, its plausibility, and whether the account of the research was approached critically (Golden-Biddle and Locke, 1993). Authenticity occurs when a researcher convinces the audience the researcher was actually present, did the work, and provided an explanation of how the researcher affected the process. Authenticity is a particularly important attribute in reports of ethnographic observations, and is achieved both by providing convincing fine grained descriptions of the setting, as well as through the use of applicable quotes from participants. Plausibility occurs when the reader is convinced that the conclusions are reasonable and legitimately based on data presented.

Observations must be interpreted before claims can be made to understand them, and this interpretation has a rhetorical component. The textual representation of the world needs to persuade the reader that it reflects a 'native' perspective rather than the author's preconceived notions (Golden-Biddle and Locke, 1993).

Criticality provokes an examination of the reader's prevailing assumptions and beliefs (Golden-Biddle and Locke, 1993). This involves using rhetoric and presenting the material in a way that offers a cultural critique (Marcus, 1980).

When an author convinces the reader the 3 requirements of authenticity, plausibility, and criticality are met, the reader is usually satisfied that the data and analysis are valid. Validity "refers to the quality of data and the explanations and the confidence we might have that they accord with what is true or what is real" (Denscombe, 2010).

Voice of the researcher

Van Maanen in his classic text, "Tales From the Field", describes 3 approaches used to report accounts of ethnographic research; realist, impressionist or confessional tales. He classifies most accounts as "realist" tales. These accounts attempt to represent reality in a third person, factual manner. Another way of telling the tale is impressionistically. Accounts written in this style are "artistic" and employ descriptions of 'interesting things I noticed'. A confessional tale inserts the researcher as a character in a first person account (Van Maanen, 1988).

The report of my research is written in a variety of Van Maanen's styles. At times it is written in the confessional style, although I do not go as far as Van Maanen in that I do not become a character in the main part of the story. The report maintains a personal tone and acknowledges the effect of my context (gender, age, previous training and world experiences, etc.)

on the choices that I made and the effects of the context on the research project. I chose this form of presentation in the belief that a PhD is about learning the mechanics of research, and understanding the limitations of the choices that are made along the way. As such I present more personal reflection throughout the thesis than would be presented in submissions to most academic journals.

4.0 Findings 1 - Emergence of Nurse Practitioners in Ontario: An analysis of the historical context

4.1 Historical context

In this section, based on an extensive literature review, I provide historical context for the emergence of nurse practitioner as an occupation and its early development in Canada. Nurse practitioners emerged as an occupation in multiple settings in the 1960s. A detailed history of the development of nurse practitioners in Canada, and specifically Ontario, is not available in the current literature. This chapter provides background information required to situate nurse practitioners in the Ontario health care system. It begins with a description of the emergence of the nurse practitioner as a demarcated occupation. I analyze 3 factors: perceived physician shortage, nurses' professional aspirations, and increased questioning of the medical model of health care during the 1960s and 1970s. I argue the introduction of nurse practitioners was a public policy decision and I analyze factors that led to their failure to become embedded in the Ontario system when the occupation was first introduced in the 1970s. I examine policy changes that occurred in the early 1990s and how these changes led to the successful establishment of nurse practitioners as providers of primary care services.

4.2 Nurse practitioners emerge as a distinct occupation

Initially I assumed I would discover the origin of nurse practitioners in the historical record. For me this would mean discovering an event or circumstance from which something developed. According to the historical record, groups of nurses developed extended scopes of practice as a solution to local problems in health care delivery. There was therefore no one nidus of development but rather a widespread emergence of the occupation in the 1960s.

The term 'nurse practitioner' was first used in the United States in association with the development of a Paediatric Nurse Practitioner training program at the University of Colorado in 1965 (Arcangelo et al., 1996). The goal of the program was to train nurses to provide primary care to children in under-serviced urban areas (Tropello, 2000). Despite the use of the term beginning in 1965, an expanded role for nurses had existed in various settings long before that.

DeMaio argues that public health nurses acted as nurse practitioners when they provided primary care to families in the early 20th century in the United States (DeMaio, 1979). Employing extended skills and roles, some nurses provided child health supervision in public health settings in the 1940s and 1950s. (Siegel and Bryson, 1963). Nurses were also reported practicing in extended roles in some hospital clinics (Stoeckle et al., 1963). In Canada the Grey Nuns set up cottage hospitals and visited the sick in their homes over 300 years ago. They have since been called Canada's first nurse practitioners (Canadian Nurse Practitioner Initiative, 2006).

Nurses with post-graduate degrees, and those with similar extended scopes of practice began using the term 'nurse practitioner'. It was used to identify and differentiate these nurses from general registration nurses. Other terms were used as well. Until 2007 when title protection was granted in Ontario, labels such as "registered nurse – extended class", "advanced practice nurse", "clinical nurse specialist", "nurse clinician" were used interchangeably with nurse practitioner (Bryant-Lukosius et al., 2004). The term nurse practitioner was also used in different countries to designate nurses with expanded scopes of practices, although not necessarily the same scopes of practice (Pearson and Peels, 2002).

The Canadian Nurse Practitioner Initiative used the following definition of nurse practitioners, in the Canadian context as:

Nurse practitioners are registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice (Canadian Nurse Practitioner Initiative, 2006).

I re-quoted this definition, originally used on p.26, to emphasize the important points contained within it. The definition describes a fundamental difference in the scope of practice between nurse practitioners and other nurses. This difference is not simply one of specialized nursing practice, such as intensive care nursing or emergency nursing. The definition includes the capability of autonomous diagnosis, ordering and interpretation of diagnostic tests, and prescription of pharmaceuticals. These added capabilities created a new role for nurse practitioners in the health system. The expanded scope of practice allowed nurse practitioners to diagnose and treat many conditions nurses and specialty area nurses were not allowed to.

As Abbott and others have shown, scopes of practice and boundaries of work jurisdiction are not static. They evolve over time and are dependent upon historical and local circumstances. Professions form a system or “ecology” that shares the characteristics of biological systems (Abbott, 1988). Like species professions expand into environments where opportunities to support them exist. Even though boundaries and roles of nursing practice had expanded in some places prior to 1965, it had been a local, rather than a general, phenomenon. However adopting consistent naming, providing specific training, and the ultimate process of certification demarcated the group of nurses who shared these attributes from other nurses. These developments were consistent with the general goals and evolution of professions (Abbott, 1988) (Freidson, 1994). The increased scope of practice allowed the group to claim the ability to

provide a large number of primary care services that general registered nurses could not provide. These developments created a new occupation that eventually became recognized as such.

4.3 Factors that led to the demarcation and formalization of nurse practitioners as an occupation

The existing literature identified three factors that played a part in the emergence of nurse practitioners from the milieu of the 1960s in North America. In the 1960s there was concern about a real and perceived shortage of physicians to provide primary care (Yankauer and Sullivan, 1982) (Blumenthal, 2004). There was also an ongoing desire of nurses to be recognized as professionals, to advance their occupational status, and become equal partners in the health care system (Tosh, 2007) (Bradshaw, 2010). Finally there was criticism of the way the health system was structured (Tropello, 2000) (Illich, 1978), and an academic critique of the role and behaviour of professions – specifically medicine (Johnson, 1972) – led to an examination of alternatives to the status quo. Each of these factors turned out to be multi-layered and nuanced.

Of the three factors, the shortage of physicians has been given the most prominence in previous analyses. Once the government became the primary payer for medical services, the shortage became a public policy issue. The shortage was seen as sufficiently important to prompt a government response. Other factors were important and contributed to what followed, but they were secondary issues.

4.3.1 Factor 1 - increased demand for primary care services and a perception of physician shortage

It has always been difficult to match the demand for health care and the provision of health care services. Prior to the 1960s the belief was that

supply and demand for medical services had been left to market mechanisms to determine. This is not completely accurate (Evans, 1983). As discussed in Section 2.2, page 48, physicians sought to control competition for their services through government legislated protection of certification, licensure, and control of training new physicians (Freidson, 1970). These measures created a restricted supply of physicians. Canada and the United States followed similar paths in this regard. Demand for health care services increased in the middle of the 20th century. At this time private insurance schemes also became more available (Starr, 1982), but the supply of physicians did not also increase.

The demand for health care escalated even further in the United States, when the American government introduced Medicaid and Medicare in 1965. These two government-financed insurance schemes, covering the poor and the elderly, made medical care more available and affordable for under-privileged and older Americans (Starr, 1982). Universal health insurance was introduced in Canada in 1967. This insurance was available to all of the citizens of the country, not just the underprivileged, and it covered primarily hospital costs and physician services (Coburn, 1988). These programs contributed to increased entitlement to and demand for health care (Yankauer and Sullivan, 1982).

Before the 1970s, 'primary care' and 'health care' were synonymous with 'medical care', meaning care provided by physicians. Similarly 'under-serviced', a term used extensively in the literature and government reports, implies and means a shortage of physicians – and not necessarily a shortage of other providers (Blythe and Baumann, 2006).

In the 1960s it was natural to reframe the problem of difficulty accessing primary care services as a problem of physician shortage. Rather than question the normative beliefs of how health care services are organized and who could or should provide these services, lack of access to primary care was seen as a 'physician shortage' problem, and has been identified

as such by many authors (Yankauer and Sullivan, 1982) (Williams and Sibbald, 1999) (Angus and Bourgeault, 1999) (de Witt and Ploeg, 2005) (Canadian Medical Association, 2008) (Geiger, 2009). The change in physician to population ratio can be seen as evidence to support the supposed shortage. In the United States the ratio of physicians to the general population fell from 173 per 100,000 in 1900 to 140 per 100,000 in 1960 (Blumenthal, 2004). In 1964 there were 130 physicians per 100,000 population in Canada (Grant and Oertel, 1997).

Several explanations are given for the shortage of physicians that developed in the first half of the 20th century. During the 19th and early 20th centuries medical education in North America was of uneven quality and medical practice was erratically regulated (Starr, 1982). Reforms in medical education, resulting from recommendations made by the Flexner Report in 1910, increased the quality of medical education but also caused the closure of many medical schools (Blumenthal, 2004). The closure of smaller, often rural medical schools

caused a disproportionate reduction in the number of physicians serving disadvantaged communities: most small, rural medical colleges and all but two African American medical colleges were forced to close, leaving in their wake impoverished areas with far too few physicians (Beck, 2004).

Together with an increase in medical specialization after World War II, this decreased the proportion of physicians practicing primary care (Blumenthal, 2004).

Prior to the introduction of government-funded health insurance, there was a perceived shortage of physicians. An even greater physician shortage was perceived to be looming. This was fueled by the 1959 Bane Report, published by the American Surgeon General's Consultant Group

on Medical Education, that predicted “a shortage of 40,000 physicians in the United States by 1975” (Blumenthal, 2004).

It is impossible to determine what the optimum number of physicians is because there is no ‘right’ number. A 2010 comparison of the number of physicians per population among OECD countries reveals great differences. For example in 2010 the UK had 2.7 physicians per 1,000 people; Canada 2.4 per 1,000; France 3.3 per 1,000 (OECD Directorate for Employment Labour and Social Affairs, 2011). Moreover, there is no correlation between the number of physicians per 1,000 population in OECD countries and improved health outcomes (Watson and McGrail, 2009).

The variability in the ratio of physicians to population in different countries reflects differences in the development of structures and processes of a particular health care delivery system. According to Tuohy the configuration of a health system results from the historical context in which the system is situated (Tuohy, 1999). Policy decisions often become ‘givens’ and the assumptions behind them are no longer questioned. The givens become propositions in a chain that unfolds logically from them. The ratio of physicians to population reflects historical and normative assumptions about those systems rather than any absolute ‘right’ number of physicians.

The real or imaged perception of a physician shortage became a problem because of the normative way of thinking about the delivery of health care services. In North America delivery of first contact, primary care services was traditionally the domain of physicians. The normative belief that only physicians had the requisite knowledge, skills, and ability to deliver primary care services was widely held (Mundinger, 2002) (Hutchison, 2004) (Geiger, 2009).

Given the wide variation in the ratio of physician number to population in various health systems, it appears there is no such thing as a correct ratio to maximize health outcomes. Within each system a number is chosen based on a historical ratio. This becomes the standard for that system and arguments are made for why the number needs to be increased or left alone. Whether the shortage of physicians was or remains absolute or relative, the perception in the 1960s was that it was a problem that needed a solution.

4.3.2 Factor 2 - nursing aspirations for an increased role and respect in the health system

For more than a 100 years, nurses struggled to redefine their relationship with doctors and improve their professional status (Witz, 1992). Opinion pieces such as Stein's (Stein, 1967) and government sponsored reports, such as the Briggs Report of 1972, all made similar claims (Tosh, 2007). The Briggs Report put it this way: "Doctors and Nurses [are grouped together] not as partners but as people in charge on the one hand and their 'handmaidens' on the other." (The Briggs Report, 1972 quoted in Tosh, 2007).

Nurse practitioners emerged in different health systems under similar circumstances. In the United States, nurse practitioners emerged in response to a shortage of physicians to provide care to inner city children. In Canada nurses already worked with limited physician backup, providing primary care services in isolated northern or rural communities. This was not permitted in places where there was a sufficient supply of physicians to meet the demands for services. In the mid 1960s, increasing numbers of southern communities began experiencing physician shortages. As the shortage became more widespread, it required an organized response. Prior to this, as Yankhauer wryly observed, "whenever there has been a perceived scarcity of 'qualified' physician services, society has granted

permission to diagnose and treat disease and disability to others 'less qualified'" (Yankauer and Sullivan, 1982).

By offering services previously provided by physicians, nurses were making one of their many concurrent inter-professional challenges to medicine's hegemony of health care (Larkin, 1988) (Davies et al., 1999). They wanted respect and they wanted to change their status as "the physician's handmaiden" (Stevens, 1984) (Holder, 2004). The shortage of primary care physicians presented an opportunity to advocate for increasing the scope of practice of nurses to provide services that physicians were not able to provide. This was a way to increase nurses' scope of practice and gain respect for the profession. This interpretation is supported by Abbott's general theory, discussed in Section 2.2, page 50, of how professions interact.

It is also supported from the perspective of Closure Theory, which describes an occupation's goal of usurping activities from another group, thus ending its exclusivity in an area of labour. By usurping the right to provide primary care services the group increased its status. Larson's description of a professionalization 'project' can also be applied to this situation. Nurses saw an opportunity to expand their scope of practice, increase their status, and occupy a more respected position in society. Provision of previously exclusive physician services increased their status, decreased their sense of being a physician's "handmaiden", and forwarded their goal of becoming an equal partner in the health system.

In an effort to legitimate their claim of being able to provide primary care services, as well as to demarcate themselves from other nurses, the pioneers of nurse practitioner initiatives adopted the name 'nurse practitioner' and created specialized training programs. As the occupation evolved, nurse practitioners wanted their training to be recognized at a masters level of academic preparation. They also wanted certification, title protection, and other protective measures enshrined in legislation.

To aid in these processes, the profession began lobbying and positioning itself to expand its role and scope of practice. A resolution passed in 1970 at a meeting of the Registered Nurses Association of Ontario, stated the expanded role of the nurse should “be identified, defined, and interpreted by the nursing profession in collaboration with the medical profession” (Haines 1993 in Angus 1999).

However terms such as ‘expanded role’ and ‘collaboration’ never achieved an accepted definition or understanding among the participants in these debates. The medical profession made its view on this issue clear, and in doing so it appeared to co-opt the Canadian Nurses Association. A joint statement issued by the Canadian Medical Association and the Canadian Nurses Association in 1973 included the following statements:

[P]riority should be given to expanding the role of nurses who work in direct and close association with physicians in the field of primary health care...The roles of the nurse and of the physician are interdependent. An increasing role is envisaged for the nurse in health maintenance. More over, selected responsibilities now tending to be handled by physicians can reasonably be delegated to nurses. Ultimate responsibility for diagnosis and establishment of a medical therapeutic plan will remain with the physician (Canadian Medical Association and Canadian Nurses Association, 1973).

With the acquiescence of the Canadian Nurses Association, the national professional organization of physicians articulated a view that did not include nurses becoming autonomous or independent practitioners. The statements acknowledged the interdependence of the professions but only permitted nurses to assume “selected responsibilities” such as health maintenance. Nurses were not seen as being capable of providing comprehensive primary care. Physicians remained in charge of diagnosis and treatment, and were ultimately responsibility for a patient’s care.

Commissions, physicians, and others saw nurse practitioners as physician helpers or substitutes, providing only selected services (Boudreau, 1972, Canadian Medical Association and Canadian Nurses Association, 1973) (Canadian Nurses Association and Canadian Medical Association, 1973) (Henderson, 1983). Consideration was also given to the introduction of physician assistants, a category of practitioner that originated in the United States in the 1960s. A large number of army-trained medics, who had looked after minor illnesses and combat casualties while in the military, were incorporated into civilian practice. These practitioners were trained to collect information and do procedures under the direct supervision of a physician. Canada did not have a large armed forces and therefore there was not a large number of ex-medics looking for work outside the military. There was little interest in adding another category of worker from either medicine or nursing so this was not pursued (Boudreau, 1972).

During this period nurse practitioners appeared to have been content to make incremental steps in expanding their scope of practice rather than claiming they were a new occupation like physician assistants. In the joint statements by the Canadian Medical and Nursing Associations the terms nurse practitioner and advanced practice nurse were not used. Only the term nurse was used (Canadian Medical Association and Canadian Nurses Association, 1973). Nursing professional organizations supported the small group that initially claimed the name and training of nurse practitioner because it was seen as advancing the professional aspirations of nurses. Nurse practitioners were able to utilize the support of the nursing profession by remaining under the wide umbrella of nursing. Despite starting to demarcate themselves from other nurses, from the beginning nurse practitioners remained closely aligned with both the nursing tradition and the values of holistic care. This benefited nurse practitioners and helped advance nursing's general professional 'project'.

4.3.3 Factor 3 - challenges to the medical model of health care

A general increased questioning of social institutions included critical analyses of the medical (physician-based provision of care to individuals) model of health care. The 1960s and 1970s was an era when many institutions and customs were publicly questioned and challenged. As discussed in Section 2.2, pages 46-47, academics abandoned the view of professions as pillars of social stability, opting instead to see professionalization as a mechanism for expert labour to control market position and protect its economic and status advantages (Johnson, 1972) (Larson, 1977). During this period academics, government, and the health professions began to explore what health and health care was, and how the traditional medical emphasis on diagnosing and treating disease might be changed (Boorse, 1977) (Illich, 1978) (Tropello, 2000) (Illich, 2000) (Nordenfelt, 2007).

Also during this time, the Canadian Federal Government began to change its focus of policy interest from providing medical care to providing health care. A former Federal Minister of Health chaired a commission whose purpose was “to unfold a new perspective on the health of Canadians and to thereby stimulate interest and discussion on future health programs for Canada” (Lalonde, 1974).

This report, known as the “Lalonde Report”, introduced the idea that health was not the direct result of medical care but the result of other influences such as lifestyle, the environment, human biology, and the system of health care organization. The Lalonde Report aligned its definition of health with that of the World Health Organization. In the preamble to its founding constitution of 1948 the World Health Organization defined health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (World Health Organization, 2006).

The Lalonde Report gave prominence to the idea that health was influenced by social conditions. It recommended the Canadian health care system place a much greater emphasis on behavioral and preventative aspects of health rather than simply supplying curative services to people once disease occurred (Lalonde, 1974). This was not the emphasis of the health care system at the time of the report. Canadian physicians concentrated on diagnosis and treatment of disease, and tended to think of “health as the absence of disease” (Boorse, 1977).

The Lalonde Report facilitated a public discussion about what health was and what constituted health care. The report began to change the way policy makers thought about health care. The logic was that if health could be promoted and disease prevented, there would be less need to pay for the increasing cost of curative services. The recommendations to change the emphasis of the health system to one seen as “holistic” provided support for nursing’s critique of the way health care was being delivered (Erickson, 2007). It also pointed to service areas that expanded the roles nurses could provide, in areas such as health promotion, education, and health maintenance.

Criticism and questioning of the medical model of health care had several consequences. It challenged the normative assumption that physicians were the only practitioners capable of providing primary care. It also helped emphasize preventative services and education, two areas that physicians were criticized for not emphasizing in their practices. This allowed other occupations to make claims that they could provide these services. Criticism of the existing health care system resulted in governments becoming open to consider alternatives to the existing provision of care.

4.4 Access to primary care services became a government policy issue

As discussed above, prior to the introduction of government funded universal health insurance in Canada, supply of primary care services was provided by physicians who were in private practice and paid for out of pocket or through private insurance plans. Medicine had secured a monopoly for its services, self-governed its members, and controlled the number of physicians through licensure and medical education (Freidson, 1970) (Abbott, 1988). The government did not have a major role in the provision of primary care services. However once universal health insurance was introduced, the government became the major payer for these services.

The perceived difficulty to access primary care was seen as a failure of the government which, having become the principal funder of health services, was now faced with a human resource shortage. So what used to be a 'market' problem that could be solved by market forces, was now an urgent political problem. Multiple policy options were available to the government. In order to understand the constraints on policy, it is helpful to understand the Canadian government system and where jurisdiction for health policy lies.

Tiers of Canadian government and their roles in funding and setting health policy

Canada has 4 tiers of government: federal, provincial, upper and lower tier municipal governments. Only the top 2 tiers are responsible for funding and setting health policy. The Federal Government is the top tier. It sets high-level national policy for health, health protection, and public safety. With the exception of providing health care services to Canada's aboriginal people in remote northern communities, it is not directly

involved in administering clinical services. The federal government transfers payments to the provincial governments to cover a portion of the cost of providing clinical services, but it does not have a direct say in how the money is allocated.

The provincial governments form the second tier of government. They are responsible for setting policy and delivering the majority of clinical services within their boundaries. The federal and provincial governments fund approximately 70% of the overall health care spending per capita in Canada with each tier paying approximately 50% of that (Health Canada, 2011).

Municipal governments make up the two lower tiers. They do not have any direct responsibility for funding health care costs although they do contribute to public health services and increasingly contribute to unreported costs, such as capital equipment purchases for hospitals.

These funding and policy setting functions directly affect the organization and delivery of clinical services. Federal commissions and reports make recommendations that are difficult to enforce. Provincial governments control the allocation of budget money and therefore decide on what form the delivery of health care services take. The fact that local municipal governments have no policy or formal funding responsibility for health care limits their ability to influence local health care delivery. Thus the responsibility of determining the overall role, implementation, and funding of nurse practitioners was a provincial government responsibility.

Attempts to resolve the primary care access problem 1960 -1985

Resolving the lack of access to primary care services was neither rapid nor easy, and no single solution was sufficient. Policy options fell into three general categories. The most obvious action was to increase the supply of physicians. The second option was to consider initiatives to

‘extend’ the ability of existing physicians to look after more people. The third consideration involved changing how services were delivered and who delivered them.

Table 4.1 Policy Options to Mitigate the Physician Shortage

General Solution	Specific Examples
Increase number of physicians	<ul style="list-style-type: none"> – increase medical school enrollment – increase licenses for foreign medical graduates – incentives to practice past normal retirement age – incentives to prevent physician emigration
Change physician practice	<ul style="list-style-type: none"> – work longer hours – see more patients – increase efficiency (use ‘extenders’)
Change manner of health care delivery	<ul style="list-style-type: none"> – allow others to provide services – deregulate – regulate other occupations to become autonomous providers

The first general policy option was ‘making’ more physicians and retaining the ones currently in practice. There were three ways to increase the number of physicians: train more physicians, increase the number of foreign-trained physicians licensed to practice in the province, and retain existing physicians to stay in practice through incentives to reduce emigration or delay retirement. While increasing medical school positions meant large investments in training infrastructure, easing restrictions on

licensure of foreign medical graduates and retaining existing physicians through incentives were relatively easy options to implement.

The second option required changing the manner in which physicians' work. This included encouraging existing physicians to work longer hours, work faster, and become more 'efficient'. It was difficult to enforce longer hours or greater efficiency, so these were not seen as viable options (College of Family Physicians of Canada, 2010). Proposed efficiencies included transferring routine work to nurses, who acted as 'extenders' of a physician. This was the model, discussed above, that the Canadian Medical and Nursing Associations chose in their Joint Statement of 1973 (Canadian Medical Association and Canadian Nurses Association, 1973).

The last policy option involved rejecting the assumptions and claims that only physicians could, or should, do many, or all, of the normative activities performed by physicians. This meant other occupations could be trained to competently perform these tasks and function autonomously. To implement this option required changing the existing culture, both inside and outside, the health system. It involved changing fixed social practices regarding both how services were provided as well as the rewards reaped by those who performed them. Implementation of this option would end the exclusive control of the provision of these services by physicians.

Increasing the number of physicians was the most straightforward of the three options. The government increased medical school enrollment (Geiger, 2009) and made it easier for foreign-trained medical graduates to become licensed in the province (Evans, 1976). There was a time lag between the decision to increase class sizes and the time when the first cohort entered into practice. In the 1960s and 1970s it took 5 or 6 years to train a general practitioner or family physician. This meant it took about a decade before there was a noticeable improvement in the ability of people to access primary care. The ratio of physicians to population increased

from 1.1 per thousand in 1960 to 2.0 per 1000 in 1985 (OECD Directorate for Employment Labour and Social Affairs, 2011).

As increasing the physician supply took time, the government in the interim considered additional measures to increase the supply of primary care services. There was public debate about whether physician extenders could be used and how this could be accomplished. This discussion focussed primarily on expanding the role of nurses. In 1971 the Federal Government commissioned a committee to look into the role and functions of nurse practitioners and to make recommendations for the development of training programs for them (Gray, 1983). The report, issued in April 1972, stated that “the development of the nurse practitioner category be regarded as the highest priority in meeting the primary health care needs in Canada” (Boudreau,1972; as cited Gray 1983). It was into this environment that nurse practitioners emerged as a potential solution to a government public policy issue.

4.5 History and development of nurse practitioners in Ontario

The history of nurse practitioners in Ontario can be divided into three distinct phases. The first phase began in 1967 when the first training program opened. For a time the outlook for the development of nurse practitioners was optimistic. However by the early 1980s the perception of physician shortage had vanished and training for primary care nurse practitioners was phased out in 1983. This was followed by a second phase that lasted about 10 years. During this period advanced practice nurses began to fill niches created by a shortage of specialist physicians. The government began a series of policy initiatives it called Primary Care Reform. The introduction of these initiatives produced an opportunity for nurse practitioners to be recognized as primary care providers in formal legislation, and find their place in the evolving system of health care

delivery. The third phase began in the mid 1990s and continues through the present.

4.5.1 The first phase 1967-1983

The first nurse practitioner training program in Canada opened at Dalhousie University in 1967 (Nurse Practitioners' Association of Ontario, 2011). The program trained nurses to work in northern nursing stations (Nurse Practitioners' Association of Ontario, 2011), which provide medical care to small communities populated mainly by native people. Physicians rarely live in these communities but do make periodic visits to them. Outpost nurses provide day-to-day and emergency care in these communities, relying on telecommunication for needed advice and air transportation to transfer patients who cannot be treated on site.

While some unofficial training programs sprang up (Lees and Anderson, 1971), McMaster University opened the second official nurse practitioner program in 1971 (Spitzer and Kergin, 1973). In total about 250 nurse practitioners graduated in Canada between 1970 and 1983 (van der Horst, 1992). Graduates were trained primarily to practice in outposts and under serviced areas, as well as in community health clinics and family practice offices (Gray, 1983).

Initially there was widespread support at the national level for nurse practitioners becoming integrated into the health care system. However federal commissions and national professional organizations only make recommendations for how to solve problems and are not responsible for enacting the solutions for clinical service problems. Provincial governments are responsible for these decisions. The Ontario Provincial government provided only lukewarm support for the initiative.

The Ontario government instituted universal insurance in 1966 to pay for physician and hospital based care. When similar universal insurance was introduced in Saskatchewan, another Canadian province, a bitter doctor's strike occurred (Larmour, 2012). In an attempt to encourage physicians to participate in the universal health insurance scheme, the Ontario government negotiated an agreement with them; one that placed physicians and their professional organizations in powerful positions to alter the course of public policy (Hutchison et al., 2001) (Geiger, 2009). All changes that affected physicians had to be negotiated separately with them. This agreement allowed physicians to remain independent contractors, in effect owners of private businesses who contracted their services to the government insurance plan. They billed the plan on a fee-for-service basis (Health Canada, 2011). They collectively negotiated their remuneration mechanism and fees through the Ontario Medical Association, a physician member organization (Geiger, 2009).

The government did not want to introduce this system of remuneration for other health care providers. So when nurse practitioners were introduced, the most important infrastructure problem – never adequately resolved – was how to pay them (Angus and Bourgeault, 1999). Nurse practitioners were not allowed to bill or collect fees from the Ontario Health Insurance Plan for services they provided. Therefore they had to become employees of a physician or an organization. However if they were employed by a physician, they could not generate billings for any work they did. Physicians could only bill for work they personally performed. Even if they 'supervised' an employee, they were not allowed to bill the plan for patients they did not physically see (Evans, 1983). Technically this remains a requirement today:

The service must be personally performed by the physician and may not be delegated to any other person. Services that are

required to be “rendered personally by the physician” are uninsured if this requirement is not met (Ontario Ministry of Health and Long Term Care, 2011).

Therefore a physician could employ a nurse practitioner but could not legally generate income to pay for the services the nurse practitioner provided. A physician who employed a nurse practitioner saw their income drop an estimated 5% (Gray, 1983). This was a strong incentive not to employ one in their practice. Consequently it was rare to find nurse practitioners working in private practices.

The only funded positions for nurse practitioners in the 1970s were as employees of Underserved Area Program pilot projects or Community Health Centres. Underserved Area projects were pilot projects designed to subsidize the provision of services in areas under serviced by physicians. This effectively meant rural, and remote locations. Community Health Centres were developed in the 1970s as an alternative primary care model to provide care to special needs population groups, such as inner city residents. All of the staff, including physicians, were paid a salary. These centres were slow to catch on and the government froze funding to them in 1977. By 1985 there were only 11 centres serving 29,000 people in a province with a population of 9.1 million (Association of Ontario Health Centres, 2010) (Statistics Canada, 2011a). A lack of funding mechanisms to pay for nurse practitioner services and the inability or possible unwillingness of the provincial government to change this, severely limited employment possibilities for nurse practitioners in the 1970s.

From the nurse practitioner point of view, an even more serious problem eventually arose. By the early 1980s the perceived shortage of physicians had eased. With this the medical profession reneged on its former support for the expansion of the role of nurses and nurse practitioners. The discourse changed from tentative support to rejection of the concept. The

medical associations reasserted their claims that only physicians could or should provide primary care and there was nothing unique about nurse practitioner care: “a Canadian Medical Association (CMA) committee on Allied Health Personnel established in the early 1980s, for example, insisted that there was no need for nurses to provide primary care” (York, 1987).

The CMA director of Allied Health Education commented in a 1983 CMAJ editorial:

An expanded role for nurses built primarily on the idea that nursing has a unique or special responsibility in this regard needs to be thoroughly justified. It is entirely possible that one result could be an unnecessary new layer in the health care system”
(Henderson, 1983).

By 1983 support for nurse practitioners had largely disappeared, and all of the training programs in Ontario were shut down. Despite having trained 250 nurse practitioners, the initiative was allowed to wither. Other factors contributed to this. Nurse practitioners were not recognized as providers by third party insurers. They lacked legal status and could not prescribe medications. Other barriers to efficient access to medical support contributed to what Spitzer, a physician and champion of nurse practitioners, called “the slow death of a good idea” (Spitzer, 1984).

Once the increased supply of physicians improved access to primary care services, the ‘problem’ dissipated, losing priority on the policy makers’ agenda. Nurse practitioners were no longer seen, or needed, as a solution to a problem that had faded from policy makers’ attention. Once the problem slid far enough down the agenda so as to no longer require attention, there was no need to put legislation in place that either defined nurse practitioners’ expanded scope of practice or suggested viable mechanisms of remuneration for them. The government, the medical

profession, and the public were not prepared to overhaul the structure of the health system at that time. In an editorial in the *New England Journal of Medicine*, Spitzer wrote:

Who controls what practice? is an issue that overwhelms the fundamental question of “Who benefits what population? The movement has no groundswell of support from the public. It has not had a major impact in meeting the needs and demands of the disadvantaged who were envisioned by the pioneers of the movement as the main winners in the new strategy (Spitzer, 1984).

4.5.2 The second phase 1983 - 1993

The period of time between 1983 and 1993 was a desert for individual primary care nurse practitioners but a watershed for the profession. Existing nurse practitioners continued to work in Underserved Area Program positions and Community Health Centres, but no new positions were created and no replacements trained. It was during this period that several issues arose that changed the context of the health system. These issues created new problems for the government, but allowed the expansion of primary care nurse practitioners to again be proposed as a policy option to mitigate these problems.

Changes in the health system

The supply of physicians increased throughout the 1970s, the successful result of measures taken for that purpose. Medical school enrolment increased from 970 per year in 1960 to 1900 per year in 1985 (Geiger, 2009). However these measures might have been too successful; by 1985, a joint Federal-Provincial Advisory Committee on Health Manpower reported a projected surplus of 4870 family physicians by the year 2000 (Moore, 1986).

Now a physician surplus became an issue for the government and was coupled with the bigger problem of the steadily rising cost of providing health care services. Per capita health care expenditure more than tripled between 1971 and 1981 (Evans, 1983). The proportion of total health care expenditure paid by government insurance also grew from 42.7% of total costs in 1960 to 75.9% in 1975 (Schieber and Poullier, 1989). Paralleling this growth in spending, medical school enrollment doubled. Both the increased cost of funding services and the rate of physician supply greatly exceeded the rate of population growth.

Physician remuneration in a single payer system did not follow market pressures. According to Geiger, one of the lawyers who spent 5 years negotiating on behalf of the Ontario Medical Association, successive governments believed physicians drove the demand for medical services (Geiger, 2009). This thinking was reinforced by health economists who felt physicians increased the demand for their services and asserted each new physician added hundreds of thousands of dollars of cost to the system without any obvious benefit (Evans, 1983) (York, 1987).

Increasingly the government, health analysts, and academics saw control of both physician numbers and physician influence as the keys to controlling health costs. This thinking was illustrated by the influential 1991 Barer Stoddart Report, written by two academics who concluded there was no policy objective for management physician resources. They also concluded the optimal number of physicians was a social – rather than a technical – judgement; and “the time [was] right” for significant reforms. They noted a tension existed between the “private interests of physicians and the collective goals and objectives of the public enterprise in which they ...[worked]” (Barer and Stoddart, 1991). The authors saw their report as an overall blueprint for medical manpower management and they made a series of recommendations about this to the

government. Despite the authors' plea not to 'cherry pick' their recommendations, the government arguably did just that.

In addition to academics' advice, the joint Federal-Provincial Advisory Committee on Health Manpower recommended a series of steps to take to control the projected physician over-supply. The committee recommended an immediate decrease in medical school enrolment by 17%, elimination of 125 family practice post graduate training positions, and a further reduction of them by 20% by 1991 (Moore, 1986). It also recommended a reduction of specialty training positions. In response to this advice, the provincial government cut back medical school enrolment and placed a series of practice restrictions on new graduates. It made it more difficult for foreign medical graduates to become registered, and increased the regulation of inter-provincial movement of Canadian-trained physicians. It also reduced funding for specialty training positions (Angus and Bourgeault, 1999).

Throughout this time the relationship between physicians and the government became increasingly volatile. In 1986 the government faced a bitter 26-day physician 'strike', the aftermath of which led to profound suspicion on the part of physicians toward any government initiative to reform primary care (Geiger, 2009).

In addition to decreasing the supply of physicians, the government also explored other measures to control the escalating cost of health care. It began discussions to revive alternative mechanisms of delivering primary care, such as Community Health Centres. The government also considered changing the mechanism for primary care physician remuneration, from a fee-for-service to a capitation model. The Premier's Council on Health Strategy recommended a shift to health promotion, disease prevention, and universally accessible health services (Angus and Bourgeault, 1999). The allure of preventing costly treatment services by encouraging alternative service strategies, such as preventive

medicine, was an increasingly attractive policy option. In addition the reintroduction of primary care nurse practitioners became a viable policy option.

The committee also examined the need for an improved skill mix for increased efficiency and effectiveness within the health care system, stating that “substitution of skill sets will occur between and within health professional and provider groups (Angus and Bourgeault, 1999).

The reduction in specialty trainee positions that began in the late 1980s started having unforeseen consequences. Sub-specialty units in teaching hospitals relied on senior trainees to provide clinical service coverage and reductions in trainee positions produced difficulty staffing these units. Advanced practice nurses began performing routine clinical services previously performed by sub-specialist physician trainees. Medical acts were delegated to advanced practice nurses through a mechanism of written medical directives. For example advanced practice nurses, supervised by specialists, began providing care in neonatal intensive care units (Mitchell-DiCenso et al., 1996). This occurred in local contexts, to meet local needs, and there was no overall provincial plan for it. Advanced practice nurses were employees of hospitals and were paid by a hospital to provide their services. This provided a funding mechanism for these programs.

“Policy entrepreneurs” (Kingdon, 2011) worked during this period to develop the idea of advanced care nurses and nurse practitioners as a solution to policy problems. Nursing associations, academics, and opinion leaders – influential members of the profession – worked on proposals that sought to raise the minimum qualification for nurses to a university degree and advanced practice nurses to a master’s degree (Hunsberger et al., 1992) (Angus and Bourgeault, 1999). Despite lacking an overall plan or government policy to introduce the role of advanced practice nursing, training programs started up again in the early 1990s. This was a

similar process to that which occurred 25 years earlier with the development of nurse practitioner training programs. These programs demarcated graduates from other nurses and raised their status by giving them an advanced credential. Increasing the basic nursing qualification to a university degree and advanced nursing qualifications to a masters level increased the status of all nursing qualifications. Medical degrees in Canada, called doctorates, could be obtained as first degrees. Family practice training obtained after a basic medical degree was a further 2-year program, a similar time period to obtain most university masters degrees.

Meanwhile researchers were developing a base of empirical research to support the role of advanced care nurses (Mitchell-DiCenso et al., 1996). As discussed in the literature review, much of the research concerning nurse practitioners attempted to investigate whether advanced practice nursing or nurse practitioner care was equivalent or 'not inferior' to physician care. In the 1970s and early 1980s nurse practitioner practice in Ontario had been an active field of research interest.

With the developing shortage of specialist physician trainees, interest in advanced care nursing increased in the early 1990s because it was being implemented in various local settings. It is important to note that during the 1980s and early 1990s, primary care nurse practitioners continued to practice in Ontario in existing salaried positions, though their numbers slowly diminished (Angus and Bourgeault, 1999).

4.5.3 The third phase – 1993 and beyond

The decade between 1983 and 1993 set the stage for the third phase of primary care nurse practitioner incorporation into Ontario's health system. Fluctuations in physician supply, escalating costs of providing care, and difficult relations with physicians all led the government to seek advice on

how to manage these problems. As described above, recommendations led to the government to seek to decrease the supply of physicians.

The supply was decreased through a series of measures. These included cut backs in medical school class size, post-graduate training positions, and restrictions on the registration of foreign medical graduates. In addition, increased migration of physicians abroad and an increased percentage of female physicians in the work force were identified as factors that appeared to decrease the physician supply (Chan, 2002). Female physicians and recent graduates were noted to work fewer hours a week than older physicians (Chan, 2002).

However unlike the 1950s – a time when the physician-population ratio had decreased – these measures failed to decrease the physician-population ratio. The measures simply halted the increasing number of physicians per 1000 people. The ‘real’ physician-population ratio remained the same between 1987 and 2000 (Chan, 2002). Yet despite this there was a growing perception that people could not access primary care services (Chan, 2002)).

This perception began in the early 1990s and took several years for the accumulation of data to verify the perception. According to a College of Family Physicians of Canada report, a 2004 Decima poll found that 5 million Canadians (16% of the population) older than 18 years had tried, but were unable to find a family doctor during the previous 12 months (College of Family Physicians of Canada, 2004). Statistics Canada reported in 2003 that 3.6 million Canadians (almost 14%) had no regular family physicians, and almost 16% reported difficulty accessing routine or ongoing care (cited in, College of Family Physicians of Canada, 2004). Long before these data made their way into the public record of commissions or government sponsored reports, stories about lack of access to primary care were ‘known’ to politicians, and the issue became a political problem.

The inability to access primary care in the 1960s had been framed primarily as a shortage of physicians. By the 1990s however, the problem was seen instead as a faulty primary health care system that needed reforming. The calls for reform became more urgent through the 1990s and early 2000s. Several commissions and advisory bodies made recommendations to reform the primary care system (Ontario Health Services Restructuring Commission, 2000) (Kirby -Standing Senate Committee on Social Affairs and Technology, 2002) (Romanow, 2004).

In 1993 the Minister of Health commissioned a report entitled “Utilization of Nurse Practitioners in Ontario” (Mitchell et al., 1993) that became known as the Mitchell Report. A product of academic nursing ‘policy entrepreneurs’, this report aligned an expanded scope of practice in nursing with other government concerns at the time. These included the cost of funding services, and changing the health system focus from a purely curative approach to a more holistic, preventative one. The report provided a justification and roadmap for the expansion of nurse practitioners in the Ontario primary care delivery system. The report’s recommendations became part of a proposed solution for Primary Care Reform, a multi-pronged high-priority political problem. The recommendations were ready to implement when the opportunity presented itself in the mid 1990s.

The Mitchell Report highlighted the need to change the make-up of health care providers. It emphasized the congruence of primary care delivery by nurse practitioners with the government’s health care objectives, especially in the areas of health promotion and education. The report was careful to emphasize nurse practitioners were neither substitutes for physicians nor were they assistants. Nursing and nurse practitioners were to become “an equal partner within the health care system” (Mitchell et al., 1993).

The Mitchell Report initially proposed a solution for advanced care nurses to replace the labour of specialized physician trainees. However the report was probably reworked to emphasize the role nurse practitioners could play in providing primary care services (Angus and Bourgeault, 1999). According to an unnamed 'informant(s)' cited in Angus:

The authors, however, were encouraged by the Ministry to revise the paper in order to place a greater emphasis on the role of the primary care nurse practitioner in the community...

the Ministry's preference for the community based nurse practitioner was driven in part by the shift in focus from the hospital to the community implied in the first statement of the Ministry's Goals and Priorities ...

there could be some agenda... like if there is competition from the primary care nurse practitioners, maybe the doctors are more likely to go on a salary as opposed to fee-for-service (informant(s) 1995 cited in Angus, 1999).

I have not been able to find anyone to provide further insight into this. However it does illustrate the perceived political overtone upon which Angus' anonymous informant(s) speculated soon after the Mitchell Report came out. It is an illustration of Kingdon's "primordial soup", where a problem, a solution, and various political considerations merge at the right time, forming a window of opportunity to introduce a new policy (Kingdon, 2011).

The Minister of Health acted quickly after receiving the report. Within six months of the Mitchell Report submission, a Nurse Practitioner Steering Committee was established and an announcement made that Ontario would re-introduce nurse practitioners into the health system (Angus and Bourgeault, 1999). The Ministry's own position paper called for nurse

practitioners to be “prepared for independent practice” (Ontario Ministry of Health, 1994). “Independent practice” was a key phrase that indicated what sort of role the Ministry of Health envisioned for nurse practitioners.

Ruth Grier, the Minister of Health, wanted to get nurse practitioners recognized and given protection in legislation before the scheduled 1995 elections. In order to do so, she bypassed the procedure to implement a new health profession as laid out in the Regulated Health Professions Act. Instead of holding hearings, Ruth Grier used an exemption clause in the Regulated Health Professions Act that allowed her to bypass the public review required by the Act (Angus and Bourgeault, 1999).

This action created significant opposition from physician organizations that requested a judicial review of the Minister’s action (Angus and Bourgeault, 1999). The Minister eventually referred the matter to the Health Professions Regulatory Advisory Council, which after taking public submissions, made the following recommendations in 1996:

[T]he controlled acts of communicating a diagnosis, ordering diagnostic ultrasound, and prescribing drugs (limited to those designated in regulations) should be authorized to nurse practitioners in compliance with mandatory indicators for consultation or referral of care to a physician (Health Professions Regulatory Advisory Council cited in Angus, 1999).

Infrastructure support

As described above, in the 1970s the provincial government failed to support the implementation of nurse practitioners in two ways: it neither introduced supporting legislation nor found mechanisms of remuneration that allowed nurse practitioners to be paid for work they did in the system. In contrast to the lack of support and resources the government provided in the 1970s, in the 1990s the government did three key things. It

supported the expanded scope of practice in legislation, made changes in the design and infrastructure of the primary care system, and provided mechanisms of remuneration that allowed nurse practitioners to be paid in a variety of settings.

In 1993 the government reorganized the way it regulated all the health professions. The Regulated Health Professions Act provided a mechanism to legitimate the expanded scope of nurse practitioner practice and ultimately led to both title and legal protection. Amendments were made to the Regulated Health Professions Act and Nursing Act in 1997. These recognized nurse practitioners as a new category of nurse with an expanded scope of practice (Government of Ontario, 1991c). The term 'Registered Nurse in the Extended Class' was initially introduced only in the area of primary care. Other fields of specialty nursing were introduced into legislation later.

The government also changed the design of the primary care system. In conjunction with changes in legislation, the government worked on a series of measures designed to 'reform' the primary care system. Together these measures were called "Primary Care Reform". The reforms were designed to encourage physicians to work in collaboration with other providers, improve coordination of services within the system, change physician payment mechanisms to something other than fee-for-service, encourage the use of electronic records and other information technology, roster patients to practices, and increase community participation to decide on local priorities and services (Hutchison, 2004) (Aggarwal, 2009). These changes have still not been fully implemented.

Finally the government provided more funding through a variety of mechanisms, and a wider selection of employment opportunities for nurse practitioners. From 1998 to 2002 the Ontario Ministry of Health and Long Term Care funded 402 new nurse practitioner positions (IBM Business Consulting Services, 2004) and added 106 positions to the Underserved

Area Program. The other initiatives included upgrading paid nursing positions in Community Health Centres and creating nurse practitioner positions in newly introduced Primary Care Networks, which will be discussed later in this chapter. In addition to these funded programs, hospitals and other agencies began using their global budget funding to pay for advanced practice nurses or nurse practitioners to provide services in specialized areas such as intensive care units, cancer care teams, and rehabilitation units.

Despite improved support through legislation, changes in the organization of how services were delivered, and in the mechanisms of remuneration, one over-riding problem hampered the introduction of nurse practitioners: there was no consensus on what role they played in the health system.

Vision of the nurse practitioner role

Dorothy Hall, the Provincial Nursing Coordinator who shepherded the reintroduction of primary care nurse practitioners in the 1990s, was quoted in Birnbaum as advocating independence and autonomy for nurse practitioners: “Nurses are giving notice...that they 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” (Birenbaum, 1994).

Family physicians responded to the changing paradigm of primary care providers and Primary Care Reform by producing a model of service delivery they called the “medical home” (College of Family Physicians of Canada, 2009) (American Academy of Family Physicians, 2012). They were opposed to independently practicing nurse practitioners. They supported the idea of multi-disciplinary team practice but their conception of a team was one led by a physician in which every patient had a personal family physician. According to the College of Family Physician’s official statements, nurse practitioners would be members of the team, but

the description of their role in the team was left fuzzy. Family physicians were willing to collaborate with nurse practitioners but only within the context of the 'medical home'.

Independent nurse practitioner practices, where nurses supposedly offer the same services provided by Family Physicians, do not meet this goal and run counter to the objectives of developing patient-centred, inter-professional care. Those in government or in the nursing community who prefer such models over true collaborative family doctor–nurse practices will have to develop them without us (Gutkin, 2008).

The Ministry of Health produced a document in 2005 entitled “Guide to Interdisciplinary Team Roles and Responsibilities” (Ontario Ministry of Health and Long Term Care, 2005c). This document was meant to outline the roles and responsibilities of various members of Family Health Teams. In the guide the main difference between the roles and responsibilities of a physician and a nurse practitioner was simply the length it took to describe them. It was difficult to distinguish if the Ministry saw any difference in the role played by the two occupations.

The government began funding nurse practitioner positions in a wide variety of settings, including hospitals, nursing homes, community agencies, public health units, and primary care centres. Each setting involved work in a different role and required specific changes in the scope of practice. It reflected the lack of a coherent idea of what nurse practitioners' role in the health system was. The issue of role confusion was identified as a “barrier” to implementation (Hanrahan et al., 2001) (IBM Business Consulting Services, 2004) (Canadian Nurse Practitioner Initiative, 2006).

Despite the role confusion, support for nurse practitioners increased. Once the window of opportunity opened, nursing institutions moved

quickly to take advantage of it. In 1994 before the legislation was in place, the Council of Ontario University Programs in Nursing developed a primary health care nurse practitioner training program curriculum, and within a year programs were training primary health care nurse practitioners (Nurse Practitioners' Association of Ontario, 2011). Between 1967 and 1983, 250 nurse practitioners were trained in Ontario. By 2002 there were 453 nurse practitioners registered by the College of Nurses and in 2011 there were 1,666 (College of Nurses of Ontario, 2011a).

4.6 Legislative aspects of the nurse practitioner scope of practice in Ontario

The regulatory framework

In order to understand nurse practitioners' practice and their relationship with physicians, it is important to understand the regulatory framework that governs the practice of health care providers in Ontario. It will later be shown that legislation imposed restrictions on nurse practitioners' scope of practice and impacted their ability to practice.

In Canada the Federal or Provincial Governments pass general overarching pieces of legislation that outline laws. These are called Acts or Statutes. Regulations are a subsidiary form of legislation that provide detail and clarity to the more general Acts (Government of Canada, 2009). This section will discuss the Regulated Health Professions Act, the Nursing Act, the Medicine Act, pertinent Regulations and the College of Nurses of Ontario Standards of Practice for Nurse Practitioners. This will explain why a nurse practitioner must have a relationship with a physician in order to practice as a first contact primary care provider. In Section 5.2.1, page 173, empirical evidence will be presented to show how nurse practitioners and physicians work around the barriers to practice created by the regulatory framework.

“Regulated Health Professions Act 1991”

In 1991 the Ontario government changed the process of regulating health professions. The umbrella statute, passed that year, was called the Regulated Health Professions Act 1991 (Government of Ontario, 1991c). It replaced a system that gave legislated control of an exclusive scope of practice to a few professional monopolies. The new process established a list of thirteen defined, controlled acts. It authorized each regulated health profession to perform a portion of the list of acts. An example of a controlled act is “setting or casting a fracture of a bone or a dislocation of a joint” (Government of Ontario, 1991c). Controlled acts have a high element of risk if not performed correctly. In specific circumstances someone authorized to perform a controlled act can delegated it to another person who is not normally authorized to perform it. The person who delegates an act is responsible for the actions of the person to whom they delegate the act. This process would have important consequences for the nature of the nurse practitioner-physician relationship.

The initial passage of the Regulated Health Professions Act of 1991 appeared to codify the status quo though its implications went largely unnoticed. The passage of the Act did not change the day-to-day practice of general registrant nurses. The Act ‘legally authorized’ registered nurses to administer drugs by injection or inhalation, and to insert fingers and instruments beyond orifices, acts they were already performing before 1991. Amendments to the Act in 1998 authorized nurse practitioners to perform controlled acts beyond those done by registered nurses in the general registration class. The additional controlled acts included making and communicating diagnoses, prescribing specific medications, ordering certain x-rays and diagnostic tests, and suturing wounds (Health Professions Regulatory Advisory Council, 2008). The list was amended again in 2010. Table 4.2 shows the controlled acts that physicians, nurses,

and nurse practitioners are allowed to perform according to the amendments.

Table 4.2 Controlled Acts Authorized for Nurses, Physicians and Nurse Practitioners by the Regulated Health Professions Act (1991) and Amendments (1998), (2010)

	RN 1991	MD 1991	NP 1998	NP 2010
1. Communicating to the individual or his or her personal representative a diagnosis identifying a disease or disorder as the cause of symptoms of the individual in circumstances in which it is reasonably foreseeable that the individual or his or her personal representative will rely on the diagnosis.		X	X	X
2. Performing a procedure on tissue below the dermis, below the surface of a mucous membrane, in or below the surface of the cornea, or in or below the surfaces of the teeth, including the scaling of teeth.	X	X	X	X
3. Setting or casting a fracture of a bone or a dislocation of a joint.		X		X*
4. Moving the joints of the spine beyond the individual's usual physiological range of motion using a fast, low amplitude thrust.		X		
5. Administering a substance by injection or inhalation.	X	X	X	X
6. Putting an instrument, hand or finger,	X	X	X	X
i. beyond the external ear canal,	X	X	X	X

	RN 1991	MD 1991	NP 1998	NP 2010
i. beyond the point in the nasal passages where they normally narrow,	X	X	X	X
i. beyond the larynx	X	X	X	X
i. beyond the opening of the urethra,	X	X	X	X
i. beyond the labia majora,	X	X	X	X
i. beyond the anal verge, or	X	X	X	X
i. into an artificial opening into the body.	X	X	X	X
7. Applying or ordering the application of a form of energy prescribed by the regulations under this Act.		X	X*	X*
8. Prescribing, dispensing, selling or compounding a drug as defined in the Drug and Pharmacies Regulation Act, or supervising the part of a pharmacy where such drugs are kept.		X	X	X
9. Prescribing or dispensing, for vision or eye problems, subnormal vision devices, contact lenses or eye glasses other than simple magnifiers.		X		
10. Prescribing a hearing aid for a hearing impaired person.		X		
11. Fitting or dispensing a dental prosthesis, orthodontic or periodontal appliance or a device used inside the mouth to protect teeth from abnormal functioning.				
12. Managing labour or conducting the delivery of a baby.		X		

	RN 1991	MD 1991	NP 1998	NP 2010
13. Allergy challenge testing of a kind in which a positive result of the test is a significant allergic response.		X		
* defined by Regulation 275/94				

RN - Registered Nurse, MD - physician, NP - Nurse Practitioner

The Regulated Health Professions Act sought to balance public protection with increased flexibility of service delivery. The Act included 25 health professions (Government of Ontario, 1991c). The Regulated Health Professions Act also established a Health Professions Regulatory Advisory Council to advise the Minister of Health on regulating various professions.

Regulated professions were self-governing. Each regulated profession had its own professional College that regulated registration of its members, investigated complaints, administered discipline, handled patient relations and undertook quality assurance (Health Professions Regulatory Advisory Council, 2009). In addition there were a series of regulations that defined the details of the scope of practice and other governing processes of the profession. Based on recommendations they received, the government made periodic amendments to the regulations.

This method of regulating health professions acknowledged and allowed for overlapping scopes of practice. It permitted different professions to initiate and perform the same controlled acts. The system made a regulated practitioner accountable to standards established by their professional College. This gave regulated practitioners autonomy and accountability for actions that fell within their defined scope of practice.

“Nursing Act 1991” and “Medicine Act 1991”

The Nursing Act of 1991 regulated the profession (Government of Ontario, 1991b), and defined its scope of practice. It also contained title restrictions, established processes for the College of Nurses to regulate nursing practice, and specified what powers the College had.

Medicine was regulated by the Medicine Act of 1991 (Government of Ontario, 1991a), which followed the broad outlines of the Nursing Act, discussed above. It defined the qualifications necessary to be registered as a physician, the required levels of training, and scope of practice.

“Regulation 275/94”

Regulation 275/94 detailed registered nurse and nurse practitioner scopes of practice. It contained schedules listing the diagnostic tests and drugs nurse practitioners were allowed to order. Those in effect during the data collection period are listed in Appendix 7, Section 9.7, page 309 (Government of Ontario, 2010).

Defined in the Regulated Health Professions Act, controlled acts could be performed independently and did not require delegation from another practitioner. For example a nurse practitioner was authorized to “prescribe, dispense, sell or compound a drug as defined in the Drug and Pharmacies Regulation Act” (Government of Ontario, 1991c). However the Act had a hidden wrinkle that would be missed in a superficial reading.

In 1998 after public consultations and input from physician groups, the Health Professions Regulatory Advisory Council recommended nurse practitioners authority to prescribe drugs and order tests be limited by further regulations. The Council did not specify what those regulations should be or the reasons for the restrictions. The Act allowed nurse practitioners to prescribe medications, but subsequent regulations

restricted which drugs they could prescribe. Similar restrictions applied to ordering diagnostic tests. These lists are included in Appendix 7, Section 9.7, page 309 (College of Nurses of Ontario, 2010).

From the perspective of facilitating practice, the contents of the schedules seem restrictive, illogical, and could only be changed through cumbersome processes. The schedules specified drugs by name rather than by class and limited what diagnostic tests could be ordered. Some examples will illustrate this. Nurse practitioners could order ultrasound examinations of the pelvis, breast, and abdomen but not of the thyroid or other soft tissues. They could order Levofloxacin and Moxifloxacin, but not Norfloxacin or Gatifloxacin, drugs in the same drug family. Similarly nurse practitioners were not allowed to start some medications or change their dosage, but could renew them. For example Hydrochlorothiazide and Metoprolol, two medications used to treat a common primary care condition such as hypertension, could not be initiated without a physician's authorization but could be renewed at the same dose. If a medication or test was not listed in the schedules, a nurse practitioner could prescribe or order it only by being delegated to do so by a physician.

Regulations affecting physician practice were constructed in a different manner. They assumed everything was permitted except what was specifically put on a restricted list. Rather than list every medication that could possibly be ordered or prescribed, the physicians' regulations contained only restrictions. For example Methadone could not be prescribed by every physician but required a specific license.

It was difficult to understand how this situation came about. I obtained some insight into it from Kathleen MacMillan, the Chief Nursing Officer in Ontario from 1999-2001. In correspondence with me she provided her reflections:

Organized medicine was strongly opposed to any independent practice for nurse practitioners. They really wanted them to function under their supervision... There was a strong desire not to antagonize medicine as a means to achieve the goal of getting the nurse practitioner role implemented. Dr. Dorothy Hall (the nursing policy person engaged to lead the project) was a pragmatist and willing to make concessions to get the nurse practitioner role in place, and believed that change could occur later. The College of Nurses of Ontario was essentially conservative and needed to work with the College of Physicians and Surgeons of Ontario and the Ontario College of Pharmacists collaboratively. Organized pharmacy was also conservative in its approach and they had a professional agenda of wanting a prescribing role – [they] saw nurse practitioners as competition in that agenda. There was almost no support among non-medical personnel for open prescribing in Ontario. Medicine controlled diagnostic testing and radiology. Radiation technologists vigorously opposed nurse practitioners ordering X-Rays. In the face of such strong opposition from a number of sources, and the lack of public support for the role (compared to midwifery that had public/consumer champions) the compromise was the list of drugs and tests – even though we all knew that it would be unwieldy (MacMillan, 2011).

The net result of the regulations was to restrict nurse practitioners' scope of practice. It compelled them to build 'collaborative' relationships with physicians in order to have a mechanism to delegate acts not covered in the regulations. As later sections will show, changing the regulations proved to be unwieldy.

College of Nurses of Ontario - “Standard of Practice: Nurse Practitioner”

In addition to the Regulated Health Professions Act, the Nursing Act and separate regulations, a nurse practitioner in Ontario was also subject to a written Standard of Practice. This was amended periodically by the College of Nurses of Ontario (College of Nurses of Ontario, 2005) (College of Nurses of Ontario, 2009a) (College of Nurses of Ontario, 2011b). Given an act was included in the regulations the “Standard of Practice: Nurse Practitioner” stated that nurse practitioners could “independently decide that a specific procedure is required and initiate it in the absence of a direct order or directive” (College of Nurses of Ontario, 2009a).

The Standard also contained statements promoting collaboration with other health professionals and outlined explicit expectations regarding consultations with other professionals, specifically physicians.

The expectations for consultation outlined in the 2005 version of the Standard were highly prescriptive. They covered specific conditions requiring a physician consultation such as “sign(s) of recurrent or persistent infection...any sign(s) / symptoms(s) of illness in a child less than three months old...” and “symptomatic or laboratory evidence of decreased/ing function of any vital organ or system” (College of Nurses of Ontario, 2005).

There was a significant change in the 2009 version. The entire prescriptive section differed from the 2005 edition:

NPs [nurse practitioners] must initiate a consultation when they reach the limit of their individual competency level or legal scope of practice, beyond which they cannot provide care independently, and additional information and/or assistance is required from a

professional with more extensive knowledge related to the specific client situation (College of Nurses of Ontario, 2009a).

This statement is generic and could apply to any health professional. It follows the trend to allow for less specific boundaries that make individual practitioners accountable for their own practice.

Each successive edition of the “Standard of Practice: Nurse Practitioner” became both less specific and less prescriptive in describing the expectations of a nurse practitioner’s practice. The evolution of successive standards of practice over the last decade have mirrored the eased restrictions on nurse practitioner scope of practice, reflecting a growing confidence and acceptance of their ability to provide primary care.

Consequences of the regulatory framework for nurse practitioners

The method of regulating nurse practitioners had two important consequences. Certain parts of their practice were autonomous and did not require authorization from a physician but the regulations still made it almost impossible for a nurse practitioner to operate independently. They needed to establish a relationship with a physician, who would authorize aspects of their practice through delegation. This placed nurse practitioners in a position of dependence in what was termed a ‘collaboration’ relationship with physicians (College of Nurses of Ontario, 2005).

The cumbersome mechanism for legislating change was another consequence of these regulations. It meant a lack of responsiveness when there was a real need for change. The complicated and prolonged process of legislative change was illustrated by a review of the nurse practitioner scope of practice that began in 2006. At the request of the Minister of Health, The Health Professions Regulatory Advisory Council

began work on a review of nurse practitioners' scope of practice in 2006. In its 2008 report to the Minister, the Council noted:

The regulation-making process is cumbersome and has not proven able to deliver timely changes in requirements to keep up with evolving technologies, clinical practices and population needs. The process of developing and passing legislation is even more unwieldy. A more flexible way must be found to balance access to controlled acts with safeguards to protect the public from risk of harm” (Health Professions Regulatory Advisory Council, 2008).

The Health Professions Regulatory Advisory Council also began a review of prescription of medications by non-physicians in 2007. In a submission for this review, the College of Nurses argued that

regulating by lists, categories or classes is inconsistent with the philosophy of self-regulation, does not promote safe practice and will not provide nurse practitioners with the flexibility or the authority they require to prescribe for the diverse client populations and settings they serve. [CNO Submission to HPRAC quoted in] (Health Professions Regulatory Advisory Council, 2009).

On Nov. 24, 2008 the Ontario government amended Regulation 275/94 to broaden nurse practitioner prescribing authority. The bill amended the Nursing Act of 1991 by permitting nurse practitioners to prescribe drugs from categories or classes of drugs designated in the regulations. Despite their power to do so, the Ontario government did not change the way the regulations were constructed (Health Professions Regulatory Advisory Council, 2009). Nurse practitioners were given authority to prescribe 24 more drugs, but the basic format of Schedule 3 – which lists permitted drug names and circumstances rather than categories – remained unchanged (College of Nurses of Ontario, 2010).

Submissions to the Health Professions Regulatory Advisory Council had the character of labour arbitrations. A particular College would go to a Council hearing and would ask to be granted something. In the interest of protecting the occupational jurisdiction of their members, other Colleges generally made strong objections, and the Council ultimately made a recommendation that fell somewhere in between the proposal and its objections. It was rumoured that some of the submissions received by the Health Practitioners Regulatory Advisory Council in 2007 and 2008 would form the basis of amendments to pieces of legislation regulating the health professions. The College of Nurses of Ontario advocated open prescribing in 2008. Perhaps it did not see its request that the Health Professions Regulatory Advisory Council open prescribing for nurse practitioners was a major change. But it was too major for the Council and it did not recommend open prescribing by nurse practitioners:

HPRAC is not recommending that nurse practitioners have open prescribing authority as requested. HPRAC is recommending that the drug regulation under the Nursing Act, 1991 be amended to designate drugs and substances by therapeutic class. Specific agents within therapeutic classes, including any terms, limitations and conditions, would be developed through a new drug approvals framework, carried out by the proposed Council on Health Professions Regulatory Excellence (CHPRE) on the advice of a new Drugs and Therapeutics Formulary Committee (DTFC) (Health Professions Regulatory Advisory Council, 2009).

Recent changes in regulation

In 2009 the government passed Bill 179 (Government of Ontario, 2009), increasing the nurse practitioner scope of practice to include reducing and casting certain fractures. In addition nurse practitioners were authorized to prescribe any drug within a category of medication. This meant medications could be prescribed based on their class rather than by their

specific name. These provisions only took effect once the provincial government had amended and approved the relevant regulations and Acts. The government made the regulatory changes in phases, taking 2 years to remove the list of laboratory tests from nurse practitioners' ordering restrictions. Then in October 2011 it changed the regulation for prescribing medications (College of Nurses of Ontario, 2012).

Nurse practitioners were still not permitted to order CT scans, MRIs, or ultrasounds outside of the trunk of the body (College of Nurses of Ontario, 2012). At the time of writing, nurse practitioners were not permitted to prescribe controlled drugs, such as narcotics (even low potency ones like Codeine) and sedatives such as benzodiazepines. 'Controlled' drugs were regulated by federal government legislation. However in May 2012 the federal government took the first steps to loosen these restrictions (Government of Canada, 2012).

Shortly after the regulations covering nurse practitioner practice were first published in 1998 the government began to modify them, taking over 10 years to make significant changes. These alterations were announced in 2011, after I had finished collecting data. These latest changes have made it easier for nurse practitioners to practice as first contact primary care providers. However they remain insufficient to allow for independent practice. Bill 179 reduced (but did not eliminate) the requirement for collaboration with a physician in order to authorize aspects of a nurse practitioner's practice.

4.7 Primary care service delivery models

“Primary Care Reform”

The primary care system of the 1980s and early 1990s was repeatedly criticized as unstructured, fragmented, and not part of a coordinated or

integrated system (Abelson and Hutchison, 1994) (Hutchison et al., 2001) (Aggarwal, 2009). The government's response was to initiate a series of changes that came to be collectively known as Primary Care Reform. It also responded by establishing a series of commissions to study primary care and make recommendations (Lalonde, 1974) (Ontario Health Services Restructuring Commission, 2000) (Kirby -Standing Senate Committee on Social Affairs and Technology, 2002) (Romanow, 2004). The commissions reported and made recommendations after changes had been implemented.

The reforms sought to change the basis of the health care delivery system from a medical care (physician-based provision of care) model to a primary health care model. This model had a more expansive concept of providing care to a population through a variety of different kinds of providers. (Aggarwal, 2009). Primary Care Reform included the following components: collaborative teams of health care professionals, mechanisms to increase and improve access to care, community participation, improved coordination of services within the system, and the use of payment mechanisms other than fee-for-service. It also encouraged providers to use electronic records and other information technology, and to roster their patients (Hutchison et al., 2001).

It was difficult for the government to persuade physicians to participate in their reform initiatives. When the government introduced universal medical insurance in the 1960s it gave physicians substantial autonomy to determine where and how they would practice in return for their cooperation (Tuohy, 1999) (Geiger, 2009). Physicians were not employees of the government, and to encourage them to participate in Primary Care Reform, the government provided attractive incentives to join new organizational models of primary care delivery. Based on their experience with government attempts to limit their numbers and practice freedom in the 1980s and 1990s, physicians were suspicious of the reforms and were slow to participate in the new models (Geiger, 2009).

One of the goals of Primary Care Reform was to increase community input into setting priorities for health services (Aggarwal, 2009). Services organizations such as Family Health Teams, Community Health Centres, and Nurse Practitioner-Led Clinics were required to have a board of governors. The Board, which was either governed by providers, community members or a combination of the two, was to set direction and provide oversight for the organization (Ontario Ministry of Health and Long Term Care, 2009a).

Introduction to the organizational models of the case practices

A series of primary care health service models were developed as part of the Primary Care Reform policies. This study included 4 organizational models represented in the case practices: Family Health Teams, Underserviced Area Program, Nurse Practitioner-Led Clinics, and Aboriginal Health Access Centres. The latter is a variation of a Community Health Centre model. Each model will be briefly described to provide context for the presentation of observational and interview data that follows.

Family Health Teams

According to the Ontario Ministry of Health, “[t]he implementation of Family Health Teams is the central, transformation strategy through which the government will provide more Ontarians with access to primary health care (Ontario Ministry of Health and Long Term Care, 2005d). Family Health Teams are multi-disciplinary primary care service organizations that vary in composition and in the services they provide, based on local needs. The Team’s activities are overseen by a local governance board. The Team is to provide expanded access to care through extended hours of practice, improve system navigation, and care coordination. They are to emphasize health promotion, illness prevention, patient-centred care, and

chronic disease management (Ontario Ministry of Health and Long Term Care, 2005c).

It took over a decade to establish 186 Family Health Teams across the province (Ontario Ministry of Health and Long Term Care, 2012a). By 2009 Teams provided care to approximately 3 million people (Ontario Ministry of Health and Long Term Care, 2010) in a province with a population of 12.8 million (Statistics Canada, 2012).

The Ministry of Health introduced new Family Health Teams in a series of five funding waves. When the government announced a new wave of funding, local groups of community members or practitioners would apply to become a Family Health Team. Sixty-nine of 214 applications received were approved for funding in the 2005 wave (Blythe and Baumann, 2006). An application to form a Family Health Team was similar to a business plan. Once approved the applicants and the Ministry of Health drew up and signed an agreement that specified the number and type of health care providers to be funded, the specific activities the Team was to undertake, and its governance structure. Governance meant establishing a board to oversee the management and approve the policies of the Team.

Composition of Family Health Teams was highly variable. The composition depended upon the original application and business plan submitted. The plan outlined the patient population to be served, community needs and the services to be provided. A typical Family Health Team consisted of an Executive Director, administrative staff, family physicians, nurse practitioners, and nurses, though a variety of other professional staff might be included. For example the Team might have one or more pharmacists, diabetes educators, dietitians, chronic disease management nurses, physiotherapists, social workers, occupational therapists, chiropodists or chiropractors.

Teams provided services to a defined population and each patient was required to register individually. Teams were expected to make primary care more accessible by registering people who did not already have access to a practitioner. Ministry guidelines dictated how Teams performed services, what roles were performed by each practitioner category, and how the staff were compensated. The Ministry of Health established funding formulas for all providers, except physicians. (Ontario Ministry of Health and Long Term Care, 2005d) (Ontario Ministry of Health and Long Term Care, 2006) (Ontario Ministry of Health and Long Term Care, 2005b).

The Family Health Team funded nurse practitioner positions, and usually hired them as employees. Thirteen of 15 nurse practitioners in the 4 Family Health Team cases I studied were employees of a Team. The other 2 were independent contractors who had contracts that defined the parameters of their work. They were paid extra in lieu of benefits, holidays etc.

Funding for physicians who worked in Family Health Teams was more complicated, remained outside the Team budget, and was dealt with through a different mechanism. Prior to 2000 the majority of primary care practices were owned and managed by physicians, almost 90% of whom were paid on a fee-for-service basis (Hutchison et al., 2001). Primary Care Reform policies encouraged family physicians to form groups that were funded in various ways. These groups were funded through models that included capitation, fee-for-service or were blended (charging a fee for some services in addition to a base capitation) (Ontario Ministry of Health and Long Term Care, 2009b). Each model required enrolling or 'rostering' patients to a physician or group of physicians. Physicians who wanted to become part of a Family Health Team could not be part of a funding model that was primarily fee-for-service. They were expected to be in a capitation or blended model of payment.

In the capitation models physicians were remunerated per enrolled patient, in addition to receiving various 'quality' incentives. Quality incentives were paid when a specified percentage of eligible rostered patients reached a target for preventive care procedures, such as immunizations or fecal occult blood screening. The Ministry of Health made these funding models attractive to physicians through incentives. This produced a shift in physicians from using fee-for-service payment to capitation models (Kralj and Kantarevic, 2012).

Physicians were not employees of Family Health Teams, instead remaining independent contractors. They established agreements with Family Health Teams that allowed them to maintain a high degree of personal control over such things as their practice size, working hours, and vacations.

All patients registered in a Family Health Team were rostered to a specific physician or group of physicians. Both physicians and their rostered patients benefited from the services of the other providers in the Team. Other health care practitioners, on the other hand, were paid through the Family Health Team funding mechanism. In fee-for-service models of physician payment any expense incurred while running an office, including services provided by non-physician providers, was considered 'overhead' and payable from fee-for-service payments made to the physician. In contrast, physicians associated with a Family Health Team did not have to pay for the cost of other service providers within the Family Health Team. These were not 'overhead' expenses for a Family Health Team physician.

First contact, generalist nurse practitioners working for a Family Health Team had their own patient list but unlike physicians did not roster the patients in their own names. 'Their' patients were rostered in the name of one of the Family Health Team physicians who received capitation money and clinical target bonuses for all the patients rostered to them, including the patients usually seen by a nurse practitioner. This arrangement was

one of the incentives for a physician to join a Family Health Team and work in a collaborative relationship with a nurse practitioner. The arrangement created a complicated web of fiduciary duty and liability. It will be shown to have important consequences for the nature of the nurse practitioner-physician relationship.

Underserviced Area Program

Ontario established an Underserviced Area Program in 1969 to address the poor distribution of health care providers. The program provided incentives for practitioners to work in under serviced areas (Anderson and Rosenberg, 1990). The program initially included physicians and dentists but was expanded in the 1990s to include nurse practitioners. In 1999 the government announced funding for 106 nurse practitioner positions in this program. The funding included some the overhead costs for practices in under serviced areas (Dicenso et al., 2010). Some of the funding was used to create positions in physician offices but most of it was used to establish clinics in locations not serviced by physicians.

The Ministry of Health periodically announced new Underserviced Area Program funding and incentive opportunities. In order to qualify, a location was first designated as under serviced. In 2006 there were 137 communities designated as under serviced in Ontario (Blythe and Baumann, 2006). Interested groups, usually municipal governments, applied and were selected using criteria such as local need, local support, and an index of rurality.

Funding for an Underserviced Area Program practice included nurse practitioner salaries, benefits, and some overhead costs for the practice. The amount was adjusted depending on the level of community support.

A municipality would often try unsuccessfully for many years to recruit physicians before it became designated under serviced.

In the initial funding waves, many of the applicants for Underserviced Area Programs were municipalities, local recruitment committees or the Victorian Order of Nurses, an agency that supplied community based nursing services. The Victorian Order of Nurses had a province-wide network and was able to provide the organizational infrastructure to manage Underserviced Area Practices. They provided both a financial flow-through mechanism for money transferred from the Ministry and logistical support to run the clinics. This was a good arrangement for the Ministry of Health, because it meant dealing with a well-established agency with the capacity to oversee clinics and provide accountability.

The Victorian Order of Nurses did not provide any direct clinical oversight although technically there was a nurse practitioner director of practice available as a resource for nurse practitioners. Practices were overseen in a relaxed fashion, especially when they were running smoothly. As Karen, a nurse practitioner in the Fir Practice put it, “[t]hey saw the way I run things, they don’t question me (Karen, nurse practitioner, Fir Practice).

Three of the participant practices in my study were funded through the Underserviced Area Program, and 3 out of 4 nurse practitioners were employees of the Victorian Order of Nurses, while 1 was an independent contractor. Two of the participant Family Health Teams had at one time been Underserviced Area Program practices prior to being designated a Family Health Team.

Nurse Practitioner-Led Clinics

Nurse Practitioner-Led Clinics provide comprehensive primary health care services to individuals who register with the clinic. At first glance these clinics might seem like a Family Health Team, but there are many

organizational and philosophical differences between the two. The most important factor is that nurse practitioners provide the leadership for the clinical services, operations, and governance of the clinic. According to the Nurse Practitioner's Association of Ontario this "brings the comprehensive perspective of nurses, especially the focus on wellbeing, health promotion and disease prevention, to the day-to-day delivery of care for patients" (Nurse Practitioner's Association of Ontario, 2011).

The clinics are not-for-profit and the governing boards are composed of greater than 50% nurse practitioners. They are fully funded by the Ministry of Health, and remuneration is salary based. The clinic receives expense allowances according to a funding formula, but no capitation fees, fee-for-service or clinical performance payments. Clinics are expected to register and provide care to 800 people per full time equivalent nurse practitioner position. The first Nurse Practitioner-Led Clinic opened in 2007 and there was further funding announced for 24 more Nurse Practitioner-Led Clinics which were expected to be operational by the end of 2012 (Ontario Ministry of Health and Long Term Care, 2012b).

Community Health Centres and Aboriginal Health Access Centres

Aboriginal Health Access Centres are a variation of the Community Health Centre model. Their client population is restricted to people of indigenous origin. The provision of a primary care clinic is only one of many services supplied by the Centre organization. Other services include mental health services, homeless outreach, health promotion, chronic disease management, community services, support groups, youth services, and cultural programs. These Centres are not-for-profit and are governed by board members drawn from the community at large (Aboriginal Health Access Centres, 2010).

These Centres receive funding through Aboriginal Health Access Centre Program. While similar to Community Health Centre program funding,

these Centres receive less money for auxiliary staff, equipment, and overhead (Donna, nurse practitioner, Ironwood practice). All the staff are salaried except for physicians associated with the clinic, who are paid a set amount of money – a sessional fee – for a prescribed number of hours worked.

The Community Health Centre model of care focuses on five service areas: primary care, illness prevention, health promotion, community ‘capacity’ building, and service integration. It achieves this by being comprehensive, accessible, client-and-community-centred, multi-disciplinary, integrated with other parts of the system, community-governed, and based on the social determinants of health (Ontario Community Health Centres, 2011b). The Community Health Centre model was introduced in the 1970s and has had a modest uptake as a service organization. Seventy-three Centres served approximately 4% of the province’s population by 2010 (Ontario Community Health Centres, 2011a). Community Health Centres see a higher proportion of clients with complex health needs than other organizational models. For example the Centres see patients, with multiple diagnosis (32% vs 16% in Family Health Teams), mental health problems (5.2% vs 1.2% in Family Health Teams) and people living on low-incomes (51.4% from the bottom 2 quintiles vs 37% in Family Health Teams) (Ontario Community Health Centres, 2011a).

5.0 Findings 2 - Practice Case Studies

5.1 Description of the case practices

There were 9 cases included in the data set. They were practices where nurse practitioners and physicians worked together, providing general primary care. In 8 practices nurse practitioners looked after a list of patients to whom they provided ongoing, first contact, primary care. In these practices, a patient would identify as consistently seeing a specific nurse practitioner. One particular practice was included amongst the cases to illustrate another organizational model of primary care delivery. In that case each nurse practitioner was assigned to a group of physicians. They worked a specified number of days a week in each physician's practice, where they acted as a physician 'extender', undertaking activities such as following up on diabetic patients, conducting prenatal visits or doing Pap smears. The nurse practitioners in this practice did not have their own list of patients.

General characteristics of the case practices are summarized in Table 5.1. I directly observed nurse practitioners in their practices in the Ash, Beech, and Cedar practices. These settings will be described in greater detail than the other practice settings.

Table 5.1 Important Case Characteristics

Criterion	Description	A	B	C	D	E	F	G	H	I
Setting	Rural	X		X	X	X	X	X		
	Urban		X						X	X
Sites		1	4	1	2	5	1	1	1	1
Practitioner	Nurse Practitioners	2	4	2FT 2PT	1	5	1	1	4	4
	Physicians	1PT	17	1PT	4	21	1	1	1	2
Governance	Community	X		X						X
	Provider		X		X	X			X	
	Mixed Provider/ Community					X				
Funding Model	FHT		X	X	X	X				
	UAP	X					X	X		
	NPLC								X	
	AHAC									X

Legend:

A-Ash Practice, B-Beech Practice, C-Cedar Practice, D-Dogwood Practice, E-Elm Practice, F-Fir Practice, G-Ginkgo Practice, H-Hawthorne Practice, I-Ironwood Practice

PT-part time, FHT-Family Health Team, UAP-Underserved Area Program, NPLC-Nurse Practitioner Led Clinic, AHAC-Aboriginal Health Access Centre

Ash practice

This practice was established in 2003 as a community-subsidized clinic. It was located in a village of 1700 people, situated approximately 40 kilometres from the closest city, and surrounded by a rural, agricultural area. Smaller villages surrounded the practice location. The village had a 12-bed hospital with an emergency department. Two family physicians not associated with Ash practice shared an office in another village 10 kilometres away. The catchment area for both practices contained about 10,000 people.

Through attrition a shortage of family physicians had developed in the area during the last decade. The municipality initially subsidized the development and operating costs of the clinic building in the belief that a subsidized clinic would attract family physicians to the village. The municipality applied for and received funding for a nurse practitioner position from the Underserviced Area Program. The first nurse practitioner was a local resident who, prior to training as a nurse practitioner, had worked as a nurse in the area for many years. A physician working in the emergency department of the local hospital began working part time in the clinic, and became the 'collaborating physician' for the practice. A second nurse practitioner joined the clinic a year later and a series of semi-retired family physicians practiced 1-2 days a week in the same clinic space. They stayed for a few months or up to several years but had little to do with the nurse practitioners or their practice arrangements.

The two nurse practitioners in this practice were generalist, first contact, primary care providers. They each looked after a list of 600 - 800 patients. Patients, when asked, would identify them as their provider.

The office was well maintained and had good quality equipment. The waiting room, often full of patients, was never crowded. The remainder of the clinic included an open area for the administrative staff, four

examining rooms, a small, shared office for the clinicians, a small 'lab room', two washrooms, and a lunchroom. The clinic used an electronic medical record.

The community clinic had a governance board composed of representatives from the community, the municipal government, and one of the nurse practitioners. There were no physicians on the board. The clinic received funding from the Underserved Area Program to cover costs and pay the non-physician staff, and the municipality underwrote a portion of the practice costs. The nurse practitioners were employees of the Victorian Order of Nurses, which acted as a contract facilitator between the Ministry of Health and the local governance board. It provided professional oversight of the nurse practitioners and acted as a mechanism to move money from the Underserved Area program to the clinic. Nurse practitioners received a salary and benefits as employees of the Victorian Order of Nurses.

When the practice began, the physician was paid fee-for-service for patients he saw. In addition he was paid a retainer from Underserved Area Program to act as the collaborating physician and consultant for the nurse practitioners. In 2008 the physician joined a Family Health Group with other physicians in the area. Family Health Groups were one of the organizational and physician payment models introduced as part of Primary Care Reform. In this model physicians receive payment through a blend of capitation – a base amount per patient for a basket of clinical services – and fee-for-service for provision of services outside the core group of services. In addition they receive premiums and bonuses for reaching clinical targets for some services. The model required patients to be rostered in the name of a physician or the group of physicians. With the change in funding model, all of the patients in the clinic seen by the two nurse practitioners were rostered to the physician. The physician began to collect capitation money and incentive bonuses for the work done by the nurse practitioners. He reported that “90% of the patients that

are rostered to me are basically looked after by the nurse practitioners” (Gary, family physician, Ash Practice). This was a funding anomaly; in other Underserved Area Program case practices, patients were not rostered to a collaborating physician.

The collaborating physician spent approximately one day a week in the practice. The rest of the time he worked in the emergency department of the local hospital. During the days the physician was not in the clinic, he was available by phone or pager if a nurse practitioner needed an urgent consultation. If a situation wasn't urgent, they discussed problem cases with him when he was next in the office. If Gary was not available, the nurse practitioners contacted the physician working in the emergency department of the hospital one block away. Occasionally the nurse practitioners consulted one of the part time physicians who shared the office space. These consultations would be informal 'corridor consultations'.

I spent a total of 20.5 hours observing the two nurse practitioners, in 3 sessions spread over 16 months and I observed a total of 37 patient consultations. In addition I interviewed the nurse practitioners and physician associated with this practice on separate occasions.

Beech practice

The Beech practice was established as a Family Health Team in 2007. The Family Health Team was located in a small city surrounded by villages, small towns, and rural areas. The city population size was 22,000 and the surrounding primary care catchment area included a further 30,000 people.

In 1995 there were 34 family physicians in the community (The Owen Sound Family Physician Recruitment and Endowment Fund, 2008). In 2010, there were 22 family physicians in the community. Before the

Family Health Team was established, the family physicians worked alone or in small group practices. The later in this context, meant the physicians shared office overhead and provided coverage for each other when one of them was absent. At the time of my fieldwork, the Family Health Team practices were located in 4 office buildings scattered across the city. Referred to as 'pods' these collections of offices each had 3 to 5 physicians and 1 nurse practitioner. The Family Health Team had a diabetic educator, a pharmacist, a dietician, a social worker, a respiratory therapist, and chronic disease management program nurses associated with it. All the members of the Family Health Team used a common electronic medical record.

Nurse practitioners in this practice were generalist, first contact, primary care providers. They each had their own list of patients, and each patient identified a particular nurse practitioner as their provider. Each nurse practitioner reported having between 350-800 patients their practice.

The nurse practitioners' office set up varied. One had her own suite of rooms – an office, an examining room, and her own office support person to assist her. The support person's job was to answer the phone, make appointments and perform general office work. Another nurse practitioner shared one office room with 3 physicians. There were 4 desks in one room. This nurse practitioner had her own examining room but shared other examining rooms if required. She reported receiving virtually no administrative support from the office staff in that pod. For example she did her own photocopying, faxing, and was responsible for phoning patients to coordinate appointments with specialists. These same services were provided to the physicians, who paid for them as overhead. The Family Health Team provided money for nurse practitioner administrative support. Indeed, the other nurse practitioners received some administrative support, such as help booking appointments. However the nurse practitioner who reported receiving no support did not perceive any help was available to her.

At the time of the study, the Family Health Team was waiting for the completion of a new building to house the entire team in one location. The physicians and nurse practitioners expected this would even out the facilities and staff support. Once everyone moved into the new building, the physicians and nurse practitioners were to become a large group practice with common office routines and office staff would be employees of the Team rather than of an individual physician.

No nurse practitioners sat on the Family Health Team's governance board, whose only voting members were physicians. Instead nurse practitioners and other 'interdisciplinary care provider' members of the team met with the Executive Director on a monthly basis. Communication to and from the Board went through the Executive Director. The nurse practitioners reported they never met regularly with the physicians as a group.

Funding for non-physician salaries and activities of the Family Health Team was determined by Ministry of Health funding formulas. These formulas provided money for salary and benefits or sessional payments to non-physician providers. Out of the 4 nurse practitioners in this Team, 2 were salaried employees and 2 were independent contractors. Contractors had an agreement with the Team that outlined the services they provided. They were paid a set amount that included payment in lieu of vacation pay and benefits.

The physicians were members of a Family Health Network. This was an organizational model, developed during Primary Care Reform, which blended capitation and fee-for-service funding. Physicians were required to belong to this funding model to participate in a Family Health Team.

Rather than being rostered to the Team, patients were rostered to a physician. Therefore every patient on a nurse practitioner's list was also

rostered in the name of one of the family physicians, who received payment and incentives for work performed by the nurse practitioner as if the work had been done by the physician themselves.

The nurse practitioners in the Team rarely worked when there was not a physician working in the building at the same time. This meant nurse practitioners always had physician backup readily available. Communication between nurse practitioners and physicians within the pod occurred in several ways. Despite being “down the hall” or “up the stairs”, nurse practitioners were observed most frequently to use e-mails to communicate with a collaborating physician. The e-mails would be used to ask questions and to get authorization to order tests or medications outside of their scope of practice. This method of communication was used for routine, non-emergent issues. For urgent matters a nurse practitioner would phone or, more likely, walk over to the physician’s office to talk to them. Physicians and nurse practitioners were observed to participate in ‘corridor consultations’ when they encountered one another during the course of the day.

I spent a total of 17.5 hours observing 2 nurse practitioners in this practice. I observed 27 patient consultations. In addition I interviewed another nurse practitioner and two physicians from this practice. My attempts to arrange a formal interview with the Executive Director were unsuccessful, although we had several prolonged, informal discussions throughout the data collection period.

Cedar practice

This practice began as a solo physician practice in 1985. From 1999 to 2006 it was operated as a community-owned and governed clinic. The practice was located in a village of about 500 residents, approximately 20 kilometres from the closest hospital. The village is a major tourist destination in the summer.

When the original physician retired, a volunteer community group spent several years raising money to build a clinic building with the hope of attracting full time physicians. During that time, the community was served by itinerate physicians whose primary practices were located in a nearby town. A physician typically visited a half-day a week. There were 2 nurse practitioner positions in the practice, funded through the Underserved Area Program. The building committee and the Victorian Order of Nurses, who oversaw the nurse practitioners, applied for the existing practice to become a Family Health Team. Despite the practice's not meeting the basic requirements for a Family Health Team, their application was approved.

Cedar practice underwent a difficult transition from an Underserved Area Program funded clinic to a community-governed Family Health Team. The community-run governance board became embroiled in a struggle with the Victorian Order of Nurses over governance and operational issues in the clinic. During that time, all of the existing nurse practitioners, the only full time physician and her husband, the administrator, left the clinic.

Throughout the period of data collection, Cedar practice had 1 or 2 full time nurse practitioners, 2 part time nurse practitioners, a clinic director, a manager, 2 nurses, a mental health nurse, a receptionist, and someone who did data input. The Family Health Team did not have a full time physician. This was an unusual situation given that one of the requirements for Family Health Team approval was to have a minimum of 5 physicians participating. Only 1 family physician spent a half-day a week in the clinic and acted as the team's collaborating physician.

Darlene, the senior nurse practitioner, had recently graduated when the Team hired her. She had been practicing about a year before I spent time observing her. Darlene had been working on developing written policies for the clinic but had yet to implement them. In addition to her large clinical

case load, Darlene was also responsible for clinical oversight of the other practitioners. She estimated there were approximately 1600 patients registered in the practice, though the exact number could not be determined because of the difficulties of counting whether patients 'belonged' to the clinic or to the itinerate physician. Another newly graduated full time nurse practitioner was hired but did not stay long. Two part time nurse practitioners helped out about 1 day a week. In addition to clinical work, 1 of the nurse practitioners visited a nearby aboriginal health centre 1 day a week. The nurse practitioners were not paid for this work because these patients could not be rostered and therefore the work was not covered by the Family Health Team funding. These visits were a continuation of a long standing practice, started before the establishment of the Family Health Team. The nurse practitioners made these visits because otherwise "there would have been no one to provide care to these people" (Darlene, nurse practitioner, Cedar practice).

The family physician who visited the clinic a half day a week had been associated with the clinic for many years. He continued to see his 'own' patients, who were not rostered to the Family Health Team. Acting – though not officially – as the team's collaborating physician, his visits were remunerated on a fee-for-service basis. In addition to the fee-for-service he received if he saw a nurse practitioner's patient, he was also paid a retainer for being the Family Health Team's collaborating physician. This was an unusual arrangement, a carry-over from when the clinic was funded through the Underserviced Area Program. The physician belonged to another group in the nearby town where his main practice was located. Government payment rules stipulated that he could not belong to two capitation-funded groups at the same time, thus his payment scheme was a pragmatic compromise that allowed the practice to maintain the Family Health Team status while it tried to recruit full time physicians.

The practice was located in a spacious new building with 12 examining rooms. The equipment was observed to be new and of good quality. The

clinicians used paper based records but were making the transition to an electronic medical record.

The physician spent a half-day a week at the clinic. 'Half' a day often meant early afternoon until 9 or 10 PM. During his visits, he saw some of his own patients, and some consultations from nurse practitioners. A nurse practitioner was observed to sit in on approximately one third of his consultations. At the end of the session he met with the nurse practitioners, at which time they went through a large pile of patient charts that had accumulated over the preceding week. The physician approved test requests, specialist consultations or medication renewals that were outside the nurse practitioners' scope of practice. These meetings were also used to spend time discussing investigations and management of particular patients. The interaction between the nurse practitioners and the physician had the character of informal case discussions between a consultant and house staff in a hospital. A nurse practitioner would present the case and the physician would ask her questions about the patient and her proposed management. Interspersed between the cases they discussed the physician's rationale for ordering or not ordering specific tests or diagnoses, or for treatment decisions. Between weekly visits the nurse practitioners phoned the physician once or twice a day with urgent questions that could not wait for his next visit.

I spent 23.5 hours over 3 sessions in direct observation in this practice. I observed 40 patient consultations and two formal nurse practitioner-physician chart reviews. In addition I interviewed the nurse practitioner on a separate occasion.

Dogwood practice

This practice was a Family Health Team located in two sites. There were 4 family physicians and 1 nurse practitioner. The nurse practitioner worked at the smaller site, where one of the group's physicians rotated through on

a daily basis. The nurse practitioner was an employee of the Team. The governance board was physician-led and consisted of the 4 physicians in the practice. I interviewed 2 physicians from this practice, but the nurse practitioner refused an invitation to participate. She cited being “too busy” as the reason for not willing to be interviewed.

Elm practice

The Elm practice was a large multi-site Family Health Team located in a rural area. There were 21 physicians and 5 nurse practitioners in the Team. The nurse practitioners in this Team did not have their own list of patients. Instead they were assigned to a different physician’s practice for a specified number of days a week, depending on the size of the physician’s practice. The type of work they did in each practice was reported to be different, and depended on what they had negotiated with the physician. For example a nurse practitioner might do Pap smears, routine physical examinations or prenatal visits in one physician’s practice, while monitoring diabetic patients in another practice. I interviewed 1 nurse practitioner, 1 physician, 1 practice administrator, and 1 community board member from this Team.

Fir practice

This practice was located in a village 30 kilometres from the closest city. It was a solo nurse practitioner practice, funded through the Underserved Area Program and administered by the Victorian Order of Nurses. The practice was approximately 10 years old and the nurse practitioner had been in the practice since the beginning. I did a practice site visit and an extended interview with the nurse practitioner. The collaborating physician associated with this practice was the same one who provided collaboration with the Gingko and Hawthorne practices. I did a formal interview with him over the telephone, had a less formal discussion with

him on one other occasion, and corresponded with him via e-mail to clarify some issues that arose.

Gingko practice

This was another Underserviced Area Program funded practice, administered through the Victorian Order of Nurses, and staffed by one nurse practitioner and an office assistant. It was located in two sites between which the nurse practitioner alternated. She used paper charts and carried them between the sites in her car. I visited 1 of the sites located in the back of a library in a small village about 30 kilometres from the closest city, and I interviewed the nurse practitioner in her office.

Hawthorne practice

This Nurse Practitioner-Led Clinic opened about 4 months before I visited it and was one of the few of its kind operating in the province at the time of my site visit. Nurse Practitioner-Led Clinics had governance boards comprised mainly of nurse practitioners. Three of the 5 members on this clinic's governance board were nurse practitioners. The practice was located in a spacious building and was well equipped. The nurse practitioners had seen approximately 500 patients since opening the clinic, and planned on having 3200 patients in the practice.

A Nurse Practitioner-Led Clinic is organized and funded in a similar but not identical manner to a Family Health Team. Patients are registered to the clinic, but not rostered to a physician or individual nurse practitioner. In this particular clinic a collaborating physician was never physically on site. Instead he was paid a stipend to provide consultative advice and administrative backup for the nurse practitioners working in the clinic. There was a lead nurse practitioner who provided clinical leadership and direction for the clinic. I spent part of 2 days observing in the clinic and

interviewed 3 nurse practitioners. One of the interviews extended over two days.

Ironwood practice

The Ironwood practice was an Aboriginal Health Access Centre, located in a large urban area. Apart from primary care, the centre also provided other programs such as mental health services, homeless outreach, health promotion, chronic disease management, community services, support groups, youth services and cultural programs. Established in 1998, the centre was governed by a lay board of 9 people. Comprehensive primary care was provided to clients who had to be of indigenous ancestry. The government funded 4 full time equivalent nurse practitioner and 1.4 full time equivalent physician positions as well as administrative staff positions. Most of the clinical staff, both nurse practitioners and physicians, chose to work part time. With its 1320 registered clients, the clinic tried to have a physician on site whenever it was open, but high physician turnover and their part time status over the last several years made this difficult to accomplish.

Physicians acted in a consultant role and received an hourly rate for the time they spent in the clinic. They saw patients referred to them by the nurse practitioners in the clinic, and if they followed a patient themselves, it would usually only be for a short period of time until their clinical condition stabilized. The physicians did not provide ongoing care for chronic conditions, but they were available to discuss cases with nurse practitioners. For a long period of time a physician had been associated with the clinic but was never physically there. Instead he was available to consult over the telephone if another physician was not present in the clinic. He was paid a stipend for this service.

I did one clinic site visit and interviewed the clinical director, who was a nurse practitioner, and I interviewed one of the physicians by telephone.

Participants

Table 5.2 List of Interviewees and Participants

Practice Name	Informant	Occupation/Position
Ash	Roberta	Nurse Practitioner
	Brenda	Nurse Practitioner
	Gary	Family Physician
Beech	Donna	Nurse Practitioner
	Laura	Nurse Practitioner
	Tina	Nurse Practitioner
	Norma	Family Physician
	Erin	Family Physician
	Darlene	Administrator
Cedar	Fay	Nurse Practitioner
	Ken	Family Physician
Dogwood	Harry	Family Physician
	Evan	Family Physician
Elm	Theresa	Nurse Practitioner
	Nazeem	Family Physician
	Hashim	Office Staff
	Dennis	Board Member
Fir	Karen	Nurse Practitioner
	Steve	Family Physician

Practice Name	Informant	Occupation/Position
Gingko	Brenda	Nurse Practitioner
Hawthorne	Susan	Nurse Practitioner
	Lisa	Nurse Practitioner
	Gayle	Nurse Practitioner
Ironwood	Donna	Nurse Practitioner
	Neil	Family Physician
Miscellaneous	Billie	Academic Nurse Practitioner
	Daria	Academic Nurse Practitioner
	Norm	Lawyer/Negotiator

5.2 Major themes

Foreshadowed themes

The role of nurse practitioners in the health system in Ontario has been repeatedly identified as a source of confusion (Hanrahan et al., 2001) (IBM Business Consulting Services, 2004). Nurse practitioners work in situations where they are expected to provide comprehensive primary care services. The ability to do so is dependent on having a sufficiently broad scope of practice. As described in Section 4.6, page 134, nurse practitioner scope of practice is legally defined in Ontario. This limitation has been identified in the literature as a barrier to practice (Hanrahan et al., 2001). When legislation was introduced to define nurse practitioner scope of practice the lack of clarity in their role had several consequences. The legislation and regulations governing nurse practitioners' scope of practice in effect prevented nurse practitioners from

working independently as providers of first contact primary care. Therefore in order to practice in that role, nurse practitioners relied on a relationship with a physician. The empirical data collected in this study was analyzed to understand the nature of the relationship between nurse practitioners providing comprehensive primary care and the physicians they collaborated with. This will be synthesized in Chapter 6.

The remainder of this Chapter outlines the major themes and sub-themes derived through thematic analysis of my data. See Table 5.3 for an outline for the remainder of the Chapter.

Table 5.3 Summary of Major and Sub-Themes for Remainder of Chapter

Section	Categories	First Order Theme	Major Theme
5.2.1	<ul style="list-style-type: none"> - medical directives - confessionals - pre-signed requisitions and prescription pads - local knowledge - - personal relationships 	Workarounds	Restrictions on Nurse Practitioner Scope of Practice
5.2.2	<ul style="list-style-type: none"> - specialist consults - collaborating physicians <ul style="list-style-type: none"> - clinical matters - administrative matters 	Communication	Collaboration with Physicians

Section	Categories	First Order Theme	Major Theme
5.2.3	<ul style="list-style-type: none"> -salary vs capitation or fee for service - employee vs self employment - who is ultimately responsible for patient care -consequences -standards for delegation -liability - nurse practitioner and physician representation in organisational governance boards 	<ul style="list-style-type: none"> Remuneration method Employment status 'Ownership' of patients Rostering Legal issues Organizational governance 	Structural Features
5.2.4	<ul style="list-style-type: none"> - how nurse practitioners are referred to - external displays - intra-professional talk 	<ul style="list-style-type: none"> Use of names and titles Signage and advertising Relationship talk 	Indicators of Status

5.2.1 Restrictions on Nurse Practitioner Scope of Practice

Workarounds

I observed workarounds in every case practice. 'Workaround' refers to processes developed by nurse practitioners and physicians in a particular practice to extend the nurse practitioner scope of practice to allow them to provide primary care services with minimal disruption to their practices and minimal inconvenience to their patients. The following observation illustrates why workarounds were needed and one example of how they were enacted.

One of the nurse practitioners who allowed me to observe her practice walked out of the lunch room and down the hall on the way to her examining rooms to begin the afternoon session. As she passed the waiting room, two of her patients, a mother and teenage daughter, were waiting for the receptionist to make an appointment to see her. The nurse practitioner stopped to say hello and asked them what was happening. The teenager's mother explained that she was making an appointment with the nurse practitioner to follow up a consultation with a dermatologist 3 weeks before. The nurse practitioner said she had not seen the consultation note, and went to look for it in the teenager's chart. It was easily found but was addressed to the nurse practitioner's collaborating physician, not to her. The letter had been filed in the chart without the nurse practitioner having seen it. The dermatologist had recommended the girl start Isotretinoin, an acne medication. He had recommended a starting dosage but had not written her a prescription to start the medication. The nurse practitioner appeared to be embarrassed that she had not seen the letter, and went to get a prescription pad from her examining room. She wrote out a prescription for the medication, apologized for not having seen or acted on the letter and arranged a follow up appointment in 2 weeks time.

I noticed the prescription had been signed by the collaborating physician, even though the physician was not in the office at the time. When asked about this, the nurse practitioner said Isotretinoin was a drug she was not allowed to prescribe without a physician's consent. She and the collaborating physician had an "arrangement" to cover situations like this when he was not in the office. The arrangement was to use a pre-signed blank prescription pad "if necessary". She could have waited until the physician was in the office the following week for him to sign the prescription but that would have meant explaining to her patient that she was not able to prescribe acne medication herself. It would also involve more work explaining the case to the physician and faxing the prescription to a pharmacy. Each of these actions would have caused a further delay

in starting the medication. The dermatologist had recommended the medication but had not prescribed it himself for the patient. The consultation letter was sent to the collaborating physician, not the nurse practitioner, because nurse practitioners could not directly refer to specialist physicians, and therefore the consultation had been requested in the collaborating physician's name. The nurse practitioner expressed her frustration at not being an 'equal' in the system. She was not allowed to request a specialist consultation herself, and though she usually read a copy of the consultation letter when it came, she could not prescribe medication recommended by the specialist without authorization from her collaborating physician who had never seen the patient.

This observation and the explanation given by the nurse practitioner shed light on how restrictions on her scope of practice impacted her day-to-day practice. Her role in the practice was to provide comprehensive primary care, yet the restrictions on her scope of practice made it difficult to do so efficiently.

The restrictions also made her feel like an inferior in the health system. The vignette illustrated the frustration this nurse practitioner felt, as she perceived a lack of respect for her 'place' in the system. As she stated: "I probably collectively have as many years in school as a physician has, learning different things and I do my job well" (nurse practitioner, identification code withheld). The vignette also illustrated how this particular nurse practitioner and her collaborating physician had developed a process to work around the restrictions in order to make her practice in that setting possible.

Another nurse practitioner expressed her frustration, saying the limitations on her scope of practice indicated she was not trusted or was thought incapable of doing the work. "It does not let us get on with our work. It's like Big Brother is watching all the time" (Laura, nurse practitioner, Beech Practice).

Nurse practitioner's legislated scope of practice was too restrictive to allow them to independently practice comprehensive primary care in any of the case practice settings. There was a disconnect: nurse practitioners were expected to carry out a certain role but were not provided with the legislation to do so. In order for them to practice, specifically in practice settings where they worked without a physician, they developed mechanisms to extend their scope of practice. I call these mechanisms 'workarounds'.

Workarounds are defined as: "work patterns an individual or a group of individuals create to accomplish a crucial work goal within a system of dysfunctional work processes that prohibits the accomplishment of that goal or makes it difficult" [Morath and Turnbull, 2005 cited in] (Halbesleben et al., 2008). Use of workarounds is acknowledged to be widespread in health care delivery but few studies have focused exclusively on workarounds (Halbesleben et al., 2008).

The development of workarounds that allow nurse practitioners to practice in local settings has not previously been systematically described in the literature. Some of the workarounds I observed were considered acceptable by the regulating bodies while some 'stretched' the rules. In each case the workarounds allowed patient care to be provided with increased efficiency without causing undue hardship to the patient. They are therefore a form of shortcut, and have a very specific motive "to complete a task by getting around a blockage" (Halbesleben et al., 2008).

Workarounds varied. Each case practice developed idiosyncratic methods to fit the context of the practice. The specific workarounds used in a particular setting depended upon the nature of the relationship and trust that existed between individual nurse practitioners and physicians in the practice. The following section will describe the workarounds that I observed or that participants described.

Medical directives

The most common workaround used in the case practices was a medical directive. A medical directive is used to delegate a regulated act to someone who is prohibited from performing it except under the authority and direction of a practitioner authorized to perform the act themselves. The specific act is done in the place of the authorizing practitioner, who is supposed to have a 'relationship' with the patient (College of Physicians and Surgeons of Ontario, 2010). All the participants claimed medical directives were used in the practices they worked in.

In its prescribed format, a medical directive is a formal written document that states the conditions under which the act can be performed, who can perform it and who is authorizing the act. The person who follows a medical directive has legal liability for performing the act properly and appropriately. However because the person authorizing a medical directive has the act performed in their name, they are also liable for the proper performance and outcome of it. The advantage of using a medical directive is that the person performing the act does not have to be granted approval by the signatory each time the act is performed. Medical directives were developed for routine and recurrent situations. A collaborating physician described this rationale for putting medical directives into place:

We felt that there were some things that I was doing all the time...ordering bone densities, initiating statins [a group of drugs to lower blood cholesterol levels]. They [nurse practitioners] needed some guidance to raise the statin dose. So we built a number of medical directives that basically allowed them to do things beyond their scope but under my direction (Steve, family physician, Fir, Gingko and Hawthorne Practices).

In the above example, ordering a bone densitometry or altering a drug dose based on a diagnostic test level were actions frequently performed for screening and treatment purposes. Medical directives were used in this situation so that a nurse practitioner did not have to request authorization from a physician each time she wished to order these tests. The examples illustrated straightforward, frequently encountered situations. However it was difficult and complicated (indeed sometimes impossible) to create medical directives for clinically complex situations when multiple variables converged. When monitoring and following patients with chronic illnesses, it was more common to “tinker” with therapy, to work out the best situation for a particular patient (Mol et al., 2010). As one nurse practitioner put it, “[m]edical directives are very cumbersome and you have to cover every what if” (Roberta, nurse practitioner, Ash Practice).

Making medical directives or even adapting existing ones to meet the needs of a local practice setting required meetings, something to which busy clinicians seemed averse. Only one case practice reported holding regular meetings attended by both nurse practitioners and the physician. It was far more likely that meetings would be held in a corridor, at lunch, or called ad hoc to deal with a specific situation, and they were rarely held to systematically organize medical directives. One physician described how the directives were made in the clinic he worked:

I think we sit down and have a discussion about what we’re going to do. What routine, which drugs do we start to initiate treating hypertension or diabetes or whatever else...We have these informal discussion over lunch or just sitting down...create a protocol. Protocols are really not hard...some of them are written down... you kind of have that...unwritten understanding and the other thing, it’s very flexible depends on which course you go to. You come back from this course and you go “Ah, you’ve gotta do

this” and then the next year, it totally changes (Gary, family physician, Ash Practice).

The process described is not the creation of a protocol or medical directive. It is rather an example of “corridor work”, described by Iedema et al. and carried on in:

a unique site where final decisions can be held in abeyance and where uncertainties and provisional decisions can co-exist ... a space where people can agree to work around rules and regulations; in short, a space where tasks and positionings become sufficiently provisional, flexible and negotiable to enable clinicians to weave the complexity of emerging facets of clinical practice into a workable and productive unfolding (Iedema et al., 2005).

The process described by the physician was one of the ways they reached consensus about how to manage a clinical problem in that particular practice. The result was called a “directive” or alternatively a “protocol” but it was not written down.

Like other workarounds medical directives were used to carry out the day-to-day work in the practice. However necessary they were, they had disadvantages and consequences. Medical directives served as a constant reminder of the limitations of nurse practitioners’ scope of practice and their dependence upon a physician. One nurse practitioner expressed her resentment of the implicit supervision inherent in medical directives. During an interview she became visibly annoyed and said:

Everyone has to be in total agreement with the medical directive. Basically they [the physicians] are signing a piece of paper that says at some point in time she's going to do this and she has to know what she's doing, instead of saying you are a professional. Do what you think is necessary for the patient and for their benefit

to diagnose or to treat the patient (Roberta, nurse practitioner, Ash Practice).

The need to have workarounds created and reinforced, in physicians, a sense that they were ultimately responsible for the patient, and reminded them that they were liable for someone else's actions.

If the nurse practitioners make an error in judgement, am I going to get called up to deal with that? I think that's been one of the professional fears about that...someone else is going to screw up and I'll be on the hook for it...I think that's more a theoretical issue than a practical one... (Gary, family physician, Ash Practice).

The requirement for and use of medical directives highlighted how the hierarchy and power differential of the nurse practitioner-physician relationship was reinforced. It served as a means of control. As the nurse practitioner that was quoted above said, "everyone has to be in agreement." However it was the physician who authorized and signed the directive and whom ultimately had the power to decide whether a directive was instituted or not. Despite having contributed, in most cases, to the establishment of a medical directive, nurse practitioners did not have the same power as the physician to determine whether it was enacted. The nurse practitioners could choose not to use a directive but that would have been an act of defiance and serve no useful purpose. Medical directives and other workarounds were necessary to make a practice efficient, but they also highlighted the unequal nature of the nurse practitioner-physician relationship.

Despite practitioners' claims that they used medical directives, the extent to which they did was unclear. They talked about directives but I never saw one directly referred to. During the time of the study, despite everyone's claim to have them, no one was able to produce one of these

directives to show me. Indeed they could be said to be ‘more honoured in the breach than in the observance’.

“Confessionals”

Written medical directives and consultations, however informal, were considered officially acceptable workarounds. This was not, however, the case for all workarounds. Seeking permission to do what was not in a nurse practitioner’s scope of practice was considered acceptable if it was carried out in advance of the action. However this was not always done. Indeed sometimes permission for an act was sought after it was performed. This practice was referred to by one nurse practitioner as undertaking a “confessional”.

An example of a confessional type workaround occurred when a nurse practitioner was working by herself and ordered a test or medication not on the Schedule (see Appendix 7, Section 9.7, page 309) of tests or medications. She would make a notation in the chart and call it a ‘verbal order’. This was observed when a nurse practitioner ordered a hormone assay, based on a recommendation made by a consultant. Ordering that test was not technically within her scope of practice, however, rather than wait to discuss it with her collaborating physician or call him by telephone she went ahead and ordered the test as a ‘verbal order’. She said she would tell the physician about it later, but admitted that this sometimes did not happen.

Verbal orders and their “telephone order” variation, are used extensively by nurses in hospital practice. These are used when a physician isn’t physically present on the ward or when they don’t have time to write the order in advance of it being carried out. It is noted in the medical record as a way of documenting that authority was given to undertake a delegated task. They are, however, not something a nurse undertakes without it occurring in advance of the action.

In the office setting nurse practitioners were observed to use confessional workarounds for things that were considered minor and routine. They were used in situations where a nurse practitioner 'knew' the physician would authorize the act, if asked.

I observed this type of workaround used when a medical directive was said not to exist. There was a fluid understanding or agreement between the physician and nurse practitioner that these actions were permissible, and could be used in routine situations not covered by the nurse practitioner's scope of practice.

Another example of this was observed one day during a patient encounter. A nurse practitioner wrote out a prescription and signed it verbal order Dr. X. The prescription was for a medication not included in the Schedule of medications nurse practitioners were permitted to prescribe. When this was discussed later, the nurse practitioner said she was following a "guideline" the physician had discussed with her about how to treat the specific condition. When asked what process was in place to let the physician know when this happened, she said that she "does touch base with the physicians but not with everything". Another nurse practitioner recognized that her professional College did not see this as 'accepted' practice, yet rationalized it by saying: "these are confessionals as opposed to consultations. And they get the blessing..... [laugh].... and I have not had one that hasn't been blessed yet" (nurse practitioner, identification code withheld).

In these situations some nurse practitioners assumed they had general, non-written, informal permission to perform certain acts even though the specific situation where it was used was not discussed with the physician beforehand. The notation of "verbal order Dr. X..." allowed technicians who performed diagnostic testing to undertake the test or a pharmacist to dispense medication under the assumption the physician had ordered it.

Where used, the physicians and nurse practitioners in my sample condoned the use of confessionals as a workaround in situations where they trusted each other to not exceed reasonable limits. Practitioners used and talked about confessionals only in terms of improving patient care. Without this workaround, seeking permission in advance for routine or minor things would impact patient care by delaying the patient receiving a test or medication.

In the event of an audit by the College of Nurses or the College of Physicians and Surgeons, confessionals protected a nurse practitioner. However they put a physician at risk if anything went wrong and could put the nurse practitioner in jeopardy if caught. Recording 'verbal order' in the medical record reduced a nurse practitioner's liability if a medical error occurred because it transferred some of the risk to the physician. However it also exposed her to another sort of risk; in the case of a serious error, a physician could simply deny that a particular verbal order was ever given.

Confessionals were viewed by nurse practitioners as instrumental in allowing them to get on doing what they needed to do. They were a pragmatic solution used to work around limitations of nurse practitioners' scope of practice, and were used by nurse practitioners and tolerated by physicians when a physician was not available to authorize an action. Making a phone call, or waiting until the physician was next in the office to approve the order, would have been disruptive to the practice flow.

The use of this workaround implied an understanding of what the limits of the practice were. This understanding was worked out over time between individual nurse practitioners and the collaborating physician. From the physician's point of view, the use of confessionals depended on a high level of trust in the ability of the nurse practitioner to do the 'right' thing and to not exceed the implicit understanding that existed between the two of them. It also required trust on the part of the nurse practitioner that the

physician would back them. The stated intent of the nurse practitioners was to inform the physician later. However in practice this was seldom observed to happen. Nurse practitioners reported that physicians seldom questioned the use of a confessional workaround.

I observed that each nurse practitioner-collaborating physician 'dyad' had a different level of comfort with the use of confessionals. It appeared there was an unwritten agreement about what was 'permissible' and what was not within the dyad. It appeared to be fluid and was reported to change over time. In practices where confessionals were used, there was a high level of mutual trust between the nurse practitioner and physician.

Pre-signed requisitions and prescription pads

Diagnostic testing required the ordering clinician to sign a requisition authorizing the test to be performed. Pre-signed or signature-stamped requisitions for diagnostic tests were commonly used in physician offices. Nurse practitioners used this as a workaround to order some diagnostic tests. "[I]f there was a patient who wanted a test, often I would wait and get one of [Dr. X's] requisitions or do it on the computer and I would send it over" (nurse practitioner, identification code withheld).

One of the problems with this workaround was that the results of the test were sent to the physician whose name was on the requisition. A nurse practitioner using this workaround would have to add their name to the requisition in order to get a copy of the results. If the results were sent only to the physician, they would have no meaning to the physician as the physician did not see the patient or order the test. There needed to be robust office processes to handle incoming results and consultation letters. As shown in the observation discussed above regarding the dermatology consultation letter (page 174), these processes sometimes failed. When they did it affected both patient care and the nurse practitioner's self-esteem.

Another workaround observed in a practice was the use of pre-signed blank prescription pads, used by a nurse practitioner when the physician was not available in the office to order a medication. One practice used a dual system of signatures. The physician understood the system to work in the following manner:

We've set up a prescription system whereby we have particular prescriptions that are valid only if they're signed both by them [the nurse practitioners] and by me and we use that for drugs. Renewing the medications is not an issue. If you're on a regular medication, I will just actually sign the prescription pad for them and then they can fill it out. If they start something new, they'll call me and we talk about it on the phone and I'll say "go ahead with that". So we just have a system whereby we have these little prescription pads that we're using and that works well (family physician, identification code withheld).

This practice was pragmatic but made it impossible for a pharmacist to figure out who actually prescribed the medication. It required great trust between the physician and nurse practitioner that this workaround would not be abused.

Local knowledge and personal relationships with other health care providers

The schedules listing every diagnostic test and drug, and the circumstances in which nurse practitioners could order them were complicated. See Appendix 7, Section 9.7, page 309. Health care providers such as laboratory technicians, X-ray technicians or even pharmacists did not have ready access to these schedules, thus making it difficult for them to know when a nurse practitioner was exceeding her scope of practice. It also meant if a specific diagnostic test was ordered by

a nurse practitioner and not listed in the schedules it was refused. This was observed on one occasion when a laboratory technician refused a nurse practitioner's requisition for a Dilantin level (used for monitoring the amount of Phenytoin, an anti-convulsant medication, in the blood). The nurse practitioner had ordered the test, but forgot to write "per Dr. X" on the requisition. The patient's blood was drawn at a blood collecting station but the laboratory refused to run the test because it was ordered by a nurse practitioner and not by a physician. Rather than keep the blood and contact the nurse practitioner, the blood was discarded. This required the patient to return to the office, where a new requisition was filled out with "Per Dr. X" written on the bottom. The patient returned to the laboratory to have their blood redrawn and the test performed. Such incidents were a source of intense frustration to the nurse practitioner who referred to this situations as "stupid" and "insulting" (Roberta, nurse practitioner, Ash Practice).

Refusal of testing also happened with diagnostic imaging.

I'm irritated because if I don't do it properly, the hospital will give me a hard time every time I forget to write verbal order or whatever. Sometimes they'll give me a hard time and they won't do it for that reason. I try to fill out the requisitions properly to avoid that happening (Tina, nurse practitioner, Beech Practice).

In rural areas, some nurse practitioners developed workarounds based on local knowledge and personal relationships they developed with other health care providers. In one case a nurse practitioner reported the relationship she developed with local laboratory and X-ray technicians allowed her to do things without delay or without the collaborating physician's authorization. The techs at the local hospital would process tests they thought were reasonable if the nurse practitioner thought the test was required.

I had a lady recently who had a femur fracture and it looked very mothy and they were querying hyperparathyroidism and the tests for that ... so I just called the lab and I said to [the lab tech], I need to order these tests, these are the reasons why and I put parathyroid hormone on the requisition. I can't order it but could you put it on under [Dr. X] please and she said no problem. They wouldn't be able to do that everywhere but I mean it's not that I'm trying to slide something by someone. But if the test needs ordering and he [the physician] is not there to sign the requisition and you know... if you followed everything to the T., it could get very, very cumbersome in the course of the day with the types of patients that we are seeing (nurse practitioner, identification code withheld).

This local workaround occurred because of the personal relationship between the lab technologists and the nurse practitioner, who trusted each other. In the above example, the lab tech agreed to go ahead and do the tests because she thought it was reasonable to perform them and it was a test she knew from experience the physician would have ordered in that situation. It was a pragmatic local solution to the problem of restricted scope of practice.

Prescribing medications was an area of difficulty for nurse practitioners and pharmacists. According to the schedules in the College of Nurses of Ontario, some medications, such as antibiotics or birth control pills, could be prescribed by nurse practitioners as an initial prescription. Nurse practitioners could renew existing prescriptions of other medications, but not start them de novo, nor adjust their dosage. An example of this was the blood pressure medication Hydrochlorothiazide. A nurse practitioner could write a prescription to renew the medication, but if a patient attempted to fill the prescription at a different pharmacy than where the original one was filled, the pharmacist would have no way of knowing whether a particular prescription was a new prescription, a renewal or a change of dosage. Rather than attempt to contact a nurse practitioner

each time this question arose, in situations where the pharmacist knew the nurse practitioner and the prescription seemed reasonable, they simply filled it. This was within the spirit of the regulation, if not within the letter of the law.

Another nurse practitioner worked around this problem in the following way:

I write on the prescription pad “under medical directive of Dr. ...” or “under Dr. ...” . a lot of times, for renewals and what have you. It’s already been done through Dr. ... They [the pharmacists] know I’m working with a collaborating physician, so they will automatically accept your renewal (Karen, nurse practitioner, Fir Practice).

Working beyond the scope of practice

Nurse practitioners in this study often felt they practiced beyond their scope of practice. This occurred in two situations. The first situation occurred when nurse practitioners provided care for people with complex conditions that they felt were beyond their training and/or experience to manage. This sort of situation made them feel clinically uncertain and uncomfortable. The second situation occurred when they knew what to do but had to work around the legislated regulations and rules that restricted their access to testing, prescription of medications, and ability to refer to specialist physicians.

During interviews nurse practitioners expressed discomfort about looking after complex patients, including those with multiple co-morbid conditions, those on multiple medications or those with mental health problems. Sometimes nurse practitioners felt pressure from their employer to accept complex patients into their practices. More often though nurse practitioners expressed a sense of duty and responsibility to provide care to these patients who did not have any other access to a regular primary

care provider. As one nurse practitioner put it: “there is a sense of responsibility for the patients... even when the patients are beyond my scope” (Roberta, nurse practitioner, Ash Practice). Despite this none of the nurse practitioners admitted exceeding their personal competence level.

The people who have the most difficulty accessing care are those with complex co-morbidities or low socio-economic status (Olah et al., 2013). This was an example of the Inverse Care Law, expounded by Julian Tudor Hart in 1971. Briefly he stated “the availability of good medical care tends to vary inversely with the need for the population served” (Tudor Hart, 1971).

A particular frustration expressed by nurse practitioners in several case practices was a process whereby physicians ‘cherry picked’ patients they accepted into their practices. Physicians were reported by the nurse practitioners in one case to be “balancing” their practices by including people they wanted to look after rather than those who were more difficult to look after.

This phenomena is illustrated by the following lengthy excerpt from a transcript. Rather than paraphrase it I have let the nurse practitioner’s story speak for itself. In the excerpt, the nurse practitioner, who is already looking after approximately twice as many patients as a typical nurse practitioner practice, described two patients she had been caring for:

[W]e have new physicians in the area telephoning our patients asking them if [the patients] want to move over to their practice. And you know what... I don’t care...Sure, go ahead. So here are two patients, both of them were very complicated, both diabetics, both have high blood pressure, both renal patients. The one patient we have all straightened away and everything is going well. The other patient we are still in the process of tidying up because she

has one other factor, the rheumatoid arthritis so we are still trying to straighten her out for all those conditions. They [the physician's office staff] called both of these patients and both patients signed on with them. They [the physician] accepted the one that is all straightened away and both were supposed to go in to meet this physician. The second patient showed up at the door, they said we won't accept her and they ripped her application...after THEY called her and phoned her, they ripped her application...so the family called here and pleaded with us to take her back. We are not taking on any new patients but they told us what happened. So I said you need someone to look after you so come on back (Fay, nurse practitioner, Cedar Practice).

The excerpt illustrates several important realities in this nurse practitioner's practice. She looked after complicated patients, spending a lot of time "tidying" them up. Only after the patient was "straightened away" was a new physician in a neighboring town willing to accept the patient into their practice. However after deciding the person required too much time and care, the physician refused to accept the patient. The application to join the physician's practice was "ripped up". The nurse practitioner's anger and frustration were evident in the transcript, but the respect she had for the people she took care of was also evident. This nurse practitioner functioned and saw herself, as a safety net for complicated patients in need of care, something the physician did not appear to feel. The sense of being responsible for the welfare of patients and being part of the health care safety net was a recurrent theme expressed by the nurse practitioners in this study. A nurse practitioner in the Hawthorne practice expressed it this way:

I am socially driven to provide primary health care regardless of your needs, although there are some times when I feel some patients would benefit from a different level of care... So we have a responsibility to respond to our patients' needs. I don't think it's our

right to be able to pick and choose our patients based on the amount of work we see them as being. So what do we say? No I'm not going to take you...etc. so that patient is ostracized? (Susan, nurse practitioner, Hawthorne Practice)

Another nurse practitioner expressed her dilemma this way: "I have a hard time saying no. I have very complicated patients. They have just fallen through the cracks" (Laura, nurse practitioner, Beech Practice).

Sometimes geographic isolation contributed to nurse practitioners feeling responsible for looking after patients who were beyond their scope of practice. In several practices nurse practitioners worked in small communities where they were in solo practice, and where the collaborating physician was only available by phone or e-mail (Gingko and Fir Practices). The nurse practitioners in those practices were able to make it work, however they also found it difficult to say 'no' to patients. Karen a nurse practitioner in the Gingko practice recounted this example:

In the early years... I got into areas beyond my scope. Someone would call, it's 4:30 PM, elderly, congestive heart failure already, doctor an hour away, could they come up and see me? Incontinent, immobile, wheelchair bound already and uncomfortable so what do you do? I did have access to an ECG. So I did what I could. Finally said, she's already in heart failure, she's already on the meds, so I phoned her doctor – oh of course, it was 3 days before Christmas – the Thursday, before Christmas. He did call me back and I talked to him and said "this is what I'm being presented with". He said "that's the way she is". I said "I didn't know where else to go, that's why I'm calling you because it's beyond my scope of practise – way beyond. I'm here by myself. I've done what I can. If the congestion got any worse, I'll send her into the emergency department. He said that's exactly what I would do and he said how can you expect in one visit to assess

this lady when it took me 8 months to get to the bottom of what's going on? (Karen, nurse practitioner, Gingko practice).

In other practices nurse practitioners looked after patients who they felt were beyond their scope of practice because they did not have control over how their practices were structured. Nurses who worked in Family Health Teams reported less control over which patients they took on in their practices. According to Laura, a nurse practitioner in the Beech practice, “[t]he direction from the Family Health Team is 800 patients and complexity doesn't matter” (Laura, nurse practitioner, Beech Practice). She estimated her own practice size was about 350 patients. Even with this number she felt “overwhelmed”. In her case she attributed this to the complexity of the patients and the lack of support staff (Laura, nurse practitioner, Beech Practice).

Another nurse practitioner in the same practice noted that it was “not clear how the patients are assigned”. She was also “concerned about taking on too many [patients] with chronic mental illnesses or other ‘heavy’ diseases that are beyond the scope of practice” (Donna, nurse practitioner, Beech Practice).

The nurse practitioners in this practice negotiated with the Team's administration to keep their practices a manageable size, with the appropriate types of patients for their scope of practice. Most practices had a waiting list of patients to join the practice. When the physicians joined the Family Health Teams, they brought their existing patient lists into the teams with them, while nurse practitioners started their patient lists from scratch. It was difficult for a nurse practitioner to reject a patient who had been on a waiting list when her practice was not yet full. So rather than reject a patient outright, they sometimes negotiated with a physician or an administrator about whether a patient would be taken on.

In one interview the assertion that patients were beyond the nurse practitioner's scope of practice was seen by the physicians as an attempt by the nurse practitioner to impose her vision of her role and 'obstruct' the work of the Team. This was illustrated by the following quote: "[we are] having a great deal of difficulty trying to grasp exactly what her role is to be because we're constantly getting 'Well that's not within my scope of practise'" (physician, identification code withheld).

Patients' complexity mattered to nurse practitioners. The more complex the patient, the more time it took to care for them. It also affected a nurse practitioner's job satisfaction:

Some days you feel that you have a lot of complex patients who may not have had medical coverage for a while. You are seeing them for maybe the second or third time in the practice. You know they have a lot of problems now and you just... you just have half an hour and you say what's my priorities and um you know what needs to be done but... you get two or three of those in the day and you don't feel that you've accomplished much (Roberta, nurse practitioner, Ash Practice).

Another nurse in the same practice expressed frustration about looking after patients she felt were beyond her scope of practice:

[Y]ou wouldn't have to get these really complex patients and feel responsible for sorting them out and you would be doing more of the things that would be within your scope of practice and you would feel more productive maybe in a day (Brenda, nurse practitioner, Ash Practice).

Instead of physicians providing care for new patients who were on the more complicated end of the spectrum, nurse practitioners reported taking on these complicated patients by default. Caring for these patients

required more time, and nurse practitioners felt pressure to go beyond their comfort zone and scope of practice. Despite feeling overwhelmed at times, most of the nurse practitioners in this study felt an obligation to look after people who would otherwise not receive care. And they did so even if it meant feeling uncomfortable. The sense of responsibility and passion they felt about this came through in the interviews quoted above.

Nurse practitioners had a lot to say in interviews about their scope of practice and the limitations placed upon it. Being able to practice “full scope” was regarded as an ideal type of practice, one prized by most of the participants. By “full scope” they meant having their own set of patients to whom they provided comprehensive primary care services. Lisa, one of nurse practitioners at a Nurse Practitioner-Led Clinic, said her colleagues in other practices frequently told her “she was really lucky to be able to be in a practice where she could practice ‘full scope’” (Lisa, nurse practitioner, Hawthorne practice).

5.2.2 Communication and collaboration

“Collaboration” was a term widely used to describe the ideal working relationship between a nurse practitioner and a physician:

A collaborative relationship entails a physician and a RN(EC) [nurse practitioner] using complementary skills to work together to provide care to patients based on mutual trust and respect and an understanding of each other’s skills and knowledge. This involves a mutually agreed upon division of roles and responsibilities which may vary according to the nature of the practice personalities and skill sets of the individuals. The relationship must be beneficial to the physician, the RN(EC) [nurse practitioner] and the patient (Ontario Ministry of Health and Long Term Care, 2005a).

The Ministry of Health document quoted above refers only to a collaborative relationship between a physician and nurse practitioner. In the cases I observed, nurse practitioners worked in collaborative relationships with many other health professionals, lay people, and patients, however data collected and analysis within the scope of this research was confined to the nurse practitioner-physician relationship. It is however, important to acknowledge that nurse practitioners collaborated with more than just physicians.

“Collaboration and Communication” was chosen as the name for the second major theme that emerged from the data. Findings were grouped into two sub themes: consultation and administrative backup. Consultations occurred with specialist physicians and with the physician who delegated acts to a nurse practitioner to enable her to practice. The latter consisted of clinical consultation and administrative backup. In order to accomplish collaboration, communication had to occur.

Specialist Consultations

Requests for consultations with other practitioners are an everyday feature of primary care practice. One of the structural barriers to nurse practitioner practice in the Ontario health system was their difficulty in obtaining specialist consultations. The government health insurance did pay for physician-to-physician consultation requests but not for those made by a nurse practitioner. Consequently most specialist physicians refused to see patients referred to them by nurse practitioners unless a workaround was used.

In order for the health plan to pay for a consultation, a referring physician’s health plan number was included on the request for documentation. Nurse practitioners did not have these numbers because they were not physicians. In order for a nurse practitioner to send a patient to a specialist they were supposed to first consult with their

collaborating physician. If the physician agreed, they made the referral to the specialist in the physician's name and used their health plan number to verify it.

In some practices the physician wanted to see the patient themselves before agreeing to a consultation request, while sometimes they just discussed the case with the nurse practitioner. In some situations the referral happened as a confessional workaround in which case the physician became aware of the referral when they received a consultation letter from a specialist.

The most common workaround used for specialist referrals was described by a nurse practitioner as follows: after discussing it with the physician, she wrote a consultation request and put both her name and the collaborating physician's name as well as the billing number on it (Donna, nurse practitioner, Beech practice).

Like other workarounds the level of trust between an individual nurse practitioner and physician determined the boundaries of the workaround. Most of the time the physician in whose name a consult was being requested was aware of the request being made in advance of the actual consultation.

The entire process of requesting and receiving the results of a specialist referral was not always straightforward, and depended on a personal-professional relationship between the specialist and the referring party. A referral from someone known to the specialist was sometimes dealt with differently than one from an unknown physician. Specialists generally had little direct experience working with primary care nurse practitioners. They lacked an understanding of nurse practitioners' competencies and the manner in which they practiced. One physician took advantage of his personal relationship with the specialists he knew to improve the timeliness of how nurse practitioner referrals were handled.

If they [the nurse practitioner] made a referral for a specialist, they were way down the pecking order. If I made a referral on behalf of them, the referral got dealt with in a much quicker fashion. This was the same with certain diagnostics [specialized testing] (Steve, family physician, Fir, Gingko and Hawthorne Practices).

As well nurse practitioners needed to learn the language of referral; which phrases to use and which not use. This was the case at the beginning of a nurse practitioner's practice. Steve told me, "...that was something we found very early made a big difference. What you put on your requisitions so they got dealt with in an appropriate manner" (Steve, family physician, Fir, Gingko and Hawthorne Practices).

Specialists frequently sent their letters exclusively to the physician who requested the consultation. In order to be paid for a consultation, the specialist must write a letter to the referring physician listing the recommendations or plan for treatment. A consultant's letter was addressed to the physician because the request for referral was made in their name, however, the nurse practitioners whose name was also on the referral did not always receive a copy of the letter. Therefore they might not have been aware the consultation had taken place. This produced several problems that potentially impacted patient care. Information sent to a physician was sometimes not available for a patient follow up visit with a nurse practitioner.

Despite having authorized the consult, a collaborating physician might never have seen the patient. When the physician received a consultant's letter, they might not read it, assuming the referring nurse practitioner would. However as the addressee and recipient of the letter, a physician who failed to act upon the information contained therein could be medically and legally liable. Therefore by having a referral made in their name, a physician became responsible for necessary follow-up. But the

physician might have forgotten about the referral, having authorized it in passing conversation or – depending on the workarounds used in the practice - not known about it at all.

Each practice developed a mechanism for ensuring appropriate follow-up. Some practice processes were more robust than others, and the mechanism for follow up seemed to depend on how well organized the practice was. One way of accomplishing appropriate follow-up was to stress the necessity of sending a copy of the consult letter to the nurse practitioner.

[S]ome physicians would only send their consultation back to me. We wanted them to ensure...at least something went back to the nurse practitioner. Sometimes I'd get the consult note back and sometimes [I] didn't but that was OK. What the nurse practitioner would do was if there were recommendations contained within that were outside her scope, then I could re-engage. [It was the] same with ultrasounds, same with other diagnostics. We clearly indicated that it was coming from 2 sources, the collaborative physician and nurse practitioner. Again my billing number is generously labelled all over the place. I think that was something we found very early made a big difference (Steve, family physician, Fir, Gingko and Hawthorne Practices).

In three case practices included in this study, the physician was never physically in the same location as the nurse practitioners. Therefore the physician neither saw referred patients nor even knew their names. In these practices the physician and nurse practitioners worked out a process that clearly indicated referrals or requisitions were coming from two sources: the collaborative physician and a nurse practitioner. This was reinforced by making it clear to the specialist physicians that the referral was made by a nurse practitioner and that a copy of the consultation must be sent to her. There was a clear understanding between the physician

and the nurse practitioners about who was responsible for what part of the process, and the relationship allowed for flexible engagement on the part of the physician when it became necessary.

In some cases, once a consultant was 'educated', a personal-professional relationship between the consultant and a nurse practitioner developed. One nurse practitioner I interviewed felt able to bypass her collaborating physician, pick up the phone, and talk directly to a consultant gynaecologist to whom she frequently sent patients (Roberta, nurse practitioner, Ash practice).

The inability of nurse practitioners to make direct specialist referrals had a series of potential consequences. It created barriers to efficient patient care. Important information sometimes went missing because a nurse practitioner did not receive the necessary information about her patient from the consultant. It created more work and wasted the time of both the nurse practitioner and the collaborating physician. The requirement of collaborating physicians to approve specialist consultation requests added an extra step to the referral process. It reinforced the impression that collaborating physicians were responsible for more aspects of a nurse practitioner's practice than they were.

This process of working around health insurance payment rules was not related to delegating medical acts. Indeed it was not a legal requirement, but a bureaucratic one that the Ministry of Health could have changed at any time. It was insulting to nurse practitioners when they did not receive copies of results or consultation letters simply because they were not allowed to order certain tests or consultations without physician permission. These requirements were a recurring reminder to every nurse practitioner of their 'place' in the health system.

Communication with a collaborating physician

Working with a collaborating physician required a nurse practitioner to communicate with them frequently. This was observed to occur for two main purposes. The first was for clinical consultation when a nurse practitioner wanted assistance determining a diagnosis, creating an investigation plan or managing a patient's condition. The second purpose for communicating with a collaborating physician was for administrative backup. This occurred when a nurse practitioner knew what to do but was not able to do it because of restrictions on her scope of practice.

Nurse practitioners and physicians communicated in several ways. Each case practice developed their own processes to accomplish this. The main factors determining how communication occurred were the necessity and urgency of the situation, and the accessibility of the collaborating physician.

Clinical consultations

In practices where nurse practitioners and physicians worked in the same location, clinical consultation was observed to occur through face-to-face meeting or more commonly through intra-office e-mail. In larger clinics or those that used electronic charting, nurse practitioners and physicians shared access to patient medical records and used e-mail. Response to e-mails occurred rapidly, typically within 30 minutes.

In larger Family Health Team settings, nurse practitioners had several options for obtaining consultations from their collaborating physicians. In Beech practice each nurse practitioner was assigned to a 'pod' of 3 or 4 physicians. Each nurse practitioner had their own individual practice population but patients were 'rostered' to a specific physician. Thus nurse practitioners consulted with the physician to whom the patient was rostered. This was done in several ways. If the patient's clinical condition

was urgent or emergent a nurse practitioner bypassed the collaborating physician and called an ambulance directly or sent the person with a relative by car to the hospital emergency department. If there was less immediate need for consultation a nurse practitioner had several options. They either phoned the physician or walked down the hallway to speak directly with them. If the physician responsible for the patient was not physically present in the building or was unavailable, a nurse practitioner spoke to one of the other physicians in the 'pod'. Though available, this option was used only occasionally. The level of urgency was seldom high enough to require an urgent response from the collaborating physician. If an issue requiring consultation was less urgent or 'elective', the nurse practitioner sent the physician an e-mail. Physicians checked their e-mails regularly during the working day and usually replied to a nurse practitioner within a few minutes.

Sometimes a nurse practitioner and physician were observed to meet in a hallway or break room, prompting an informal discussion of a case. If it was felt a physician was required to see or examine a patient, the nurse practitioner made an appointment for the patient to see the physician. One of the nurse practitioners in this Family Health Team reported she sometimes accompanied a patient to the consultation with the physician to observe and discuss the case with the physician (Tina, nurse practitioner, Beech practice). This was also observed in Cedar practice where a nurse practitioner, seeking a clinical consultation from the collaborating physician, would schedule an appointment for the patient with the collaborating physician during his weekly visit to the office. The referring nurse practitioner was observed to attend these consultations and would discuss the cases with the physician both during and after the visit.

Nurse practitioners in Beech practice did not consult among themselves because they were located in different buildings, making informal consultations with colleagues impractical. In Ash practice two nurse practitioners were frequently in the office together without a physician

present. They were observed to informally ask each other to “come have a look at this and tell me what you think”. This type of informal consultation amongst nurse practitioners was observed or reported to occur in every case practice where at least two nurse practitioners worked together.

In smaller rural practices where a physician was present only part of the time, the process for a physician consultation was more complicated. In these practices the physician was generally available by phone if a nurse practitioner needed to consult urgently with them. If the collaborating physician was not available, the nurse practitioners sent their patient to the closest emergency department or walk-in-clinic, if one was accessible. Walk-in-clinics in Ontario are places people go for minor medical care. They are generally found only in urban areas. Ash practice’s collaborating physician also worked part time in a nearby emergency department. When he was not available, the other physicians working in the emergency department were available to advise the nurse practitioners by phone.

One day I observed a nurse practitioner call a physician on duty in the local emergency department to discuss a patient with asthma she was seeing in the clinic. She felt her patient should be prescribed a course of oral steroids for exacerbation of asthma. Prescribing oral steroids was beyond her scope of practice. She discussed the case with the physician, who agreed with her that oral steroids were indicated. Then using one of the administrative workarounds discussed in Section 5.2.1, page 173, the nurse practitioner arranged for the patient to receive the required medication. Making a phone call to the emergency department was easier for the nurse practitioner than trying to track down the collaborating physician and it prevented a patient visit to the emergency department.

In addition to the relationship they had with their collaborating physician, nurse practitioners also formed ties with other physicians. In the example

just given the nurse practitioners cultivated a relationship with physicians who worked in the local the emergency department. As a trial the nurse practitioners worked in the emergency department several days a week for a couple of hours over supper time to give the physician on duty a break. This example of relationship building meant the physicians in the emergency department always took a telephone call from one of the nurse practitioners.

In another example, the managing director of Ironwood practice sought out opportunities to sit on local hospital committees. She joined the Emergency Department Patient Care Advisory Committee of a nearby tertiary care hospital. She did this because she understood the benefits of cultivating such relationships:

[W]e needed to strike a fast, efficient, effective partnership with [the emergency department physicians]... We were coming up with block after block after block. They were turning people away and I just said OK, I am calling the director. We need to meet. You remember me from the committee. This is what I need (Donna, nurse practitioner, Ironwood practice).

Administrative backup

Similar methods of communication were used to obtain administrative backup. These situations were usually not urgent. In cases where a physician was not in the clinic on a daily basis, files would pile up on a desk until the physician dealt with them. In other cases they were dealt with by phone or fax. One group of case practices developed an unusual approach.

The collaborating physician at Fir, Gingko, and Hawthorne practices did no clinical work on site and visited the practice settings infrequently for administrative reasons. When these practices were established, the nurse

practitioners had difficulty finding a local physician to collaborate with them. This difficulty led to a creative and innovative solution to work around the restrictions on their scope of practice.

The solution was unusual in a number of ways. The physician never had face-to-face contact with patients, but instead communicated with the nurse practitioners through e-mail or fax. Nurse practitioners sent clinical questions and requests to the physician electronically, and the physician replied in kind. For reasons of confidentiality, only patient initials were used in the communications. No patient identifiers were used at all. The physician and the nurse practitioners with whom he collaborated were separated, in one case by 165 kilometres. When the physician was on vacation he maintained electronic communication with the nurse practitioners, once while on a cruise 7 time zones away. This method of communication had gradually evolved over several years through trial and error. If a face-to-face consultation with a physician was needed, a patient was referred to a specialist physician, a local emergency department or a walk-in-clinic.

In these 3 case practices, patients were not rostered to the physician. He provided only advisory and administrative backup to the nurse practitioners. Unlike physicians in other case practices, this physician felt he dealt with clinical situations and not specific patients. He responded to a clinical picture that was painted by a nurse practitioner rather than treating a patient with whom he had an individual relationship. The use of remote electronic communication made it appear to be a different type of consultation. However it was similar in kind to a nurse practitioner meeting a physician informally in a hallway and saying, "I've got a 65 year old man with..." The difference was how and where the consultation occurred.

This physician and the nurse practitioners in two rural Underserved Area Program practices used this process of backup and communication for a few of years. When a new Nurse Practitioner-Led Clinic tried to open in a

small city in southern Ontario the nurse practitioners in the clinic could not find a local physician willing to collaborate with the clinic. The physician who collaborated remotely with the Fir and Gingko practices was approached and he agreed to provide the same level of support for the Nurse Practitioner-Led Clinic as he provided to the other practices. I visited the Nurse Practitioner-Led Clinic approximately 5 months after it opened where the practitioners reported being satisfied with how their system for physician backup was functioning.

The physician viewed his collaborating role as providing support and extension of the nurse practitioners' scope of practice, rather than the nurse practitioners working as an extension of him. He had a thorough understanding of the issues of nurse practitioner autonomy and the boundaries of their responsibility for patients. His views were in alignment with those of the nurse practitioners. When describing how he became involved in these clinics he said:

I certainly don't want to see and be primarily responsible for a bunch of patients, but if the nurse practitioner can practice within her scope – and I could easily broaden her scope a little bit – and we could do most of this through correspondence, I'd be open to doing that (Steve, family physician, Fir, Gingko and Hawthorne Practices).

The outcome of consultation advice was recorded in the patient's health record. This served as a record that documented a delegated act had been authorized.

Looking across the cases, each case practice developed a system of consultation that included multiple processes of communication between the nurse practitioner(s) and physician(s). These systems varied from case to case and depended upon what was needed, the urgency of the need, and the availability of the collaborating physician. All of the systems

of communication were based on the local conditions of the practice setting and the work patterns of the nurse practitioners and physicians. The systems of communication evolved to meet the unique challenges that occurred in each practice. Some processes such as the use of personal digital assistants, were unusual and innovative. Perhaps the adjective that best describes these systems is 'pragmatic'.

5.2.3 Structural features of the health system that impact the nurse practitioner-physician relationship

While analyzing the data, I began to see some situations that did not make sense. For example, why would a nurse practitioner working in a collaborative practice with a family physician assume the care of patients with complex medical problems instead of caring for patients with conditions more closely matched to her training? However once I understood the structural features of the health system, I was able to better interpret the reasons for this. Structural aspects of the health system explained many of the characteristics of the nurse practitioner-physician relationship.

The structural features of the health system that emerged as important themes included the employment status of nurse practitioners and physicians, payment mechanisms, the phenomenon of rostering patients, and the governance arrangements of practice models. These will be discussed in the following sections.

Nurse Practitioner remuneration and employment status

Nurse practitioners had few options for remuneration or employment status. The Ministry of Health did not allow nurse practitioners to roster patients, join capitation schemes or bill fee-for-service. There was little choice for a nurse practitioner except to become an employee and be paid a salary.

There were 24 full time nurse practitioners in the 9 case practices. Twenty-one of them were employees of the organization they worked in, while only 3 were independent contractors. This self-employed status was available as an alternative to salaried employment in only 1 of the Family Health Team and 1 of the Underserved Area Program cases. This situation arose in the Family Health Team when the first nurse practitioner to be hired insisted on becoming an independent contractor, and the management agreed to it. At the time of the data collection, 2 out of 4 of the nurse practitioners in this Family Health Team had opted for independent service contractor status. However one of them was thinking of switching to become an employee for the (employee) “benefits”. Her husband was also self-employed, and the nurse practitioner wanted to have a dental and drug insurance plan (Donna, nurse practitioner, Beech practice). In the other Family Health Teams, independent contractor status was not an option for nurse practitioners.

Sessional fees were also a possible option. These were generally used by an organization to pay a practitioner to provide services to the organization for a limited time period without making them an employee. The practitioner usually worked primarily in another job, and did sessional work on a part time basis. Sessional fees for work done in a Family Health Team might have been permissible, but it was not advantageous for a nurse practitioner to be paid this way. Given that they were not allowed to join the same payment schemes as physicians, nurse practitioners had little choice in how they were employed or paid.

Payment by salary made a nurse practitioner an employee of the organization. This had some advantages. The salary was not dependent on the volume of work. This meant nurse practitioners had a stable income, and knew what they would receive each month. Additionally, employees did not pay overhead expense. Paying expenses was a concern to non-salaried practitioners when the volume of work dropped

but the fixed expenses did not. Being an employee meant job and financial security, as well as employee benefits such as dental plans, sick leave, and paid vacation. It also meant having no involvement in the business aspects of the organization. Employee status was an arrangement some nurse practitioners preferred. “I don’t want to have the hassles of being self-employed. I just can’t be bothered doing all that contractual stuff. I’m not really interested in any sort of my own business” (Laura, nurse practitioner, Beech practice).

However employee status brought restrictions not faced by the self-employed. Employees reported to managers who ‘managed’ what they did within the practice. There were two levels of management: professional and administrative. Both types of management were variable and depended upon the practice setting. Professional practice oversight was informal and inconsistent. As nurse practitioners were a regulated health profession there was no mandate for anyone to directly oversee their clinical practice. They were autonomous practitioners accountable to their professional College. However physicians in all the case practices oversaw to some extent nurse practitioners’ practice in order to delegate certain acts that would allow a nurse practitioner to provide comprehensive primary care.

In Family Health Team case practice, physicians were paid for work nurse practitioners did with physician rostered patients. This funding arrangement increased the physicians’ sense of responsibility and liability for the outcome of the patients rostered in their names. Examples of this thinking are illustrated in the following quotes:

If the nurse practitioners make an error in judgement, am I going to get called up to deal with that? I think that’s been one of the professional fears about that...someone else is going to screw up and I’ll be on the hook for it (Garry, FP - Ash Practice).

I'm not as comfortable as when I see them [patients] myself or when I review them myself...so here I'm responsible for tests I haven't ordered or investigations that I have not had any part of. Then I have to try to pick it up without having all the other relevant information. I do find that difficult (Evan, FP- Dogwood Practice).

Another physician, in an aside during one of the observational sessions, commented that his role was "to make sure patients did not fall through the cracks of the nurse practitioners' care" (physician, identification code withheld).

Patients were not rostered to a physician In Underserviced Area Program clinics, Aboriginal Health Access Centres or Nurse Practitioner-Led Clinics. The physicians associated with these practices were paid stipends or sessional fees to support the work of the nurse practitioners, rather than receiving compensation for the work nurse practitioners did. The remuneration of physicians in these cases did not depend on the volume of work done by the nurse practitioners in the practice.

In these cases physicians took on more of a consultant role. They did not view themselves as being in charge or having overall responsibility for the patient. Instead physicians were clear their role was that of a consultant, and they were only responsible for the acts that they were delegating. As Steve stated: "In this relationship, I'm ONLY responsible for the advice I give" (Steve, family physician, Hawthorne practice).

The case practices funded by the Underserviced Area Program were administered through the Victorian Order of Nurses. Nurse practitioners in these practices were employees of the Victorian Order of Nurses. There were professional practice advisors available through the Victorian Order of Nurses for the Underserviced Area Program practices, but the nurse practitioners from these practices reported they never sought advice from them. The nurse practitioners reported the advisors "did not interfere" with

their clinical practices. The Nurse Practitioner-Led Clinic and the Aboriginal Health Access Centre had nurse practitioner managers and if clinical practice issues arose, they would deal with them.

Administrative management was variable and depended upon the way in which the practice was organized. The governance board and the organization's administrators defined job descriptions. As employees nurse practitioners did not have the flexibility of self-employment. For example vacations could only last a prescribed length of time. On the other hand in Family Health Teams and the Aboriginal Health Access Centre the nurse practitioners themselves had no administrative responsibilities.

In the Underserviced Area Program practices, nurse practitioners assumed a variety of administrative roles. Each of the three Underserviced Area Program case practices began as municipal government initiatives, and all were eventually placed under the management of the Victorian Order of Nurses. In one of these practices the nurse practitioner was an independent contractor and had almost complete administrative control of the practice. This structure had evolved prior to the Victorian Order of Nurses becoming involved in the practice's administrative oversight. Here the nurse practitioner was not only a self-employed independent contractor, but ran the administrative side of the practice like a physician would their own practice. She had control of hiring and firing, did payrolls, and was virtually independent. She received money from the Victorian Order of Nurses for her salary, money from the municipality to pay for specific office expenses, and she subsidized the practice with money she received for billing out-of-scope services and for talks she gave in the community (Karen, nurse practitioner, Fir Practice).

The other two Underserviced Area Program case practices were administered in a different way. The Victorian Order of Nurses oversaw

budgetary and human resource issues, and the nurse practitioners were employees, without the sort of autonomy that Karen had.

Being an employee implied other losses of personal autonomy. The nurse practitioners who were independent contractors had more office support than the employee nurse practitioners. In one practice a nurse practitioner, an independent contractor, had her own office assistant, while another nurse practitioner in the same Family Health Team reported having no office support, and having to do all of her own telephoning and faxing. She was supposed to have access to some of the assistants who helped the physicians in her 'pod', and felt she had no control over the arrangements (Laura, nurse practitioner, Beech practice).

Another example of loss of personal autonomy associated with employment status was highlighted in one Family Health Team. I approached two nurse practitioners to spend time observing their practice, and asked to interview them. Both readily agreed, and so I spent a day with each of them. I assumed, as had the nurse practitioners working in this Family Health Team, that they had the autonomy to consent to allow someone to observe them in their practice and to interview them. I made the mistake of approaching the nurse practitioners directly, without notifying the Team management personnel. When the Executive Director discovered what had occurred, a new policy about participating in research was instituted. Before I could interview any more employees of that Team, I had to make a formal application and presentation to the governance board to seek permission to involve employees of the Team. This process took 6 months to complete, and when I finally received permission to proceed, I was asked to limit my interviews to 45 minutes each and let the Executive Director know in advance when they would occur.

The policy regarding participating in research applied to all the employees of the Family Health Team. However it was not clear if the policy applied

to physicians in the Team. About 6 months after the policy was put in place, I spoke with one of the Team's family physicians, who told me she had no knowledge of the policy. Indeed she claimed it would never have happened if I had asked to observe or interview only physicians (Erin, family physician, Beech practice). She did not see the policy as applying to her. She felt she was able to dictate if, and for how long, she wanted to have someone observe her practice. This vignette illustrated the power differential between nurse practitioners and physicians with regards to personal and professional autonomy in that particular Family Health Team.

Physician remuneration and employment status

In contrast to nurse practitioners, physicians had variable and complicated mechanisms of remuneration. Family Health Team budgets did not include funding for physician services. Prior to 2000 the majority of primary care practices were owned and managed by physicians. In 2000 90% of physicians were paid on a fee-for-service basis (Hutchison et al., 2001). As part of the Primary Care Reform strategy, family physicians were encouraged, through monetary incentives, to join one of the new funding model organizations. These funding models employed capitation, straight fee-for-service or blended methods of payment (Ontario Ministry of Health and Long Term Care, 2009b).

Each funding model required enrollment or 'rostering' of patients to a physician or group of physicians. In the capitation models, physicians were paid a specific fee for each patient enrolled, and were given extra incentives to look after people with chronic conditions. For example physicians who had more than a specified minimum number of patients on their roster with diabetes or chronic mental illness were given extra premiums. In addition physicians in these schemes received payment for providing 'quality' care. For example if a target percentage of eligible rostered patients were provided with preventive care procedures such as

immunizations or fecal occult blood screening the physician was paid a quality incentive.

Physicians were required to belong to a capitation or blended capitation model of payment to become affiliated with a Family Health Team. However exceptions were granted. By joining or forming a Family Health Team, physicians, and their rostered patients, had access to services provided by other health care professionals such as nurse practitioners, pharmacists, nurse chronic care management specialists, and other health care providers who were employees of the team. These 'allied health' providers' services were only available to patients rostered to a physician who belonged to a Family Health Team. If a physician was not part of a particular Family Health Team their patients could not receive these services. Physicians did not pay overhead for their patients' access to these services, and patients did not pay out of pocket for them either. This was an incentive for physicians and patients to join a Family Health Team.

Physicians were not employees of Family Health Teams. Instead they remained independent contractors, bound by agreements that allowed them to maintain a high degree of personal control over such things as their practice size, working hours, and vacations.

All patients registered in a Family Health Team were rostered to a specific physician or to the group of physicians. Even if a patient was assigned to a nurse practitioner, they were placed on the roster of a physician who then became the nurse practitioner's 'collaborating' physician for that patient. They were paid for work and procedures the nurse practitioner performed on patients that the physician had maybe never even met. This is an important point to appreciate. It resulted in a web of ambiguous relationships between the nurse practitioner, the physician, and the patient.

Physicians associated with the Aboriginal Health Access Centre were paid in two different ways. They were paid sessional fees – essentially an hourly rate – for being on site in the clinic. Physicians in this practice had a high turnover rate, rarely staying even a year. However one physician had been associated with the clinic since it started. He was retained to provide consultation and authorize services when a sessional physician was either not on site in the clinic or during periods when the clinic had physician vacancies. This physician was seen once a year at the practice Christmas party. He did not want to work on site because “he doesn’t want to have a boss” (Donna, nurse practitioner, Ironwood Practice).

While the physician payment mechanisms varied based on the organizational structure of the practice, they were not always simple. In one practice the nurse practitioners were initially paid through the Underserved Area Program and the physician was paid fee-for-service for the patients in his practice. Underserved Area Program funding included a stipend for the collaborating physician to discuss patients and to authorize out of scope activities for the nurse practitioner. Therefore if the physician physically saw and examined a nurse practitioner’s patient he was paid an additional fee-for-service. A few years later the physician joined a loosely affiliated group of local physicians where he was paid through one of the capitation models. An anomaly in the payment rules allowed the physician to roster all the patients in his practice as well as the patients in the nurse practitioners’ practices. This created a similar situation as a Family Health Team except that the ratio of physicians to nurse practitioners in Family Health Teams was approximately 4 to 1, while in this practice it was 1 to 2.

In both cases, the Ministry of Health was paying both a nurse practitioner and a physician for the services provided by a nurse practitioner. Another feature of this payment system was that a physician received ‘quality’ bonus payments if the nurse practitioner provided good care to her patients. Nurse practitioners were not paid, and indeed did not qualify for,

quality bonuses for the care they provided to the physician’s rostered patients.

Comparison of nurse practitioner and physician remuneration and employment status

As described above, there were striking differences in the mechanisms of payment for nurse practitioners and physicians. These are summarized in Table 5.4.

Table 5.4 Mechanism of Remuneration by Practice Type and Type of Practitioner

Organization Model Number of cases (x)	Number of Nurse Practitioners		Number of Physicians			
	Salary	Contractor	Blended	Stipend	Sessional	Salary
Family Health Team (4)	10	2	43	1	0	0
Underserved Area Program (3)	3	1	1	2	0	0
Nurse Practitioner Led Clinic (1)	4	0	0	1	0	0
Aboriginal Health Access Centre (1)	4	0	0	1	1	0

Employment status and remuneration mechanisms had practice implications. See Table 5.5. Employees did not pay overhead expenses, and their payments did not depend on the number of people they saw or the size of their practice list. None of the participant nurse practitioners paid overhead expenses. Instead the Ministry of Health provided a stipend to the practice organization to cover nurse practitioners’ overhead. This

was separate from a nurse practitioner’s salary line in the budget. The few independent contractor nurse practitioners did not pay overhead expenses either. This meant that a nurse practitioner’s income was independent of the number of patients she saw and how much time she spent with each one. In most cases it was not the same for physicians.

Table 5.5 Practitioner Remuneration Variables

Practitioner	Employment status	Remuneration mechanism	Remuneration dependent on patient Volume	Overhead paid out of income
Nurse Practitioner	Employee	Salary	no	no
Nurse Practitioner	Self Employed	Contract	no	no
Physician	Self Employed	Capitation	yes	yes
Physician	Self Employed	Fee for Service	yes	yes
Physician	Self Employed	Collaboration Stipend	no	no
Physician	Self Employed	Sessional	no	no

Physicians were self-employed, independent contractors. With few exceptions, such as those who received stipends or sessional fees, they had to pay overhead costs for their practices. Practice expenses were variable from month to month and their income depended upon the number of people they saw or the number of people they had on their rosters. From a financial perspective this meant it was advantageous to roster and see more people with less complexity. It provides a perspective

on why physicians with more training than nurse practitioners might 'cherry pick' healthy patients to add to their rosters and leave the complex patients for nurse practitioners to spend more time with.

Structural factors such as payment processes and employment status were artefacts of importance in the health system. The system was effectively a monopsony, with the government as the single buyer and payee for services. Other mechanisms of buying primary care services did not effectively exist outside the government system. Therefore the providers had limited options for work. The system only allowed nurse practitioners to be salaried, therefore there was no other practical way for a nurse practitioner to work within the system. As discussed earlier, rules about payment for specialist consults were similar in that payment was restricted to consultations requested by physicians. This required nurse practitioners to have a collaborating physician 'authorize' a consultation with a specialist physician.

'Rules' constructed by bureaucrats, created the infrastructure and processes that existed within the health system. These rules had profound effects on nurse practitioner practice and their relationship with a collaborating physician. Given the rules, the chain of consequences they initiated was logical. However the end result didn't make sense when nurse practitioners tried to practice in a local setting. On the surface these rules appeared to be relatively simple to change. In practice they were not.

Rostering

Rostering meant a patient was registered with a physician or group of physicians. This was considered an important component of the government's Primary Care Reform agenda and was used as an incentive to move physicians from fee-for service to capitation models of payment. It was also seen as a mechanism for the government to collect and track

population data that could not be obtained while employing the previous fee-for-service model of payment (Hutchison, 2004).

Capitation payments were based on the number of people rostered to a particular physician or group of physicians. These models were made attractive for physicians; enough so that between 2003 and 2011 the number of Ontario primary care physicians remunerated through a capitation model grew from 4% to just under 75% (Kralj and Kantarevic, 2012). While the government was successful in getting primary care physicians to join capitation schemes, it was not clear whether it had similar success in achieving other goals of its primary care reform. To date there has not been a publicly reported comprehensive evaluation of the primary care reform initiatives.

Rostering and therefore capitation payments to physicians occurred in 5 of the 9 case practices. Where rostering occurred, in effect, both the physician and nurse practitioner were paid for providing care to a patient, yet the care was provided by only one or the other practitioner. In case practices where nurse practitioners provided the first contact primary care, but rostering patients did not occur, the physician was paid a small stipend to collaborate with the nurse practitioners. The practice of rostering patients created a series of consequences that affected the nurse practitioner-physician relationship. Issues of murky lines of responsibility for the patient, liability, employment relationships, oversight, mechanism of payment, and workload expectations were at least partly the result of rostering.

Participants did not see rostering or capitation, per se, as problems. The problems identified had more to do with the rules about who was paid, how they were paid, and how responsibility for patient care was blurred by rostering. This was a source of resentment:

There's a bit of a...burn for rostering his patients and he's getting X amount of dollars for these rostered patients. We all work hard and yes...I'm not a physician, I'm not. But I probably collectively have had as many years in school as a physician has, learning different things and I do my job well...he gets a large amount of money a year for being my consulting physician yet he's rarely around to consult. So you know that's another bit of a burn... (nurse practitioner, identification code withheld).

'Ownership' of patients

Rostering also changed the way nurse practitioners saw their relationship with their patients. Roberta expressed it this way:

[A]ll the patients are rostered to the physician. Prior to becoming a Family Health Group I still said I had my own patients. I would still say my patients say they still have me as their primary care practitioner but in legality... I guess this is the way the health care system is going now. These patients are really the patients of the physician and the Family Health Group (Roberta, nurse practitioner, Ash practice).

This nurse practitioner understood that even though she provided most of the care to 'her' patients, the patients 'belonged' to the physician. Rostering patients to an individual practitioner implied 'ownership' of the patients, an emotive term when used to refer to people. However it is being used here in the sense of belonging or being attached to and responsible for. The normative practice for generalist primary care practitioners, either physicians or nurse practitioners, was to refer to patients they saw on an ongoing basis as 'my patients'. Conversely patients identify and refer to the practitioner who they saw regularly as 'their' doctor / nurse practitioner.

One physician considered the patients rostered in her name as ‘hers’ and expressed her discomfort in having a nurse practitioner look after them. “I [am] very uncomfortable not seeing my patients for months upon months and having them see someone else and who knows what’s happening with them” (Norma, family physician, Beech practice). Interestingly this sentiment was not always shared. She reported that other physicians in the same Family Health Team saw patients looked after by a nurse practitioner as the nurse practitioner’s patients.

The issue of belonging was also a cause for confusion among the patients of nurse practitioners and physicians. One day while observing a consultation with a nurse practitioner she left me with her patient in the consultation room for a few minutes while she went out to get some equipment. I asked the person how they liked receiving care from a nurse practitioner? They told me how much they liked Roberta, but they guessed Gary, who they had never met, was their real doctor because his name was on a bottle of prescription medications they were given. The ability to prescribe this medication was beyond Roberta’s scope of practice.

Who is responsible and who is liable?

The sense of ‘ownership’, and therefore responsibility, for patients was a murky issue. Rostering created a complicated web of confusing fiduciary duty and liability. This had important consequences for the nurse practitioner-physician relationship.

Rostering and receiving payment for another practitioner’s work made some collaborating physicians feel they needed to supervise or oversee the work of a nurse practitioner doing the work in their name. This appeared to result from the question of who was responsible and who held medical legal liability for mishaps. Norma, one of the family physicians, felt her role in the relationship was to supervise the nurse

practitioner who saw her (Norma's) patients. She likened the level of supervision she provided to what she would provide to a resident (trainee physician).

The sense of ownership carried implications that a contract existed between a patient and the practitioner. It reinforced physicians' sense of responsibility for the outcome of the patient's treatment. "If the nurse practitioners make an error in judgement, am I going to get called up to deal with that" (Gary, family physician, Ash Practice).

Standards for delegation of medical acts

The standards of practice for delegation of any controlled medical act in Ontario must follow the "applicable regulations under the health profession Act governing the member's profession" (Government of Ontario, 1991c). For nurse practitioners this means that they must "initiate a consultation when they reach the limit of their individual competency level or legal scope of practice..." (College of Nurses of Ontario, 2009b).

The College of Physicians and Surgeons of Ontario's policy regarding delegation of Controlled Acts by physicians states that delegation can take place either by direct order or by medical directive (College of Physicians and Surgeons of Ontario, 2010). Direct orders "always take place *after a physician-patient relationship has been established*" [emphasis added] (College of Physicians and Surgeons of Ontario, 2010). Medical directives could be used but must be written and set out the criteria required to proceed with the directive. As part of the policy, the College of Physicians and Surgeons of Ontario had 8 conditions to consider when delegating controlled acts. It is important to examine the conditions for delegation in some detail because this was the regulative and normative context that physicians brought into their delegation relationship with nurse practitioners. The conditions for delegation includes the following sections:

1. The overriding principle of delegation is that it must **usually** occur in the context of a physician-patient relationship.
2. Delegate only those acts that form part of your regular practice.
3. Identify the individual performing the act and be aware of his or her skills.
4. Establish a process for delegation, or ensure that there is one in place, that includes education, ensuring the maintenance of competence in the performance of the delegated act, and providing the appropriate supports.
5. Ensure delegation occurs with the informed consent of the patient where feasible.
6. Ensure proper supervision of the delegation.
7. Consider any liability issues that may arise from delegation.
8. Consider any billing issues that may arise from delegation.

In all instances where a controlled act is delegated, the act remains the responsibility of the physician who authorized it (College of Physicians and Surgeons of Ontario, 2010).

This policy was written and approved by the College of Physicians and Surgeons of Ontario in 1999, and subsequently reviewed and updated in 2003, 2004, 2007, and 2010 (College of Physicians and Surgeons of Ontario, 2010). Despite that since the introduction of the Regulated Health Professions Act in 1991, nurse practitioners have been delivering primary care services, some of which required delegation, the College of Physicians and Surgeons of Ontario did not change its delegation policy to address this reality.

The policy clearly indicated there was supposed to be a relationship between a physician and a patient in situations where physicians delegated controlled acts. A nurse practitioner acted as a surrogate or an extension of the physician in situations where controlled acts were delegated.

These rules convey normative and cultural messages. The physician was in charge. They were responsible for both patient care and the outcome of treatment, as well as for supervising the care provided by a nurse practitioner, at least for controlled acts. Indeed the subtext might be interpreted as saying that only physicians have the knowledge, skills, and abilities to practice in this area, and therefore must control the work of others who work under them. This policy did not describe the conditions needed to develop a relationship where nurse practitioners and physicians were equal, co-dependent, and mutually collaborative.

Physicians were held responsible and medico-legally liable for the outcome of delegated acts. Therefore physicians were required to ensure supervision of the individual they delegated to and had to be aware of their competence. The delegation of acts could only be done between specific individuals.

Liability

In Canadian malpractice jurisprudence, there are three types of liability (Canadian Medical Protective Association and Canadian Nurses Protective Society, 2005). Direct liability means the practitioner is accountable for his or her professional practice. Vicarious liability means the employer is responsible for negligence of its employees in the performance of their employment duties. Finally 'joint and several' liability is applicable if the court finds more than one defendant negligent.

In rostered practices such as Family Health Teams, a nurse practitioner is responsible for her own practice. However since nurse practitioners are employees and not independent businesses, the employer is potentially vicariously liable for any claims made against her. The collaborating physician is not the nurse practitioner's employer. However a rostering physician has a duty of care because they receive payment for treatment

of the patient. This potentially gives them joint liability, along with the nurse practitioner, for any lawsuits concerning the nurse practitioner's care.

Medical legal liability was straightforward in the case practices that did not roster patients as a method of physician payment. Nurse practitioners were directly responsible for what they did within their scope of practice. Physicians were responsible only for the acts they delegated to nurse practitioners, such as ordering diagnostic tests not on the approved lists or for medications whose prescriptions they delegated. They were not responsible for a nurse practitioner's practice. This was expressed clearly by Steve, a family physician, who provided collaborative care to the Nurse Practitioner Led Clinic:

Based on the legal assumption that this is another health care provider and if they practice to the standard of their discipline, then the information that they give to you is really theirs and you'll only be judged on what YOU used [the] information to give guidance on. You're not being judged on the others person's care, the other person's assessment (Steve, family physician, Hawthorne practice).

In practices that did not roster patients, the lines of responsibility were clearer. Physicians in those cases were paid to be collaborators or at least authorizing agents to extend the nurse practitioners' scope of practice.

An Outlier - a rostered practice without these issues

Elm practice rostered patients as part of its Family Health Team requirements. However it did not employ nurse practitioners to provide comprehensive primary care to identified lists of patients. The issues of ownership, responsibility, and liability were much clearer in this case practice because the nurse practitioners were not given a chance to

practice “full scope”. Some nurse practitioners were happy with this model:

When I started what I wanted was my own patients and really pushed for that at the beginning. At the beginning they were quite clear – “No, we don’t want you to”. I think that was sort of between the Board of Directors and probably the physician group that was established. Although at the time I thought oh well, we’ll work with it, it’s okay this way (Theresa, nurse practitioner, Elm practice).

Nurse practitioners in this practice were assigned to a specific physician for a certain period of time per week, during which they served as an extension of the physician. They did tasks a physician would normally do but did not provide comprehensive care for a list of patients. In an interview with me, Theresa described a typical workweek. One day she did prenatal exams for a physician who did not do obstetrical care. Another day in another physician’s practice she did not do any prenatal exams because that physician performed obstetrical deliveries. She reported she did the majority of the Pap smears and followed patients with chronic conditions such as diabetes. Some days she did ‘well person’ exams. How a nurse practitioner spent their time in this Family Health Team was subject to negotiation between the nurse and each physician (Theresa, nurse practitioner, Elm practice).

Elm practice employed the nurse practitioners in a manner that ‘extended’ the physicians in their practice. The nurse practitioners did not have a list of patients they called their own, although they did follow some people for periods of time. On the advice of the physicians, the governance board decided to employ the nurse practitioners in this manner. There had been a high nurse practitioner turnover rate when the Family Health Team was first established. Theresa reported she had been told that the physicians did not want to have an extra 400 patients on

'their' roster and be expected to look after them if a nurse practitioner left and could not be replaced.

Nurse practitioners who worked with physicians in Elm practice had clear responsibilities. They extended the physician's care by providing services that the physician would have provided had a nurse practitioner not been available to do them. Though nurse practitioners were employed by the Family Health Team, they worked in the physicians' practices. Thus the issues of patient ownership, responsibility, and liability were clearer than situations where nurse practitioners had their own list of patients.

Governance of practice organizations

The employment relationship of nurse practitioners and physicians was further complicated by the existence of governance boards that oversaw the operation of the service organizations. All of the case practices had a governance board with the exceptions of Fir and Gingko practices. These were solo nurse practitioner practices administered by the Victorian Order of Nurses. See Table 5.1, page 157.

Family Health Teams had one of three types of governance board. The first type was composed of only providers, i.e. physicians. The second type of board was composed of lay community members or stakeholders. The third type was a mixture of provider and lay community / stakeholders. Two of the case Family Health Teams, Beech and Dogwood practices, had physician-only membership on the governance board. Cedar practice had a community board with 1 nurse practitioner member. Elm practice's board was made up of 5 providers (4 doctors and one nurse practitioner) and 9 lay community members.

The most common type of governance structure for Family Health Teams was the physician only board. This structure provided only the physician perspective and reinforced the unequal relationship between nurse

practitioners and physicians. Nurse Practitioner-Led Clinics had a majority of nurse practitioners on their boards, while Community Health Centres and Aboriginal Health Access Centres had community led boards with some provider representation. The governance boards decided how the nurse practitioners were employed by the organization.

There was a complicated relationship between the nurse practitioners and physicians in the 2 Family Health Teams where the board was composed of only physicians. The physicians worked 'in' the Family Health Team but, as noted above, they were not paid through the team and, unlike nurse practitioners, were not employees of the team. The physicians determined the organization's policies, and had a vested interest in the way the organization functioned and the way it was structured. The executive director reported to the board and managed all staff except the physicians. The nurse practitioners in both these Teams had no representation on the governance board. While not being directly accountable to the organization for their practices, the physicians nonetheless controlled policy setting, and hired and fired the managers. This meant they were in control of the organization and its employees, including nurse practitioners.

Conflict between nurse practitioners and physicians

In 8 of the 9 case practices there was no reported overt conflict between the nurse practitioners and collaborating physicians. In 1 practice however, conflict appeared to result from lack of communication between the parties, who had been unable to reach an agreement about what the role of the various practitioners or about what work processes the practice would have. The problem was exacerbated by the fact that the physicians did not formally meet with the nurse practitioner. The physicians in this practice did not understand the legislation governing nurse practitioners. The nurse practitioner determined who she would see and resisted being managed by the physicians. The physicians felt the nurse practitioner took

a long time to see each patient, they did not trust her clinical judgement, and they felt uncertain about what to do with abnormal diagnostic tests ordered for 'their' patients in their name. The physician who had originally been involved in hiring the nurse practitioner had left the practice, and the remaining physicians had not been able to build, from their perspective, a satisfactory relationship with the nurse practitioner.

With that exception there was little overt conflict within the case practices. However there was sometimes conflict within the community where they were located. In the case of the Nurse Practitioner-Led Clinic, the nurse practitioners were unable to find a local physician who would collaborate with the clinic. When interviewed by the local newspaper, a local physician commented:

'That's an interesting model but not one that serves the patient best, I think.' Kerr said the clinic would have a doctor who is accessible by phone or through other means but there should be a physician operating under the same roof to assist with the patients. He said if a patient truly needs special attention from a physician, that treatment is not best delivered via remote means of a fax, phone or e-mail. 'I think that's why a Nurse Practitioner-Led Clinic could be a disservice to patients,' he said (McVicar, 2008).

The physician also reported he was trying to hire a nurse practitioner for his clinic, even though he was not prepared to support a clinic led by nurse practitioners and cast dispersion on the method of collaboration they had adopted in order to open at all.

The Aboriginal Health Access Centre had difficulty retaining physicians. This model of care was not common and physicians had difficulty adapting to it. Nurse practitioners were frustrated by their dependence on physicians to be able to practice. One of the nurse practitioners expressed her resentment about not being able to open a practice of her own and get

paid for it. She felt nurse practitioners were treated like “serfs” or “minions”. She resented having to constantly train new sessional physicians who attempted to impose their ideas upon the practice (Donna, nurse practitioner, Ironwood practice).

5.2.4 Indicators of status

Use of names and titles

I observed nurse practitioners were invariably referred to by their first names by patients, physicians, office staff, and the nurse practitioners themselves. When speaking about a nurse practitioner to a patient, physicians were observed to refer to the nurse practitioner by their first name. I never observed a physician use a nurse practitioner’s surname. I also noted that when nurse practitioners spoke to a patient about a physician they used the title Dr. and the physician’s surname.

When interviewed, nurse practitioners usually referred to their collaborating physician as “Dr.” and surname, whatever their gender. Only during informal conversations were nurse practitioners observed to talk directly to or about a physician using the physician’s first name. This happened ‘back stage’, in offices or lunchrooms but it was rarely observed to occur in situations where someone who was not part of the practice team might overhear the conversation.

I believe this practice reflected the hierarchy of status that existed within the health system. In my own experience nurses frequently said they had difficulty calling a doctor by their first name, and would never do so in front of a patient. They felt it was not right. In North America there is generally no title, such as ‘sister’, used to refer to nurses. Nurses and nurse practitioners were never observed to be referred to as ‘Nurse Smith’ or ‘Nurse Practitioner Jones’.

Interestingly a few patients were observed to call a nurse practitioner “Doctor” or refer to their nurse practitioner as “their doctor”. I believe this reflected the provision of certain primary care services by nurse practitioners was a relatively new experience for these patients. These services were previously provided exclusively by physicians and were still associated with physicians. As there was no normative title for a nurse practitioner, the default title of a person providing these services was ‘doctor’. A person who provided these services was a ‘doctor’ in the patient’s mind. This insight did not occur to me at the time the data were collected and arose through reflection and analysis of it. Further reflection led to speculation that the traditional doctor-patient relationship involves symbolic and clinical authority being invested in the doctor (Schei, 2006). The patient wanted to use a title for the nurse practitioner and ‘doctor’ was the closest fit.

Signage and advertising

It was common to have signs on buildings or doors of practice locations. When a practice included the names of individual practitioners on external signage, nurse practitioner names were either not included or invariably located below the names of the physicians on a sign. One explanation of this is the sign was used to display the hierarchy of status. An alternative explanation is nurse practitioners, in most of the practices, had been in the practice less time than the physicians. However when individual names were displayed, physicians and nurse practitioners were grouped separately. When new physicians joined a practice, they were listed on the top of the sign with the other physicians.

It was also noted to be common practice for physicians, unlike nurse practitioners, to list their names in public telephone directories. There were several potential explanations for this. Unless their rosters were ‘full’, physicians, as independent contractors, competed with each other to

some extent for patients. Whereas as employees, nurse practitioners were not in competition with physicians or with other nurse practitioners for patients, and therefore did not need to advertise their services. Nurse practitioners saw themselves as part of a team or a clinic and not as individual businesses.

In the rural practices local knowledge was sufficient that everyone 'knew' how to find or contact the practitioner or clinic. It was unnecessary to make signage or put individual names in telephone directories.

Relationship talk

Several nurse practitioners who I interviewed referred to their "physician partner." This term was used aspirationally. Nurses and nurse practitioners aspired to be "equal partners in the health system" (Mitchell et al., 1993), but I did not observe a physician refer to a nurse practitioner as their "nurse practitioner partner". Most nurse practitioner-physician relationships developed a certain level of respect for each other's abilities over time. However physicians in the case practices did not consider the nurse practitioners as equals or partners. This was expressed by one physician:

I think some people try to equate them [nurse practitioners] with family doctors, but I don't think they are; they don't have the same kind of training, so I don't think they could ever be considered on an equal footing (Norma, family physician, Beech practice).

Nurse practitioners sometimes used the term 'collaboration' to refer to a desired state, but physicians were rarely observed using the term in the sense of an equal relationship advocated by Way.

Collaborative relationships are based on provider equality. The relationships are not hierarchical, nor are they dependent upon the

supervision of one professional group by another. Likewise, collaborative practice is neither a “physician replacement” nor “physician extender” model. The model recognizes the strengths and integrity of each of the professional partners’ approach to care delivery (Way et al., 2000).

On the other hand they rarely behaved as if they believed the second meaning of collaboration, as mentioned in the introduction on p. 11, “cooperation with the enemy” (Oxford Dictionary). The word’s meaning as used to describe the nurse practitioner-physician relationship lay somewhere in the middle.

5.3 Summary

This chapter contained a description of the case practices and reported the analysis of data obtained from my interviews and observations. Rather than repeat the findings here the next chapter will synthesize this information and discuss the findings in terms of sociological theory.

6.0 Synthesis and Discussion

Return to the research questions

The research questions were formulated to explore the occupation of nurse practitioner and its place in the Ontario health system. I practiced as a family physician for a decade in settings similar to many of the case practice settings. I also practiced in northern Canada, where I came in contact with nurses and a few nurse practitioners who practiced together in isolated communities. Despite having been in medical school in the 1970s, practicing as a family physician in the 1980s, and even acting as a preceptor for a few nurse practitioner students in an Emergency Department, I did not understand what nurse practitioners did, nor did I have a sense of what their role in the health system was. I was involved in introducing a nurse practitioner into the Emergency Department I worked in – an initiative that was not sustainable. This research allowed me the opportunity to reflect on these experiences and use an academic approach to explore some of the questions I had been thinking about.

In this chapter I will discuss and synthesize the themes that emerged from my research. Then using various theoretical frameworks I will situate my findings within the larger sociological study of the division of expert work.

6.1 Question 1 - History and development of nurse practitioners in Ontario

My first substantive task in this thesis was to address the question “**What is the history and development of the occupation of nurse practitioners in Ontario?**” This involved constructing a historical narrative from disparate sources. These included reports from federal government commissions, Ontario government commissioned studies and discussion papers, professional association and College policy

statements, position papers, histories compiled by professional organizations, academic papers, and theses.

The main challenge in this aspect of the work was piecing the information together into a coherent narrative. Despite searching the grey literature, I was unable to find a comprehensive account that wove together the multiple factors I found to be important in the differentiation of nurse practitioners from the existing professions of nursing and medicine.

During the course of the investigation and upon reflecting on the findings, I realized two important things. The first was that nurse practitioners did not arise in one place, at one moment in time or from one set of circumstances. Instead nurses began to expand their scope of practice in response to local needs. The local settings and conditions of practice where this happened were similar, but not identical, and the work performed in those settings was the work that nurse practitioners later claimed as their distinct practice. Nurse practitioners emerged simultaneously from many groups practicing in many places. A combination of multiple factors converging and ‘shocks’ in the larger health system allowed nurses doing similar work to coalesce into a new group.

The second thing I realized was that nurse practitioners, although they remained under the umbrella of nursing, became a distinct occupation that was different from both nursing and medicine. The work nurse practitioners performed when providing generalized primary care services was fundamentally different than that of traditional nursing. In this study I observed nurse practitioners to make diagnoses, investigate, and treat patients in a similar manner as family physicians. They used disease diagnoses in their work rather than various systems of “nursing diagnosis” used by registered nurses in Ontario and based on “alterations in function for which nurses provide solutions through nursing interventions” (Muller-Staub et al., 2007).

Despite being observed to provide care in a broadly similar manner as family physicians, nurse practitioners claimed their care was different. This claim was supported by the literature review in Chapter 2. Briefly it established that nurse practitioners spent more time than physicians listening and communicating with patients during consultations (Kinnersley et al., 1999) (Shum et al., 2000). They spent more time in “social/emotional/patient-centred” communication (Seale et al., 2005), and were more concerned with psycho-social issues than physicians” (Campbell et al., 1990). This supports the contention made by nurse practitioners that they used a different relational model than physicians, one that emphasizes different methods of working (McAllister, 2008).

This raised other issues. Providing primary care through investigating complaints, making diagnoses, and prescribing treatment is a social process. Social processes have instrumental and honorific purposes (Sandel, 2009). In this case the instrumental purpose is to provide primary care. Honorific purpose is one that celebrates values and excellence, and results in bestowing of rewards. If the instrumental purpose can be carried out by two different occupations, then why would the honorific purpose (the values it celebrates and the rewards it presents to those providing it) be different for the two occupations performing it? If two occupations perform the same work, what is it that makes each occupation distinct? And if they are not distinct, then how can one occupation claim and receive different rewards? This study did not specifically collect data to investigate these questions, but it does point in their direction.

My conclusion that nurse practitioners became a distinct occupation is supported by the Canadian government’s recognition, in its National Occupational Classification, of nurse practitioners as a separate occupation, distinct from both nursing and medicine (Statistics Canada,

2011b). A classification of occupations is a tool for defining a group according to tasks or duties undertaken in a job (International Labour Organization, 2004). The classification named nurse practitioners, and recognized their training, activities, and tasks as sufficiently different from other nursing occupations and those of physicians so as to be classified separately under “3124 - Allied primary health practitioners” (Statistics Canada, 2011b).

The assertion that nurse practitioners form a distinct occupation, different from nursing, might either be discarded as a question of semantics, or contested by those who wish to honour nurse practitioners, as the cutting edge of nursing (Barton et al., 2012). In broad terms nurse practitioners are still nurses in the same way that neurosurgeons are still physicians. However they represent distinctly different occupations. The work of a primary care nurse practitioner is more similar to that of a family physician than the latter’s work to that of a neurosurgeon. The recognition that nurse practitioners form a distinct occupation is helpful to gain the most from a sociological analysis of the nurse practitioner-physician relationship.

In order to apply sociological models of profession, the issue of whether or not nurse practitioners constitute a profession needs to be addressed. As illustrated by repeated papers and opinion pieces with the same title “Is Nursing a Profession?” (Messer, 1914) (Covert, 1917) (Segal, 1985) (Brown et al., 1987), it is not as straightforward an issue as it might at first seem. Nursing has struggled to achieve recognition as a profession for decades. Despite multiple attempts to define the term profession, a consensus definition of ‘profession’ has never been achieved (Cogan, 1955) (Freidson, 1994). Attempts to define the term ‘profession’ have resulted, over time, in increasingly broader definitions, and many occupations are now regarded as such. The term profession has come to mean any “paid occupation, especially one that requires prolonged training and a formal qualification” (Oxford Dictionary). This definition can be applied to many occupations.

Perhaps an exact definition of profession does not matter. A brief examination of the history of theoretical perspectives of profession will show that nurse practitioners as a collective have produced many of the artefacts and share most of the characteristics of occupations, such as medicine or law, that are unequivocally recognized as professions.

Nurse practitioners emerged from nursing as a distinct occupation in the 1960s. The nurses who became nurse practitioners accomplished this in three ways. They substantially changed the type of work they did as nurses, by expanding their scope of practice to include investigation, diagnosis, and treatment of diseases. They adopted a name for the new occupation that distinguished them from other nurses and physicians. Finally they developed a system of training, certification, and ultimately licensure that became recognized as credentials to practice as a nurse practitioner. These are common artefacts created by occupations that become recognized as professions (Larson, 1977) (Abbott, 1988) (Freidson, 1994).

This history of the emergence of nurse practitioners, and their recognition as a distinct profession, allowed me to draw on academic theories about how professional groups emerge and struggle for legitimacy. These academic theories provided insights that helped me develop an understanding of this process. I considered three theoretical approaches: Closure Theory, Abbott's Division of Expert Labour, and Profession Theories. Below I summarise how they allowed me to gain additional insights from the data.

Closure Theory, Abbott's Division of Expert Labour, and Profession Theories

Certain groups of nurses who were practicing differently from general nurses adopted the name 'nurse practitioner'. From a theoretical perspective, this can be seen as a demarcation and closure strategy. Closure Theory suggests this strategy is used to indicate membership in a group and to exclude others from membership; it is used by a dominant group to name its own members and name outsiders as something different.

Closure allowed the emergent group to define themselves through specific training, certification, registration, and scope of practice that members shared in order to belong to the group. Once the group was recognized, as predicted by Larson, the group was able to reap the rewards of status associated with that work, and it sought a legal monopoly (Larson, 1977). This did not occur until 1997 when the government passed amendments to the Regulated Health Professions Act. This further strengthened and protected the group through state intervention to legally sanction and enforce title protection, registration, and explicit activities of practice. These are benefits of becoming recognized as a profession (Freidson, 1970) (Larson, 1977) (Abbott, 1988). Following the general process described in Closure Theory, nurse practitioners in Ontario succeeded in achieving the objectives described by professions theorists.

Additionally education and training became well established in the province's universities, and nurses control the curriculum content and administrate training programs (School of Nursing Graduate Program, 2011). Nurse practitioners in Ontario have achieved what Larson termed their "professional project" (Larson, 1977).

Closure Theory also predicts that if a group achieves these objectives and is allowed to perform work previously claimed as the exclusive jurisdiction of another group, it in turn attempts to close off access to that work. It attempts to prevent other groups from performing work it now claims as its territory. This is called double closure (Witz, 1992).

As professional behaviour theory would predict, nurse practitioners continued to seek to expand the scope of practice through amendments to the rules and regulations governing their practice. Nurse practitioners achieved the latest expansion of their scope of practice in 2009 with the passage of Bill 179 (Government of Ontario, 2009). These changes increased their ability to order diagnostic testing and prescribe medications, thereby reducing their dependence on physicians to delegate these acts.

The major catalysts for the emergence of nurse practitioners identified from the literature were a shortage of physicians to provide primary care, changing conceptions of health, and nursing's professional aspirations. None of these in and of themselves would have been enough to explain the development of nurse practitioners in Ontario. The shock that was required to induce change and spark innovation occurred when access to medical services became a public policy problem for the government after it began providing universal insurance for physician and hospital services. The government became the payee and assumed policy responsibility for control of the health system, thus it became accountable for the supply of services.

My understanding of the narrative of nurse practitioner development was enriched by considering the prevailing socio-cultural context, particularly the normative beliefs and assumptions present at the time. In the 1960s and 1970s, and again after 1990, people in Ontario had difficulty accessing primary care services. Health care was equated to medical

care, meaning the work done by physicians. Munding described normative thinking present among physicians:

Physicians tend to think of health care, or even medical care, as a domain that physicians fill completely, and although others may substitute in part, or take over when there are not enough physicians, only physicians have the fully loaded tool box. This leads to descriptors such as “non-physician providers,” or “mid-level providers,” suggesting that the gold standard is the medical doctor, and others are to be seen as subsets of the whole within that framework (Munding, 2002).

A 1971 study surveyed patients about their service provider preferences. The study divided activities into the application of both technical and knowledge skills.

Patients were much more willing to accept nurses in activities which were technical rather than in those where personal judgment and decision making were required...The findings of this study suggest that patients will be selective in those services which they will accept from the practice nurse (Lees and Anderson, 1971).

Activities that today are considered routine nursing practice were the ones the survey considered “technical”; things such as syringing of ears, taking blood pressures, and performing venipuncture. “Judgement” activities included actions such as monitoring people with chronic conditions such as diabetes or arthritis. To test for “patient discrimination of acceptable professional function” the authors asked, “[w]hom would you prefer, a nurse, a physician or either, to do the following things related to your health care: - decide which medicines or drugs you should have?” (Lees and Anderson, 1971).

Clearly the authors, who were physicians, did not think making a decision about medication was within a nurse's professional scope. The study's flawed sampling methods and leading questions made it methodologically faulty. It is a 'period piece', meaning the design of the study, and the assumptions on which it was based, reflected the particular historical context. It is usefulness today in illustrating how normative beliefs and behaviour set patient expectations and defined the range of 'acceptable' activities in the early 1970s.

Given the normative belief that only physicians were able to supply primary care services, it is understandable that the problem was framed as a shortage of physicians. It is also not surprising that the search for possible 'solutions' was restricted to policies that increased the number of physicians. However if the normative beliefs had included other occupations being able to provide primary care services, the problem might have been seen as a shortage, not of physicians but of primary health care providers. Had the problem been framed this way, policy makers could have, and would have, envisioned other solutions.

In the 1970s nurse practitioners were introduced into the health system in a limited fashion. Rather than being seen as comprehensive primary care providers, in performing some routine medical tasks, they were seen as a way to extend physicians' practices. As will be discussed in the next section, the introduction of any innovation requires support. Indeed it is not sufficient to introduce an innovation by itself and expect it to be successful.

In this case sufficient changes were not made to the health system's infrastructure to employ and pay for nurse practitioners. Thus the initiative to establish them in the system failed. When primary care nurse practitioners were reintroduced in the 1990s lack of clarity regarding their role meant accompanying changes in the infrastructure again failed to support them. The next section will look at how decisions made during the

introduction of nurse practitioners affected the roles they filled, the enactment of their practice, and the relationships they developed with physicians.

6.2 Question 2 - Decisions made during implementation of nurse practitioners in the health system

How did decisions made during implementation of nurse practitioners affect their role development and relationship with physicians?

My next task in this thesis was to further develop an understanding of the introduction of nurse practitioners as a new category of primary care provider into a government-managed health system. This section discusses the decision to implement nurse practitioners from a public policy making perspective. It seeks both to tie actual events that occurred to existing theory, as well as to understand how the lack of a clear role of nurse practitioners during the implementation process led to faulty infrastructure supports provided for them. These in turn had consequences for nurse practitioners when they began to practice in local practice settings. They created a requirement for a specific type of relationship with family physicians, one that perpetuated the traditional power structure that existed between nurses and physicians.

The decision to implement nurse practitioners - Kingdon's Agendas, Alternatives, and Public Policy Theory

I used Kingdon's model of public policy making as a theoretical framework to apply to the case. The details of his theory are given in Section 2.2, page 60.

The lack of access to primary care was considered the problem. It was initially framed as a lack of physicians to supply the services required. In

the 1970s one of the solutions that was developed by “policy entrepreneurs” was to expand the role of nurses in primary care delivery. The political agenda was to meet the raised expectation of service availability that developed after the introduction of universal health care coverage. With its introduction there developed a perception that the government was responsible for planning and providing health services. In the 1970s the decision to introduce nurse practitioners into the health system came about from the combining of what Kingdon referred to as “streams”: a problem, a potential solution, and the political agenda.

In the 1990s the problem and politics were the same. However the policy proposal that was being developed in the late 1980s and early 1990s was the expanded role of advanced practice nurses to fill the staffing shortage of specialized hospital units created when trainee positions for specialized physicians were decreased. In 1993 when the Minister of Health asked for a discussion paper to focus on primary care, advanced practice nurses were set aside and primary care nurse practitioners were resurrected as a potential solution to the primary care access problem. The window of opportunity opened to expand nurses’ role in the health system and the Minister used this opportunity to do so. However another problem developed. This was how to get the physicians to cooperate with an expanded role for nurse practitioners.

The physician problem

The introduction of another category of primary care provider was a perceived threat to physicians’ role as the sole providers of first contact comprehensive primary care services. As discussed in section 4.7, page 147, physicians had been reluctant to cooperate with the introduction of universal medical insurance. The expansion of nurses’ scope of practice in the 1970s was not seen as enabling nurse practitioners to practice independently or to be a substitute for physicians. Instead nurse

practitioners provided simple technical procedures and uncomplicated routine care under the direct supervision of a physician.

This point was illustrated by the 1973 Joint Statement of the Canadian Medical and Nursing Associations regarding the expanded role of nurses. The statement did not suggest that nurses should work independently of physicians. Instead the 7 page joint statement uses expressions such as “nurse associated” or “in association with the physician, the nurse...” six times (Canadian Medical Association and Canadian Nurses Association, 1973). Physicians felt a certain anxiety about the introduction of nurse practitioners. So in co-authoring the statement, the Canadian Nurses’ Association assuaged this anxiety.

During the second introduction of nurse practitioners in the 1990s, the government was less concerned about the political problem of dealing with physicians. In the 1980s a doctor’s strike had led to bitterness and suspicion on the part of physicians (Geiger, 2009). While the problem of access was more acute in the 1990s than it had been in the 1970s it was no longer framed as a shortage of physicians, but instead as a need for primary care reform. Reintroducing nurse practitioners was one of many ‘solutions’ introduced in a short period of time and initially they made up a limited number of increased providers (Aggarwal, 2009).

A conundrum - the role of nurse practitioners

Both the federal government and the corresponding professional associations supported the introduction of nurse practitioners into the health system (Boudreau, 1972) (Canadian Medical Association and Canadian Nurses Association, 1973). These statements of support and high-level recommendations did not include logistics of how nurse practitioners were to be introduced. There was no consensus on nurses’ expanded role or scope of practice.

In the late 1960s and early 1970s, nurse practitioners were a fledgling occupation. They were found practicing primarily in rural and geographically remote areas in isolation from physicians. They also provided care to special populations in urban areas, such as the homeless or people with chronic mental illnesses, often one in the same population. Because these populations were isolated or had unique requirements, nurse practitioners required a wide scope of practice to be effective. Practice in these situations went far beyond the limited view outlined in the 1973 Canadian Medical Association's Joint Statement that nurses' scope of practice could be increased to allow them to become physician extenders.

If nurse practitioners were to provide comprehensive primary care services to populations physicians weren't providing services to, they required a very different scope of practice than if they were merely doing routine medical tasks in an office in association with a physician. One situation required the ability to practice independently and autonomously. The other required delegation and supervision by the physician a nurse practitioner was associated with. This conundrum remained unsolved.

A lack of clarity about nurse practitioners' role and scope of practice made it difficult to create and institute the necessary changes to infrastructure and process that would support nurse practitioners. In retrospect both this lack of clarity as well as the constraints imposed on the government by agreements made with physicians, were what made the implementation of nurse practitioners into the health system of the 1970s unsustainable and ultimately unsuccessful.

In order to inform my thinking about the processes of complex innovations and what factors affect their successful implementation or their failure, I turned to another theoretical model, Van de Ven et al.'s Innovation Journey.

Nurse practitioners as an innovation - a theoretical perspective from Van de Ven et al.'s Innovation Journey

The decision to introduce nurse practitioners into the health system was a policy decision that sought change in the existing system. An innovation is a new way of doing things. As discussed above nurse practitioners did not become embedded in the health system in the 1970s. It was not until twenty years later, after their reintroduction, that they became established. What insights into this process can be gained by analyzing this as a case of a complex non-linear innovation?

There are many theoretical models of innovation. Van de Ven et. al.'s Innovation Journey model was developed from a longitudinal program of research that used organizational innovations or product development in health care as case studies. Despite the differences between the introduction of nurse practitioners into a publicly funded health system and the cases used to develop the model, I noticed many of the conditions and features of the nurse practitioner case paralleled those in Van de Ven et al.'s model. In particular nurse practitioners were an example of a complex non-linear innovation, and their case became an opportunity to test the model in a publicly funded health system.

Van de Ven et al. describe the model as non-linear, dynamic, 'process theory' of innovation. The implementation of nurse practitioners in Ontario began and developed in unexpected ways, had a series of setbacks, failed to take hold, was restructured, and eventually succeeded by embedding the profession in the health system. Like the Innovation Journey model, it did not follow a predictable linear path from conception to completion.

The initial phase developed over a period of years as nurse practitioners emerged from the health system and became a separate occupation. A series of seemingly coincidental events converged. As previously

discussed this included the provincial government's introduction of universal health insurance and their taking control of the health system's organization; the changing social values of the 1960s, that included questioning existing norms; and finally nurses' aspirations to improve their status in the field.

According to the theory a shock needs to occur that acts as the impetus to propel the innovation forward. In the case of nurse practitioners, this occurred when access to primary care services became a politically urgent public policy problem. The parallel is found in Kingdon's model when a public policy problem rises high enough on the government's agenda that they must seek a solution for it. This was the shock described in Van de Ven et al.'s model, that led to the decision to implement the innovation.

The development phase of the innovation journey occurred along with other developments to solve the access problem. In the case of the nurse practitioners once it became a public policy decision, the government bureaucracy took control. Resource managers did not understand the requirements of local practice settings. They were either unwilling or unable to make the required infrastructure changes to allow the innovation to take hold. Instead of billing fee-for-service nurse practitioners were paid a salary. Physician payment mechanisms – at this time almost exclusively fee-for-service – precluded physicians from hiring nurse practitioners for their practices. Neither nurse practitioners nor physicians had a method for billing work that nurse practitioners performed in a physician's fee-for-service practice.

The government tested different payment mechanisms, all within small-scale projects such as Community Health Centres. These were not sufficiently successful to spread the innovation to the rest of the system. Set backs occurred and finally the 'need' for the innovation disappeared

when the supply of physicians increased and the access problem became less.

The details of the introduction and development of nurse practitioners in Ontario fit into the broad outline of Van de Ven et al.'s model of innovation. The development included the shocks and setbacks that are prominent features of the model.

The reintroduction of primary care nurse practitioners in the 1990s

As discussed in Section 4.5.2, page 122, and Section 4.5.3, page 126, during the 1980s and early 1990s, a number of developments occurred in the health system. A series of new problems developed that required government attention. Costs were escalating and new patterns of physician practice were resulting in the recurrent problem of accessing physician services. It had proven difficult to determine and maintain the combination and number of practitioners required to meet the needs of the population. Additionally ideas of health and health care were changing. The government bundled these issues together and framed them as a need to reform primary care.

Primary care reform became a collection of proposals for health system changes rather than a coherent plan, and there was a lack of both evidence and consensus about what the changes should be (Shortt, 2004). The absence of strong evidence “set the stage for a cacophony of competing claims reflecting the concentrated (often economic) interests of stakeholders” (Hutchison et al., 2001).

In terms of Kingdon's model, primary care nurse practitioners were repackaged to fit into the government's agenda for primary care reform. Having been developed as an innovative policy option, primary care nurse practitioners were waiting for the shock in Van de Ven et al.'s model to

occur. It occurred when the recurrent problem of accessing primary care services became a political issue again.

The health system's problems were not amenable to simple linear solutions. The vision of the role of primary care nurse practitioners was just as confused as the 1970s, and was repeatedly identified as a problem (Hanrahan et al., 2001) (IBM Business Consulting Services, 2004). Because of the redefined measures of success applied to the varying ideas of a nurse practitioner's role, nurse practitioners began working in many different practice settings. As Van de Ven et al.'s model of a complex, non-linear innovation predicted, each practice setting had a different context and needs.

The conundrum of the 1970s recurred. A wide scope of practice was necessary to meet the varied requirements of practice settings where nurse practitioners were hired to work. Instead their scope of practice was too restricted for them to be able to practice independently. Each practice setting had to develop its own solutions to work around these restrictions.

Reflections on public policy decision-making

The experience of introducing nurse practitioners into the health system illustrated problems associated with public policy decision-making and the implementation of complex change. In particular, public policy was hampered by decision makers not understanding the impact of their decisions. In order to introduce a new category of practitioner into a managed public health care system, a myriad of changes were required to allow the practitioner to practice smoothly. Given the murky, contested vision of the role of the new practitioner, it would have been impossible to anticipate all of the required changes.

Infrastructure changes and the nurse practitioner-physician relationship

The infrastructure changes made during the implementation of nurse practitioners and their consequences were discussed in Section 4.5.3, page 126 and Section 5.2.3, page 206. To reiterate briefly, there were 4 infrastructural sub-themes identified as major influences on the nurse practitioner's method of practice and their relationship with the physician. The regulatory environment, specifically the legislated scope of practice, required a relationship to exist. The other factors such as employment status, the remuneration mechanism, and the governance structure of individual practice settings did not directly affect the relationship. However they served as context and pointed to assumptions about nurse practitioners' place in the health system's hierarchy. Despite supporters' use of aspirational words such as "equality", "partners", and "collaboration" to describe the relationship, there was a gap between these aspirations and the reality.

Characteristics of the relationship between nurse practitioners and physicians

The nurse practitioner-physician relationship was found to have the 3 main characteristics. The first was simply the necessity for a nurse practitioner to have a relationship with a physician at all. This was necessary because of the restrictions inherent in the existing legislation and regulations that defined the scope of practice of nurse practitioners. The relationship provided a mechanism for a physician to delegate medical acts to a nurse practitioner and was not voluntary on the part of a nurse practitioner. It was essential to enable them to practice in the settings in which they were expected to practice.

The second characteristic of the relationship was its asymmetry and dependent nature. The decision to delegate or refuse a controlled act was

made by the physician. Nurse practitioners requested; physicians authorized. Nurse practitioners needed the consent of physicians to carry out parts of their practices, while physicians did not need the consent of another practitioner to carry out any part of their practices. This made the relationship asymmetrical in terms of power.

The third characteristic of the relationship was its individual and idiosyncratic nature. It was not a generic relationship between two members of different occupations. In a generic relationship the individuals could be substituted and the relationship would still exist. The nurse practitioner-physician relationship was different from most inter-professional relationships. Because it was between two individuals it had the potential to be less secure than a generic one. A nurse practitioner was dependent on the beliefs and whims of the particular physician she had a collaborating relationship with. This made a nurse practitioner beholden to the collaborating physician's understanding of the roles and responsibility of the relationship, which he/she could impose on the nurse practitioner. If one of the individuals in the relationship left, a new relationship had to be formed. Another physician or nurse practitioner might see the various roles and responsibility differently, thus affecting how the nurse practitioner practiced. This led to uncertainty, a lack of stability, and considerable variation in how nurse practitioners and physicians worked out their relationships in various practices.

6.3 Question 3 - Relationships and workarounds

How do nurse practitioners and family physicians work out their professional roles and relationships in practice settings to allow nurse practitioners to be able to provide comprehensive primary care services?

The third research question sought to understand how barriers to nurse practitioner practice, described above, were overcome in practice settings. In particular it sought to understand how the necessary relationship between a nurse practitioner and a physician described in the previous section was negotiated.

Trust

Several participants mentioned trust as an important component of the nurse practitioner-physician relationship. Trust is a broad concept and difficult to pin down. In the context of the nurse practitioner-physician relationship trust presupposes an element of risk of possible damage if trust is broken.

One can trust in many things, such as God, institutions, government, economic interactions, strangers, professions, and in interpersonal relationships (Freitag and Traunmuller, 2009). The specific form of trust that pertains to this research is interpersonal trust between two individuals. Within interpersonal trust, a distinction is drawn between particularized trust and generalized trust. This distinction is variously dichotomized as “knowledge based” and “generalized trust” [Yamagishi and Yamagishi 1994 cited in] (Freitag and Traunmuller, 2009) or ‘thick trust’ and ‘thin trust’ [Putnam, 2000 cited in] (Freitag and Traunmuller, 2009). Giddens described the trust that occurs in close interpersonal relationships as “micro level” trust (Giddens, 1991). Nurse practitioner-physician interpersonal relationships are knowledge based, thick, or micro level.

Trust existing within inter-personal relationships is built over time and through experience with each other (Miztral, 1996). The inter-personal relationship between specific nurse practitioners and physicians was not directly transferrable to their relationships with other people. When one of the individuals in a relationship left or was replaced, a new inter-personal

relationship needed to be established, the routines and workarounds renegotiated. The power to control the outcome of the negotiations rested largely with the physician. Whether workarounds were loose and permissive or controlled and rigid depended upon the level of interpersonal trust that a nurse practitioner and physician developed. In one case a physician reported in an interview that he broke off a collaborating relationship with a nurse practitioner in a satellite setting because he could not trust her.

In a study of trust in sub-contracting in the French construction industry Lorenz noted a number of characteristic features of interpersonal trust and “trusting behaviour” (Lorenz, 1988). These included partnership, loyalty, a ‘moral contract’, and the need for mutual trust. He indicated trusting behaviour occurred in situations where an individual did not have complete control over the outcome and where the situation involved an element of risk (Lorenz, 1988).

Trusting was a way to overcome uncertainty and solve contingent problems. However it put the trusting parties at risk. This associated risk was due to possible consequences for the individual who trusted the other to do the right thing. When a physician agreed to use a workaround, they assumed the nurse practitioner would use the workaround responsibly. If the trust was misplaced, the physician would potentially bear liability consequences. Conversely a nurse practitioner also risked consequences if the physician denied they had agreed to use the workaround. This was a particular risk when the workarounds were not specifically written down as policies. Despite reporting their existence, participants had a hard time producing written agreements upon request. Most of the workarounds observed in use were in the form of verbal or non-verbal ‘agreements’ or understandings evolved over time to cover contingencies as they arose in specific practice settings. The absence of written rules and agreements indicated there was a high level of trust in these relationships.

Workarounds

The workarounds observed and reported in interviews were described in section 5.2.1, page 173. The workarounds used by nurse practitioners and physicians in local practices have not been previously described in detail outside of this study. In and of themselves the exact details of the workarounds are curiosities. Their significance lies in the insight they provide into the nature of the relationships that produced them. Like these relationships, workarounds were necessary, idiosyncratic, and products of unequal power.

Nurse practitioners needed workarounds to practice within the legislation and regulations, as well as to circumvent the restrictions produced by these rules. The workarounds used in a particular practice were context-specific and variable.

In many of the case practices, nurse practitioners did not work directly with their collaborating physician. This meant workarounds were required to allow nurse practitioners to practice without the need for immediate contact or direct access to a physician. In cases where nurse practitioners and physicians did practice in temporal and spacial proximity, workarounds were required to prevent work pattern interruptions for routine authorizations of delegated acts. These were the reasons workarounds were developed.

Workarounds were used as pragmatic solutions to 'get on' with the work that was required to practice. These made sense in the context of a local practice setting. This gave them an idiosyncratic character. They were used primarily as "shortcuts" to get around "blocks in workflow" (Halbesleben et al., 2008). For example one workaround used in several case practices involved the use of 'smart' phones. Using this technology shaped both the method and the contents of a consultation

between a nurse practitioner and a physician. Instead of discussing the details of a particular patient, consultations were focused on a case. To protect against potential Internet based communication hacking, no personal identifiers were used. This meant the physician did not know which patient was being discussed. He provided advice about how to handle a situation rather than a patient. This idiosyncratic solution was developed by one physician and several nurse practitioners to fit the needs and contingencies of their relationships. This method of communicating and delegating was very different from those used in the other case practices.

Workarounds both reflected, and were products of, unequal power relationships. The need to use workarounds in the first place implied nurse practitioners did not have the knowledge, skills or abilities to be able to practice both autonomously, and independently of physician oversight. The act of delegation, with its associated legal liability, reinforced some physicians' belief that they were ultimately in charge and responsible for the outcome of the patients.

Power

The inequality in power between nurse practitioners and physicians was entrenched in the health system. The manner in which the prescription and diagnostic testing regulations for nurse practitioners was structured (Section 4.6, page 139) was different from the manner in which physicians were regulated. Nurse practitioners were employees and subject to being 'managed' while physicians were independent contractors (section 5.2.3, page 212). Except in the case of Nurse Practitioner-Led Clinics, nurse practitioners were seldom members of governance boards. In cases of physician-led governance boards, nurse practitioners were accountable as employees to the physicians, while the latter were accountable only to themselves. While physicians had a variety of remuneration mechanisms (section 5.2.3, page 212), nurse practitioners were salaried and did not

have the same flexibility in choosing their hours, patient populations or size of their practices (section 5.2.3, page 206). Finally because delegation was required to authorize portions of a nurse practitioner's practice, the final decision on whether an act was to be performed was up to the physician. A nurse practitioner had little recourse if she did not like the decision made by the physician.

Unequal relationships inevitably involve differences in power between the participants. The subject of power is a large area of sociological study and theorizing. I will concentrate on Lukes' definition of power as being "explicitly relational and asymmetrical: to have power is to have power over another or others" (Lukes, 2005). To analyze it, Lukes used a framework he called the "three dimensions of power" (Lukes, 2005). The first dimension focussed on power as observable behaviour, and occurs over an issue that is inevitably about a conflict of interest. The second dimension was a 'qualified' critique of the behavioural focus of the first dimension. On issues that involved observable conflicts of interest – expressed as policy preferences or 'sub-political grievances' – this dimension allowed for barriers to decision making. The third dimension of power included latent conflict that consisted of a "thoroughgoing critique of the behavioural focus". Power can occur in "the absence of actual, observable conflict which may have been averted" although conflict potentially exists because of a contradiction between the interests of those exercising power and the real interests of those they exclude (Lukes, 2005).

The cases of nurse practitioners working in local practice settings were examples of the expression of Lukes' third dimension of power. The relationship between a nurse practitioner and her collaborating physician was structurally unequal and dependent in nature. The constructed rules specifying the infrastructure and processes of the health system produced these characteristics. Physicians did not have to overtly exercise their power in an individual, practice-level relationship, because both sides

were reminded of the power differential as they enacted workarounds on a daily basis.

Nurse practitioner autonomy

Autonomy is directly related to power; it is a person's ability to make decisions, control their own actions, and be responsible for their consequences. With the exception of delegated acts nurse practitioners were technically autonomous in their own clinical practice, which was overseen by their self-governing professional College.

The limits of nurse practitioner autonomy should have been clearly understood, but they were not. There were multiple factors that impacted it. The requirement to have delegation of some acts undertaken in clinical encounters divided the responsibility for patient outcome with the physician. In addition nurse practitioners' status as salaried employees implied the presence of an overseeing employer. This was reflected in joint medical legal liability that included the nurse practitioner, the physician, and the employer. In situations where patients were rostered and where physicians received payment for the work of nurse practitioners, 'ownership' of responsibility for patient outcome was complicated. The requirement to deal with these confounders reduced the clinical autonomy of nurse practitioners.

In addition to clinical autonomy, nurse practitioners had to manage the issue of practice autonomy, meaning their ability to set their own working conditions and style of practice. Issues such as the type of practice, hours of work, patient volume, and auxiliary staff available to them were issues an autonomous practitioner was able to decide independently. As a salaried employee, in some cases these were negotiable, however the employer made the final decision on these matters. The self-employed physicians made these decisions for themselves and were therefore much more autonomous than nurse practitioners.

Practice autonomy was related to the financial impact upon a practitioner. Unlike salaried nurse practitioners, physicians' income was dependent upon the number of patients they saw and the amount of money they spent on overhead. This was not the case for a salaried employee.

In situations where physicians were paid per rostered patient and nurse practitioners paid from a separate revenue stream, the more work the nurse practitioners did, the more money the physician made. This created an interest on the part of the physician for how a nurse practitioner worked. Given the power differential to begin with, it is hard to imagine the conditions created by rostering not affecting the nurse practitioner-physician relationship, although I do not have specific data to support this assertion.

In Family Health Team practices, with physician-led governance boards, the physicians were the nurse practitioners' de facto employer. Physicians made the decisions about how nurse practitioners would be employed. Given the potential financial impact of these decisions on the physicians themselves, there was a clear conflict of interest.

Conflict

The existence of unequal power implies conflict will occur between those holding power and those subject to that power (Lukes, 2005). Similarly my review of the professions literature predicted inter-professional conflict would be present in situations where claims by one profession to control areas of knowledge and practice were challenged by another profession. Closure Theory, (Weber, 1978) (Johnson, 1972) (Larkin, 1983) and its variants (Larson, 1977) (Witz, 1992), predicted a profession would attempt to close off access to areas of work from other occupations to obtain for its members the resources and status associated with performing that work. Once a profession could no longer exert exclusive jurisdiction over

an area it had previously controlled, Abbott's model of occupational jurisdiction predicted challenges would occur (Abbott, 1988). The vacating occupation would either concede the loss of territory or, if it were unable to provide the services itself, it would attempt to control the group that does (Abbott, 1988).

The language used in these theoretical models, such as "jurisdiction", "closure", "conceding", "challenges", all imply conflict. These theoretical models of professional behaviour and power were generally concerned with describing behaviour at a group or institutional level. The nine case practices provided an opportunity to test the models at the level of individual inter-disciplinary relationships.

With one exception my data failed to reveal evidence of overt conflict in the case practices. The details of this exception were previously discussed on page 227. After a few years of working together individual nurse practitioners and physicians worked out processes to make their relationship and practices function. The more elaborate and creative workarounds were generally found in the longest established relationships. These practitioners had come to certain understandings, not through formal processes but through ongoing problem solving in the face of new situations. They developed local, pragmatic solutions to circumvent the barriers created by rules and the health system infrastructure that impacted their practice situation. Workarounds were expressions of this pragmatic problem solving.

Conflict was present in most of the case practice but it was mostly latent and not overtly expressed. It was revealed in expressed frustration when nurse practitioners complained about barriers to their practice, the use of workarounds or their method of payment. Nurse practitioners understood they did not have control of the delegation process and therefore ultimately had to rely on the relationship with a collaborating physician. Expressing overt conflict in a relationship with someone holding superior

power was risky. Despite frustration expressed over their restricted scope of practice there was little criticism of the collaborating physician. This might have been because they recognized the source of frustration was a feature of the health system, while the relationship was with an individual who did not control this. Other evidence of conflict might not have appeared in the data either because there was none, I did not notice it or because it was risky for a nurse practitioner to admit to or display it to an outsider.

I looked to Negotiated Order Theory for a perspective on this phenomenon. Strauss et al. introduced the phrase 'negotiated order' into the literature in 1964 (Strauss, 1978). Negotiated Order Theory was based on empirical observations made in two American psychiatric hospitals in the 1960s. The researchers recognized the stability of organizations was maintained through features such as rules, hierarchies, policies, ideologies, divisions of labour etc. These features were observed to be negotiated, either implicitly or explicitly, by the people who worked in the organizations (Strauss, 1978). Strauss used three concepts – negotiation, the negotiation context, and the structural context – to understand what he was observing. Negotiation referred to interactions and strategies used by participants. Negotiation context referred to relevant features of the setting in which negotiation occurred, and the structural context referred to the overarching circumstances, such as institutions and norms, in which negotiations occurred (Strauss, 1978). Negotiation was seen as a way of linking patterns of participation to social orders (Maines, 1982).

However 'negotiation' as used by Strauss, was broadly defined and imprecise. It had three elements: interaction or communication, agreement, and resultant change. It implied a deliberate active process rather than something that just happened (Strauss, 1978). Allen pointed to the problematic broad definition of negotiation used by Strauss (Allen, 1997), claiming that it made it difficult to both compare what negotiation

meant in a specific context and generalize its implications to other settings. Allen asked whether the concept of negotiation was simply used as a convenient shorthand for diverse processes of social interaction, or whether its meaning is more restrictive (Allen, 1997). She used a more restrictive concept of negotiation and referred to direct negotiation between respective parties. She studied interaction between nurses and physicians on hospital wards and concluded that there was little evidence of negotiations or inter-occupational strains on the wards (Allen, 1997). She considered “social order as continuously accomplished rather than negotiated” (Allen, 1997).

Allen’s conception of how social order was accomplished fits more closely with my data than Strauss’ conception. Like Allen I found little evidence of explicit or implicit negotiation. The understandings developed for the workarounds were broadly ‘negotiated’, but the nurse practitioners in the case practices had little ultimate decision making power in these negotiations if the physician disagreed with them. There was little evidence found that any agreements or understandings were written down. Formal meetings occurring between nurse practitioners and physicians in the case practices were rare or non-existent. The social order of the practice, including the workarounds, were continuously accomplished rather than negotiated. Also like Allen I observed little, if any, inter-personal strain in the case practices.

6.4 Post Script

During the period of my data collection for this project the Ontario government proclaimed Bill 179. This was an omnibus bill amending 26 pieces of previous legislation (Ontario, 1997). The bill increased the scope of practice of nurse practitioners to be able to admit and discharge patients from hospital, permit nurses to carry out orders written by a nurse practitioner, set and cast a fractured bone, order any appropriate

laboratory test, and broadly prescribe from whole classes of medications rather than from a defined list (College of Nurses of Ontario, 2012). After Bill 179 was passed it took almost 2 years for most of these changes to take effect.

Even after Bill 179 nurse practitioners were still not allowed to prescribe controlled substances, such as narcotics (including Codeine) and benzodiazepines (such as Lorazepam). They were also not allowed to order some diagnostic imaging such as echocardiograms, bone densitometry, computed axial tomography (CT scans) or magnetic resonance imaging (MRI).

These changes in scope of practice should negate some of the workarounds described previously. The changes reduced, but did not eliminate, the necessity of having an individual relationship with a physician. Once the ability to prescribe controlled substances is allowed, it might be possible for a nurse practitioner to provide comprehensive primary care services without having a dependent relationship with a physician. Other issues such as rostering payments and employment status for nurse practitioners were left untouched.

7.0 Conclusions

7.1 Summary of main findings

The emergence and development of the profession of nurse practitioner from existing health systems is an example of how the system of expert labour organizes itself and changes over time. Nurse practitioners represent a case of how a new occupation differentiated itself from established occupations and successfully claimed the ability to perform work that had been under the sole jurisdiction of another occupation.

According to other authors, nurse practitioners arose as a result of a “physician shortage” (Yankauer and Sullivan, 1982) (Angus and Bourgeault, 1999) (de Witt and Ploeg, 2005). It is tempting to ascribe “physician shortage” as the sole cause for the emergence. However I think this is too simplistic an explanation, one that does not acknowledge the web of interacting contributing factors in the profession’s emergence.

Nurse practitioners did not arise in one place or at one moment in time. Rather they emerged in multiple places, in multiple contexts, over a period of time. The varied groups coalesced into a new occupation. The emergence was discussed as a convergence of three major factors that combined with others at a particular moment in history. The first factor was the difficulty people had accessing primary care health services. Normative beliefs at the time saw only physicians as capable of providing or able to provide these services. Therefore the access problem was defined as a physician shortage. The second factor was that nurses were attempting to improve their role and status in the health system as they felt they had been treated too long as physicians’ “handmaidens”. The third factor was a developing social critique of medical care as practiced by physicians that came about through a broadening general understanding and definition of health and health care services.

In the mid 1960s the province of Ontario introduced a system of managed health care and universal health insurance. By becoming the primary payer for physician and hospital services, the increasing difficulty in access to primary care services became a public policy problem for the government. It was proposed that nurses with an expanded scope of practice could be employed to provide some of the services previously provided only by physicians. This was an innovation within a provincial system of health care delivery. Two theoretical perspectives, both Kingdon's public policy model and Van de Ven et al.'s Innovation Journey model, informed my understanding of these developments.

A decision to increase the opportunities for nurse practitioners to participate in a publicly managed health system required making changes to the system's supporting infrastructure. These changes evoked responses and unmasked power relationships, which along with normative thinking, in turn, constrained and shaped the implementation of changes in health system infrastructure and processes. In failing to make the required changes to support the implementation it became difficult for the government to sustain the innovation. Over time measures to increase the supply of physicians were successful and the putative reason for expanding nurse practitioners in the health system disappeared. These setbacks led the profession to become dormant for the next decade.

Access to primary care services became a public policy problem again some 10 years later. This time instead of being identified as a physician shortage, the access problem was reframed, along with other health system problems, as a need for primary care reform. This served as Van de Ven et al.'s required "shock" to resurrect consideration of nurse practitioners as primary care providers.

"Primary Care Reform" was a label that collected proposed solutions for many problems. There was no consensus about what the problems were,

what caused them or how to solve them. The proposed roles for nurse practitioners in the reformed health system were not clear or agreed upon. Nurse practitioners were introduced into many types of practice setting, each one requiring different arrangements to allow nurse practitioners to practice efficiently. Role confusion led to changes in processes and infrastructure within the health system making it difficult for nurse practitioners to practice efficiently in most local settings.

In the 1970s nurse practitioners did not have a legally defined scope of practice that allowed them to practice with more autonomy than general registered nurses. Nurse practitioner scope of practice became legally defined in the 1990s, however the manner in which it was defined, and its restricted content, forced each nurse practitioner to form a direct, individual relationship with a physician. It was necessary for primary care nurse practitioners to have some of the actions required to practice delegated to them by a physician. While new practice organization models and increased funding for positions offered a variety of options for employment, nurse practitioners were treated differently than physicians in almost every respect.

The analysis of empirical data collected for this study found nurse practitioner-physician relationships were unequal in power. A number of factors – including the restrictions resulting from the legislated scope of practice, the employment relationship of nurse practitioners, the rostering practices of physicians in capitation models of physician payment, and the governance structure of primary care service organizations – all had important impacts on the relationship between nurse practitioners and physicians. These factors reinforced the existing hierarchy and unequal power structure between nurse practitioners and physicians. It also made nurse practitioners dependent on maintaining the relationship with their collaborating physician. The required relationship was between two individuals and was not a generic relationship between members of

different professions. This potentially made nurse practitioners hostage to the idiosyncratic beliefs and behaviour of their collaborating physician.

Despite these barriers nurse practitioners and physicians were observed to make their practices work in local settings. This was accomplished by developing workarounds that circumvented the specific barriers present in each setting. These mechanisms were adaptive mechanisms to the conditions and context of the local environment. Workarounds were 'understandings' between one nurse practitioner and one physician. The type of workaround they developed depended upon the level of trust between them.

The provisions of Bill 179 were enacted after my data collection was completed. They made some of the workarounds describe in this study obsolete and decreased nurse practitioners' dependence on physician delegation. Other barriers identified in this study, such as employment status, Family Health Teams governance, and physician payment mechanisms were not changed by the bill. The inability to refer directly to specialist physicians and to order some diagnostic imaging; and prescription of certain medications such as controlled substances also remained the same. Until these are addressed nurse practitioners will remain unequal partners in the health system.

I analyzed various aspects of the emergence, development, and implementation of comprehensive primary care nurse practitioners in Ontario, situating them within existing sociologic theory and models. These included Abbott's Systems of Professions – the organization of expert work, Closure Theory, Kingdon's Agendas, Alternatives, and Public Policy model, Van de Ven et al.'s Innovation Journey model, and Negotiated Order Theory. I used these perspectives both to provide insight into what I observed and to situate my observations within existing bodies of theory.

7.2 What this study adds

Previous studies and reports of the nurse practitioner profession in Ontario and Canada focused on barriers and other problems associated with implementation. This literature highlighted role confusion at both the health system and practice levels as being a significant barrier to successful implementation of nurse practitioners (Hanrahan et al., 2001) (IBM Business Consulting Services, 2004). There were two randomized controlled trials involving nurse practitioners carried out in Ontario in the early 1970s (Spitzer et al., 1973) (Sackett et al., 1974). These studies are now over 40 years old, and current nurse practitioners have a very different scope of practice than the participants of these studies. Studies of nurse practitioners carried out in other jurisdictions, as discussed in Section 2.1, pages 29-33, have examined the differences in nurse practitioner and physician practices. They either compared clinical outcomes, practice processes such as adherence to guidelines, or they were cost benefit analyses. The limitations of these studies were discussed in detail Section 2.1, page 39. Most were too small and underpowered to support the conclusion that nurse practitioner care was not inferior to that of physicians.

There are several important gaps in the research literature. There is a lack of understanding of how nurse practitioners were introduced into the Ontario health system, and why they initially failed to flourish. It is also unclear as to why previously identified role confusion occurred and became mismatched with nurse practitioners' legislated scope of practice. Finally there has not been a description of how primary care nurse practitioners reconcile the gap between their scope of practice and the roles they are expected to play in local practice settings.

My study contributes to new knowledge in three ways. First it documents the unfolding of events and actions over time, and thus serves as a historical summary. Second it makes a more theoretical contribution to the

literature on professions. It adds an analysis of the case of nurse practitioners as an emergent occupation to the existing body of sociological analyses of professions. It specifically describes and explores nurse practitioners as a case of an emergent occupation that developed into a profession in a publicly funded health care monopsony. Third, it provides insight into how nurse practitioner - physician relationships are impacted at a local level when nurse practitioners are obligated to develop a relationship with a physician in order to be able to practice delivering comprehensive primary care. This study goes further by documenting and analyzing both the nature of nurse practitioner - physician relationship and various workarounds developed by nurse practitioners and physicians to bypass barriers to their practices created by legislated scopes of practice.

The case also provides empirical support that generalizes Van de Ven et al.'s Innovation Journey model by describing a case of innovation from a publicly funded health service sector. Finally the case study supports Davina Allen's claim that social order is continuously accomplished rather than negotiated, as claimed in Strauss' Negotiated Order Theory.

7.3 Strengths and limitations of the study

Advantages

This study was designed to seek understanding of certain social processes. As discussed in the introduction, I began the study with a specific philosophical standpoint. My weak constructivist perspective assumed health care delivery in a particular system and local setting had a contingent, created structure that required interpretation to understand its meaning and consequences. This philosophical stand point led to a methodology designed to produce understanding by attempting to answer the how and the why of complex social processes.

As a methodology case study has some particular strengths for answering the type of research questions I asked. It is a common approach used by multiple social science disciplines to seek answers to these types of questions (Stake, 2000) (Simons, 2009) (Exworthy et al., 2012). This study used a mixed methods approach: I analyzed documentary data, conducted interviews, and undertook direct observation of nurse practitioners and physicians in their day-to-day work. Multiple methods allowed me to triangulate the findings. This was particularly helpful in checking if there was a difference between how things should be (according to legislation), how a given person reported them, and what I observed in practice.

Case study had the advantage of being able to provide a richly detailed picture of how social processes were carried out. It provided the opportunity to observe a process in detail, to make sense of it as it was carried out in its 'natural' setting. By interviewing and observing nurse practitioners, physicians, administrators, and governing board members, I gained different perspectives from a variety of settings, all of which contributed to a fuller understanding of the processes.

I took an iterative approach to my research, analyzing data as it was collected. This allowed me to be adaptable and flexible, and follow where the data led. It also allowed me to follow up anomalies and exceptions as they emerged from the data.

Case study has been criticized for not being generalizable (Simons, 2009). Simons rejects this criticism and points to the types of generalizations that can be made from case study research. She argues, like Stake, that case study produces "naturalistic generalization"; "given sufficient detail and rich description, a reader can discern which aspects of the case they can generalize to their own context and those which they can not" (Simons, 2009). Flyvberg notes that in the study of human affairs "we have only specific cases and context-dependent knowledge...[this] is,

therefore, more valuable than the vain search for predictive theories and universals” (Flyvberg, 2006).

Case study seeks to develop an understanding of “cases like this” (Stake, 2006). It enriches the understanding of situations where new occupations begin to provide services that were previously provided exclusively by another occupation.

The final strength of this study was the ability to carry it out with limited resources. It was self-funded and did not require a large research budget or grant to undertake. The methods used were time-intensive for the researcher, but they did not require extensive equipment to collect or analyze data. It also did not require coordination of a large research team in order to accomplish.

Limitations

This study told a story over a period of time, but did not tell it into the future. Bill 179 removed some of the restrictions on nurse practitioners’ scope of practice, thus changing the form of some of the workarounds previously described. My study and this thesis does not provide a full picture of the current conditions of nurse practitioner practice in Ontario. Instead what became important was the understanding of how restrictions on the scope of practice and the health system infrastructure shaped nurse practitioners’ relationships with physicians and how their practices were enacted as a consequence.

Other limitations are related to my identity as a researcher, the data collection, and its analysis. I have described in several places how my identity as a male physician researching nurse practitioners provided a certain perspective and affected what data I collected, what data participants provided to me, and what I saw in the data. Despite attempts to practice a high degree of reflexivity, as well as seek feedback from

participants and others throughout the process, my identity undoubtedly influenced the results. However this is an issue in all types of research. It is a context for the reader to be aware of when considering my findings.

I acknowledge that a different researcher could have used the same data sources, analyzed them in a similar way but emphasized different aspects of the case and drawn different conclusions. In this sense case study research is perspectival rather than absolute. However my own account is not entirely relativistic since I believe I have demonstrated the three dimensions proposed by Golden-Biddle and Locke to produce a convincing ethnographic report – authenticity, plausibility, and criticality (Golden-Biddle and Locke, 1993). For example I used applicable, multiple, and sometimes long quotations from the participants, to give the reader a sense of what the participants were saying and feeling. I felt I was able to highlight the sense of duty and responsibility felt by the nurse practitioners to care for patients who did not have regular access to care. At the same time this narrative was shaped to provide a social critique of both the health system that structurally encouraged physicians to care for medically less complex patients and the physicians who did so.

The final limitation of this study and the methodology used was it appeals only to those who share my ontological and epistemological assumptions. The results would perhaps be less convincing to a positivist such as one of the physician members of a Family Health Team governing board who dismissed my research by saying that I was able to “show anything you want” (physician, identification code withheld).

7.4 Policy implications of this research

This research has a number of policy implications and begs several questions. The first question is: what was the goal of having nurse practitioners provide first contact, comprehensive primary care services?

If the goal was to improve access to providers of primary care services, then it appears the implementation of nurse practitioners was successful. Each nurse practitioner was the primary provider for 350-800 people, in most of the case practices. It was beyond the scope of this study to determine whether other models of nurse practitioner deployment, such as the physician extender, were effective in freeing up physician time so they could increase the number of patients each physician looked after. In the physician extender model, nurse practitioners did not have their own patient list but provided some of the services physicians would normally provide their patients.

The second question is: if nurse practitioners can increase the access to primary care, why are they not able to practice independently? The underlying assumption seems to be that nurse practitioners lack the knowledge, skills or abilities to do so. There was no evidence found in the academic literature or government reports to suggest nurse practitioners' provision of primary care services was better or worse than a family physicians' care. As the literature review in Section 2.1, page 29, showed, most of the research indicated primary care nurse practitioners' care was not inferior to family physicians' care. While it is also beyond the scope of this research to answer this question, I did observe nurse practitioners during consultations with patients. I only observed 65 consultations but I did not observe any practice activity that was, in my opinion, unsafe or dangerous.

What I did observe was most nurse practitioner-physician interactions occurred to deal with administrative issues related to restrictions in the scope of practice. Generally nurse practitioners knew what to do, they just needed an act delegated or authorized. This was why workarounds were created in the case practices; they allowed both nurse practitioners and physicians to minimize the disruption in their practice flow to deal with the restrictions in the nurse practitioner's scope of practice. The restrictions on the scope of practice made the flow of their practices inefficient.

The payment scheme in Family Health Teams was puzzling to me. Nurse practitioners had their own list of patients they provided care to, yet each patient was rostered to a physician, who was also paid as if the physician was providing care to the patient. This raised the third question: Why would the government pay a physician for the care provided to a patient by another practitioner, as if the physician had provided it themselves? The majority of the time the physician did not see or discuss the patient with the nurse practitioner, yet still got paid as if they were the sole provider. This practice was not cost effective. More importantly, as described in my findings, this practice caused confusion regarding who had what fiduciary duty and medical legal liability for the patient's care. It also produced in physicians a sense they had to supervise the care of nurse practitioners.

This raises the biggest policy issue. As part of its Primary Care Reform initiative, the government emphasized the need to organize its primary care delivery system around team care. As this study showed, the structural support arrangements of the team were very important for the processes of the team's delivery of care. In multi-disciplinary team care, who or what occupation is responsible for what aspects of a patient's care? Who is responsible for the overall outcome? Who will lead the team? How will the members of the team relate to one another? Are members of the team 'equal' or does the physician member(s) have the role of owner, captain, and major player, as has traditionally been the case? The answers to these questions are beyond the scope of this research. However this research does provide insights into the nature of inter-professional relationships and how the structural arrangements such as payment, employment status, and team governance affect these relationships. It provides perspectives that can inform what to expect when other similar cases occur. This is relevant to the current introduction of physician assistant as a new category of health care provider in Ontario.

7.5 Application of the findings to other situations

Two of the goals of my research were to produce new knowledge and a product that is useful to someone else. The product might simply be insight into cases similar to this.

‘Nurse practitioner’, in this case report, was a new category of health care provider implemented through public policy decision making into a publicly funded health system. Rather than being determined by competition or market forces, the role and services provided by nurse practitioners, as well as the infrastructure to support them, were determined by the government. My findings showed how role confusion during implementation had effects on how nurse practitioners’ practice was enacted at the local level. The findings provide insight into these processes and can be generalized to other providers being introduced into similar managed health systems. In Ontario physician assistants are currently being added to the health system as new providers. Paramedics are being considered for an expanded role in promoting and maintaining health in community settings. This is an expansion from their historical role as pre-hospital emergency service providers.

Linking my findings to Kingdon’s public policy making model provides empirical support for his theory, and can supply insight into how the public policy making decision works. In particular it is important for leaders of occupations performing work in the public sector to understand how the process works. The case of nurse practitioner illustrates how members of other occupations, such as physician assistants or paramedics, who want to increase their occupational ‘territory’, must develop themselves into ‘solutions’ for public policy problems. They must be ready to be applied as a solution for a problem when the window of opportunity opens to implement it. Understanding how solutions become adapted and coupled to problems is useful to occupations outside the health sector as well.

There is an extensive body of sociological work describing the progression of occupations from emergence to professionalization. The case of nurse practitioner is another example of a profession that followed the described pathway to achieve their 'professionalization project' (Larson, 1977). This case provides further empirical evidence that reinforces the pattern, described by others such as Freidson, Larson, and Abbott. It also illustrates the need for patience, recognition of opportunity, and pragmatism displayed by leaders such as Dorothy Hall, who wanted to get the nurse practitioner role in place and worry about the details later (MacMillan, 2011).

7.6 Reflections on the ethics of the study

Ethical behaviour in social research has been a concern among researchers for a long time (Dillman, 1977). Organizations such as the British Sociological Association, the Canadian Institute of Health Research, and the Medical Research Council – among others – have developed ethical guidelines (British Sociological Association, Statement of Ethical Practice for the British Sociological Association (March 2002)) (Canadian Institutes of Health Research et al., 2010) (Medical Research Council, 2012). It is a large and important topic for researchers to be aware of.

As I planned the study, I anticipated a number of ethical issues. The study design was iterative and the final research questions were not fixed prior to starting the data collection. Interviews were planned to be guided conversational interviews and therefore open to explore topics a respondent wanted to talk about or areas that seemed interesting. When I began it was not obvious to me where the data would lead. Therefore I anticipated difficulty in obtaining informed consent: what were the participants consenting to? Informed consent is more than checking a box on a form at a single moment in time (Simmerling and Schwegler, 2005). It

is a process of communication. I planned to achieve this by feeding results back to the participants.

The second ethical issue for me was the difficulty I had asking people to participate. At the beginning of the study I was not clear whether there was any benefit to the participants for taking part in the study. I was reluctant to approach prospective participants and did not want to waste their time and good will. While this issue reflected my inexperience as a researcher, it was something I needed to contemplate.

A few unanticipated ethical issues arose during the study. I planned to provide pseudonyms for the participants and the case practices. That I believed, would make them anonymous. I soon realized how difficult it was to truly anonymize participants and their practices. Five of the case practices came from one geographic area and 3 from another region of the province. I provided a description of specific case practices to supply context for the findings. However the detail given meant pseudonyms did not make the practices and the participants anonymous from each other, at least within each geographic area. It also did not make them completely anonymous to people outside the practices who had a deep knowledge of the local settings.

During the consent process I asked for consent to quote participants anonymously. I used quoted remarks extensively to illustrate and present my findings. My dilemma was that the consent I obtained was a general consent. I asked the participants for permission to quote them, but indicated that if I did quote them, I would do so anonymously. It would have been very difficult to obtain specific consent from each participant for every quote used. Themes emerged from the analysis in an iterative manner, and at the time data was collected, I did not know what would prove to be useful to quote. I have rewritten sections of this thesis multiple times. In some cases I used quotations to illustrate themes that I later

refined or even changed several times during the writing. This made obtaining specific consent for each quote difficult.

I made a decision to continue to use pseudonyms for participant and practice names, despite the possible lack of anonymity. I used "identification code withheld" and did not include a location for any quotation I thought might be controversial, cause embarrassment, or potentially harm the working relationship with other participants or the organization they worked in. On occasion I did not use a quote I would have liked to because I was not able to make the attribution completely anonymous. This approach could be criticized because it was based on my value judgment of the content and potential consequences of the quotation, and not on the participants' own assessments. However returning to ask them each time the thesis would have been refined was impractical.

A related ethical concern was if or how to report some of the workarounds that I either observed or was told about. Some of the workarounds, such as the use of pre-signed prescription pads, might have been viewed by a professional College as a breach of their standards of practice. In this instance, I took care to make the situation as anonymous as I could to protect the participants from any potential repercussion. These workarounds were used because of the impracticality of the nurse practitioners' scope of practice for the role they were expected to fill. Workarounds were used to enhance patient care and were not used for the personal gain of the users.

Another ethical issue concerning consent occurred when I began observing nurse practitioner consultations with patients. I obtained verbal consent from every patient prior to observing the consultation. I did this for 2 reasons. First I considered it unnecessary to obtain written patient consent because I did not collect individual patient information. Second it was impractical to use that approach in a fast-moving acute-care setting.

My aim was to observe the interaction and processes that nurse practitioners used, rather than collect personal patient information or outcomes.

An important part of research practice is to prevent harm or potential harm to the participants. I created a potential issue regarding this while working with a family health team. I approached some of the team's nurse practitioners to participate in my research, and they readily agreed. After I had observed and interviewed them, the Family Health Team management informed them that they needed to have approval to participate in research. A policy for participation in research was subsequently implemented and I had to apply and make a presentation to the governing board for permission to complete any further work. The nurse practitioners and I made the mistake of assuming they had the autonomy to make a decision to participate in the research. I subsequently sought permission from the management prior to interviewing or observing other nurse practitioners in other practices.

7.7 Reflections on my intellectual journey

Undertaking the work for this PhD provided me with an opportunity to pause and reflect on the provision of primary care services in the health system in which I have spent most of my working life. I was interested in understanding its social dynamics. The process of doing so challenged my worldview, which had been heavily influenced by positivist epistemology, underpinned by my undergraduate science training and my training as a physician. Years of clinical practice and the influence of the evidence-based medicine approach to clinical practice reinforced this worldview. The opportunity to read intensively, and learn to think and write from an academic perspective, has been exciting and intensely satisfying.

Along the way I have begun to learn the craft of research. The chance to plan and complete a substantial piece of research has taught me how to search for and appraise the existing literature, and I continue to learn about the nuances and issues that arise in the research process. This includes understanding that there are strengths and weaknesses in each method and approach. I have learned about handling and protecting data, as well as being aware of and taking responsibility for the potential consequences of my research on participants. Most importantly I am learning to think and argue like an academic, to be skeptical, and to demand evidence to back up assertions. I now approach and consider the world in a different way. I consider myself fortunate to have had this experience.

7.8 Conclusions

The occupation nurse practitioner emerged from the existing health system as a response to the convergence of multiple factors. I argued that despite remaining under nursing's umbrella, nurse practitioners became members of a new and distinct occupation. The nurse practitioners observed in this study practiced more like family physicians than nurses. What made the nurse practitioner case interesting was its unusual features.

Most new occupations arise from an existing one to provide work related to a new technology. For example ultrasonographers emerged from the occupation of X-ray Technician to undertake the work of producing ultrasound images. Nurse practitioners responded to a void in the provision of existing primary care services by family physicians. This response did not occur to provide a new type of service, but to perform work already performed by another occupation. This work was under the exclusive jurisdiction of that occupation and only its members had the right to perform the work. The area of work nurse practitioners began to

perform had not been vacated voluntarily by family physicians. In terms of Closure Theory, nurses 'usurped' from family physicians some of their jurisdiction to perform this work.

The group of nurses who became nurse practitioners collectively behaved as a separate occupation, and created the artefacts of professionalization. By doing this they also closed others off from an opportunity to do this work. This was an example of a particular behaviour, described in Closure Theory as 'double closure'. Nurse practitioners protected their gains by closing off access to the same kind of work. To do this they creating specialized training, credentials, and certification. Eventually they achieved government legislated protection of their right to use the title "nurse practitioner" and scope of practice. The trajectory of nurse practitioners from occupation to profession followed the general pattern described in the theoretical models of professionalization.

The case presented here had a specific context. Nurse practitioners accomplished their professionalization and implementation within a publicly managed health system. Universal health insurance created a monopsony, where the government was the single buyer and payer for health services in Ontario. Because no private market existed, there were no market forces to determine supply and demand. The government therefore made decisions about which providers it would pay for providing defined services. In this context the decision to add, and pay for the services of, a new provider was a public policy decision.

Kingdon's public policy making model provided insight into this process. The development of the nurse practitioner illustrates the importance of having a developed solution ready to be adapted to a policy problem. In the 1970s the tried and failed to introduce nurse practitioners into the health system to ameliorate the problem of access to primary care services. However in the 1990s conditions had changed and the problem was redefined. This time the use of nurse practitioners was successfully

recycled as a solution for increasing access to primary care services. The history of implementation of nurse practitioners in a publicly managed health system fits Kingdon's model of public policy decision-making. A clear understanding of this process is invaluable knowledge for occupational leaders to strategically plan for the advancement of their occupation's work jurisdiction.

This case also illustrated the difficulties of adding a new category of practitioner to a publicly managed health system. The difficulties did not end with the decision to introduce it. According to my analysis of the literature, it seems there was a persistent lack of vision on the part of policy makers with regards to nurse practitioners role in the health system. Lacking a clear goal, the decision makers failed to build the sort of support nurse practitioners needed for their future practices. The bureaucrats charged with making these changes would have benefitted from a more nuanced understanding of the processes of complex innovations provided by Van de Ven et al.'s innovations model. Understanding the rippling out, non-linear, and interactive effects of seemingly simple decisions such as determining nurse practitioners' employment status or remuneration model, might have led to different decisions. I concluded the major factor determining the faulty structural support provided was the fundamental lack of clarity of what nurse practitioners role was.

The structural changes made to support nurse practitioners meant they were required to form a relationship with a collaborating physician. The characteristics of this relationship, which is described in Section 6.2, page 250, perpetuated the traditional power differential between nurses and physicians in the health system. This dependent, asymmetric relationship virtually guaranteed that nurse practitioners could not challenge the hegemony of physicians in the system. There was a disconnection between the aspirational claims of various stakeholders to form collaborating, multi-disciplinary, partnerships, and the results of the

infrastructural changes put in place. This disconnection has not been resolved.

Despite this nurse practitioners and family physicians used the structurally created relationships to work out ways of enacting their practices in local settings. They set up a series of workarounds to bypass the restrictions of nurse practitioners' scope of practice. These pragmatic solutions were developed to fit the context of their local practices and indicated that social order rather than being centrally predetermined, was achieved through action.

My final conclusion is there are more questions to be answered. The case of nurse practitioners providing comprehensive primary care described in this study raises the question of what is a primary care provider and how should primary care services be delivered? If two or more occupations are able to provide these services, what does it mean to be a member of one of those occupations? These questions need another set of data to be answered, and are therefore beyond the ability of this study to resolve.

In general, nurse practitioners do not want to be physicians. Even if all of the barriers to nurse practitioners' provision of comprehensive primary care services are removed, nurse practitioners will not become physicians. They will remain another type of provider who can bring the strengths of their nursing tradition to their practices. Instead of being seen as a substitute or replacement for physicians, perhaps we can understand what primary care nurse practitioners are – an alternative provider of primary care.

8.0 Acknowledgements

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My friend Ms. Elyse Pyke, was always able to find the books and papers, I needed when I was unable to obtain them myself. My nephew Liam Walke proof read the manuscript and made editing suggestions.

Finally, I would like to dedicate this work to Ani, my partner and transcriptionist extraordinaire. She has endured and fully supported many long periods of either my mental or physical absences from our life together while I pursued my 'projects'. I would not have been able to do this without you.

9.0 Appendices

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9.2 Appendix 2 - Glossary

AHAC - Aboriginal Health Access Centre

APN - advanced practice nurse

CHC - Community Health Centre

CHPRE - Council on Health Professions Regulatory Excellence

CINAHL - Cumulative Index to Nursing and Allied Health

CMA - Canadian Medical Association

CMPA - Canadian Medical Protective Association

CNA - Canadian Nurses Association

CNO - College of Nurses of Ontario

CNPI - Canadian Nurse Practitioner Initiative

CNS - clinical nurse specialist

CPSO - College of Physicians and Surgeons of Ontario

DTFC - Drugs and Therapeutics Formulary Committee

FHT - Family Health Team

FP - family physician or family practitioner

GP - general practitioner

HPRAC - Health Professions Regulatory Advisory Council

NP - nurse practitioner

NPAO - Nurse Practitioners' Association of Ontario

NPLC - Nurse Practitioner-Led Clinic

PubMed - Data base sponsored by the US National Library of Medicine,
National Institutes of Health

RN - registered nurse

RN(EC) - registered nurse in the extended class - a nurse practitioner

UAP - Underserviced Area Programs

VON - Victorian Order of Nurses

9.3 Appendix 3 - Grey literature consulted

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9.4 Appendix 4 - Example of a field note

December 7, 2010

Field notes from [Hawthorne] NPLC visit

The building is an old bank with the vault still in place.

Very large vaulted waiting room with metal ceiling that echos. Nice visual effect though. Approximately 25 chairs in the waiting room. NP offices have $\frac{3}{4}$ walls that make them noisy because of the echoes. There were 4 NPs working at the time I arrived. At most there were 2 patients in the waiting room. The NPs share 2 per office. They also share RNs, 2 NPs per RN. Apparently there is some tension around this as it is not consistent what the RNs do. Different NPs think the RNs should do different things. Apparently they have meetings among the NPs and then together with the RN. One NP confided that she thought they should have meetings with everyone all together.

2 of the NPs specifically mentioned that they had been waiting for jobs to come up at this clinic so they could apply. The feeling was that there was a shortage of NP jobs. All of them were attracted to working in an NP led clinic because they could practice their "full scope of practice".

While I was there the clinic staff all gathered in the lobby to have their picture taken in front of a Christmas tree with someone dressed in a Santa Claus suite. The atmosphere seemed friendly and relaxed.

Some of the NPs were feeling some time pressure. One admitted to staying late to finish charts and make up consultation letters. One admitted that another NP takes charts home to finish them there. All of them felt they were putting in more time than they wished to. Part of that was, they believe about start up

K lives in [XX], 130 km away. She is in the clinic 4 days a week and stays over in the city 2 nights a week. Has just finished a stint doing screening for orphan patients as part of a LHIN project.

One of the NPs had had a terrible day. The first patient who she saw was intoxicated on some kind of drug and gave the NP the impression that he was going to hurt himself. He has been known to cut himself in the past. He vaguely implied that he was unsafe but it was not specified too directly. She was concerned about his well being. She spent the rest of the day trying to sort out how to get a Form 1 done on the fellow who had left the office after the appointment. She had tried to liaise with the collaborating physician to discover that in order to complete a Form 1, application for psychiatric assessment, the physician who completes the Form had to lay eyes on the patient to be able to fill it in. Completing a Form 1 is not an act that a NP can do under the mental health act. Only physicians can sign a Form 1, She had not understood that at the beginning of the day. The NP had only a rudimentary understanding of the Form 1 process and the other forms or routes available under the Mental Health Act. I got drawn into the scene as she used me to decompress and affirm to her that she had done the correct thing. She had also called the local crisis team. Someone during the day had suggested she go out to the patient's house, with someone else and try and convince him to come to hospital! Eventually she called the OPP [Ontario Provincial Police] who were going to visit the patient in the afternoon. The Police can visit the person and arrest them under the Mental Health Act and take them to the closest ED. The other option would have been for the NP to talk to a Justice of the Peace and have a Form 2 filled out and signed by the JP [Justice of the Peace]. This allows the Police to pick the person up and deliver them to a hospital.

The experience was very frustrating and upsetting for the NP who was concerned and trying to do the best for her patient. – The Form 1 although not used often in an office setting is something that should be available to

a practitioner in this type of practice. Another barrier! However there is no simple way around this at the moment. I don't believe this will be changed under Bill 179.

This NP also related an incident where she had sent a patient for a chest Xray and an incidental lung cancer was noticed. The radiologist recommended a CT of the chest and I believe a CT of the abdomen. Despite having a requisition signed by the collaborating physician the Xray Department refused to go ahead with the exam. The patient was apparently on the table to have the exam done when the radiologist stopped it. The patient was subsequently sent to another centre.

Another nurse practitioner talked about inter-professional cooperation. She did not see the clinic as a threat to the doctors. When the doctors were approached to see if they would be interested in a collaboration role i.e. the backup and signature, initially several expressed some interest but then they withdrew. They wanted the NP to help them put together a proposal for a FHT. Despite applying 3 times they were turned down as a FHT. One of the doctors made a statement that was reported in the paper that the NPLC would actually be a disservice to patients. T. met with the doctor to try and explain what the clinic was about. Other doctors were "too busy" to be involved. In the end they use [XX] who is 165 kms away as the collaborating physician. All of the physicians who she mentioned about trying to collaborate with graduated and have been in practice 7 years or less. [XX] graduated in 1974.

The constant reference today was to patients deserving better than what they were getting from the system. NPs were providing care for people who need it. T. also made a statement that was not recorded about it not mattering who did something as long as they had the education and training to do it safely. She used the PICC line story as an example of something an RN would do in Texas but that they had to transport a patient to Kingston to get done.

Got some more explanation of this on the second visit.

Thoughts

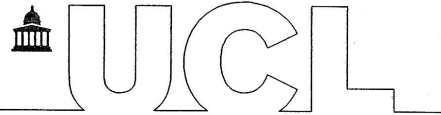
There is a critique of the health care system running through this. This is very similar to the narrative of the early NPs in Denver, an unmet health care need is recognized. Frustration with a system that is not set up to provide the care, seeing another way of doing it and a struggle against the establishment.

T. took the initiative. She stated that she had to drive 50 minutes to [YY] to provide care for people when within her own city there were lots of people without access except through EDs or Urgent Clinic settings. K. was involved in a screening project that lasted 9 months. While we can argue about the merits of it as a way of providing primary care, it certainly did meet unmet needs.

9.5 Appendix 5 - Research ethics board approval letters

UCL Research Ethics Committee

UCL RESEARCH ETHICS COMMITTEE
GRADUATE SCHOOL OFFICE



Professor Trisha Greenhalgh
Department of Primary Care and Population Sciences
UCL
206 Holborn Union Building
Highgate Hill
Archway
London N19 5LW

17 July 2009

Dear Professor Greenhalgh

Notification of Ethical Approval

Ethics Application: 2041/001: Organizational decision making concerning roles and the division of labour in multi-disciplinary primary care practices

I am pleased to confirm that in my capacity as Chair of the UCL Research Ethics Committee, I have approved your study for a period of 12 months from the commencement of the project, i.e. 17th July 2009. However, the approval of the local Research Ethics Board must also be obtained before the commencement of the study.

Approval is subject to the following conditions:

1. It is a requirement of the Committee that research projects which have received ethical approval are monitored annually. Therefore, you must complete and return our 'Annual Continuing Review Approval Form' PRIOR to the **17th July 2010**. If your project has ceased or was never initiated, it is still important that you complete the form so that we can ensure that our records are updated accordingly.
2. You must seek Chair's approval for proposed amendments to the research for which this approval has been given. Ethical approval is specific to this project and must not be treated as applicable to research of a similar nature. Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing the 'Amendment Approval Request Form'.

The forms identified above can be accessed by logging on to the ethics website homepage: <http://www.grad.ucl.ac.uk/ethics/> and clicking on the button marked 'Key Responsibilities of the Researcher Following Approval'.

3. It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. Both non-serious and serious adverse events must be reported.

Reporting Non-Serious Adverse Events.

For non-serious adverse events you will need to inform Ms Helen Dougal, Ethics Committee Administrator (h.dougal@ucl.ac.uk), within ten days of an adverse incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Chair or Vice-Chair of the Ethics Committee will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

Reporting Serious Adverse Events

The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator immediately the incident occurs. Where the adverse incident is unexpected and serious, the Chair or Vice-Chair will decide whether the study should be terminated pending the opinion of an independent expert. The adverse event will be considered at the next Committee meeting and a decision will be made on the need to change the information leaflet and/or study protocol.

On completion of the research you must submit a brief report (a maximum of two sides of A4) of your findings/concluding comments to the Committee, which includes in particular issues relating to the ethical implications of the research.

Yours sincerely



Sir John Birch
Chair of the UCL Research Ethics Committee

UCL Research Ethics Committee, c/o The Graduate School, North Cloisters, Wilkins Building
University College London Gower Street London WC1E 6BT
Tel: +44 (0)20 7679 7844 Fax: +44 (0)20 7679 7043
h.dougal@ucl.ac.uk
www.ucl.ac.uk/gradschool

Grey Bruce Health Services Ethics Committee



P.O. Box 1800, 1800 8th Street East
Owen Sound, Ontario N4K 6M9
(519) 376-2121

October 5, 2009

Dr. Don Eby
Grey Bruce Health Services
1800 8th St. E
Owen Sound
N4K 6M9

RE: Organizational Decision making concerning Roles and the Division of Labour in multidisciplinary Primary care Practices

Through an expedited review process the Grey Bruce Health Services Ethics Committee has approved our participation in the above named study.

This approval will last for only one year. If the study extends beyond one year, you are required to request re-approval for the next year at least three weeks prior to Sep. 17, 09. If any modifications occur, you must report as a change in protocol, to the Clinical Research Advisory Group.

Please notify this Committee of any new advertisements or recruiting material, change of Investigator, Study Coordinator or site location, serious adverse events, amendments or changes in the protocol, significant protocol deviations, patient death or termination of the study. Please note that you must submit all protocol amendments and/or advertising to the Committee, prior to implementing the amendments and or advertisements. Continued approval is contingent on timely submission of reports.

The Clinical Research Advisory Group is in compliance with the regulations of the Food & Drug Administration as described in 21 CFR parts 50 & 56 as well as the International Conference of Harmonization (ICH) Good Clinical Practice (GCP) Guidelines for IRB's and complies with the ethical standards forwarded in Tri-council Policy

Sincerely

Expedited Reviewers are:

Sonja Glass
Chair, Ethics Committee

Elyse Pike
Chair, Clinical Research Advisory
Committee

9.6 Appendix 6 - Introductory letter and consent form

Organizing Work in Primary Care Practices – How are Nurse Practitioners Roles and Task Boundaries Determined?

Consent Information Sheet

Introduction and Purpose of the Study

The system of primary health care delivery in Ontario has undergone a number of significant changes in the last 5-10 years. The widespread introduction of nurse practitioners into the primary care system and the development of multidisciplinary primary care teams are some of these changes. Previous studies have identified uncertainty in the role of nurse practitioners in primary care team practices.

The present study does not attempt to define the role of nurse practitioners in primary care practices. Rather, the objective of this research is to understand what strategies are used by the participants to negotiate the division of labour and the development of the role of Nurse Practitioners in practice settings. The study will investigate several aspects. What do nurse practitioners do in specific practice settings? How are practices organized so that practice activities are divided among the various practitioners and how does this division of labour get decided? How do practitioners define themselves and their role in the practice? How does decision making occur within the practice? What does collaboration mean in specific practice settings?

Your Participation

You are being asked to consent to an interview that will last 30- 60 minutes. You may also be asked to consent to allow me to observe you in

your practice. If you consent to participate, a written consent will be obtained prior to the interview or observation session. The interview will be recorded and a transcript made. Your identity and place of practice will remain anonymous in any reports produced. However, I may wish to quote what you say. If this happens, it will be done anonymously.

Information Collection and Storage

Information will be collected in one on one, face to face or telephone, interviews. The interviews will be recorded and transcribed for detailed analysis. Data might also be obtained from direct observation of some participants in their practices. This data will be recorded in detailed field notes and analyzed in a similar manner to the interviews. Data will remain confidential and is being collected for research purposes only. All data will be collected and stored in compliance with the Canadian Personal Information Protection and Electronic Documents Act 2000 and with the UK Data Protection Act of 1998.

Anticipated Benefits of the Research

To understand how the role of nurse practitioners is developed and how the division of labour occurs in multidisciplinary primary health care practices. This will provide empirical evidence of what barriers nurse practitioners encounter in practice and how practitioners work around these in individual practice settings. The research will also seek empirical evidence for how relationships between family physicians and nurse practitioners develop and are played out in practice settings. This may lead to strategies for negotiating these relationships.

Ethics Board Approval

This study has been reviewed and received Ethics Board Approval from University College, University of London, UK and by the Grey Bruce Hospital Network.

Consent Form

Organizational Decision Making Concerning Roles and the Division of Labour in Multidisciplinary Primary Care Practices

I agree to participate in the study on the understanding that:

I have had an opportunity to read the outline of the project and to ask all the questions I want to about it.

The interview will be recorded and transcripts may be made for research purposes only. Observations may be recorded in written notes or verbal recordings. These will be made for research purposes only.

I will not receive any payment to take part in the study

I know that if I change my mind about this research, I can say so at any time and the recording will be erased and not used further.

I understand that the results of the research will be reported in such a way that I or the place where I work will not be identified. However, I can be quoted (for example, when the research is published) so long as my name isn't mentioned.

[if not giving consent to be quoted anonymously, check here]

Name (printed): _____

Signature: _____

Witnessed: _____

Date: _____

Study contact information:

Don Eby

835 4th Ave. A West

Owen Sound, Ontario, N4K 6L5

519 371-2720

d.eby@sympatico.ca

9.7 Appendix 7 - 2008 amended drug, laboratory and diagnostic imaging test list

Nursing regulation 275/94

On Nov. 24, 2008, the Ontario government amended Regulation 275/94 under the Nursing Act, 1991 to include new drug schedules for nurse practitioners. Nurse practitioners were authorized to prescribe 24 more drugs (Government of Ontario, 2010).

The November 2008 additions are highlighted in red below.

This drug list reflects the recommendations the College made to the Ministry of Health and Long-Term Care. Before submitting the list to the government in fall 2008, the College consulted with the membership about its recommendations in summer 2007.

The Ministry responded to the College's recommendations with the following changes:

specified clinical indications for a number of the drugs, based on clinical rationale College members provided;

specified the "oral, sublingual" routes for isosorbide dinitrate; and

added the condition that orlistat be for renewal only.

SCHEDULE 2

Diphtheria vaccines - single entity or combination drugs

Haemophilus b vaccine

Hepatitis A vaccine

Hepatitis B immune globulin

Hepatitis B vaccine

Human papillomavirus (HPV) vaccine

Influenza vaccine

Measles vaccines - single entity or combination drugs
Meningococcal vaccine
Mumps vaccine
Pertussis vaccine
Pneumococcal vaccine
Poliomyelitis vaccine
Rh (D) immune globulin
Rubella vaccine
Tetanus vaccines - single entity or combination drugs
Tetanus Immune Globulin
Varicella vaccine

SCHEDULE 3

Acarbose - for renewal only
Acebutolol - for renewal only
Acetic acid/benzethonium chloride/hydrocortisone compound
Acyclovir (oral)
Acyclovir (topical preparation)
Alendronate sodium - for renewal only
Allopurinol - for renewal only
Almotriptan - for renewal only
Amantadine hydrochloride
Amitriptyline - for renewal only
Amlodipine besylate - for renewal only
Amoxicillin
Amoxicillin and clavulanate
Aqueous procaine penicillin G - for the purpose of treating sexually transmitted diseases
Atenolol - for renewal only
Atorvastatin - for renewal only
Azithromycin

Beclomethasone dipropionate (inhalation) - for renewal only
Beclomethasone dipropionate (topical)
Benazepril - for renewal only
Benzathine penicillin G - for the purpose of treating sexually transmitted diseases
Benzoyl peroxide
Betahistine dihydrochloride - for renewal only for the treatment of recurrent vertigo associated with Ménière's disease
Betamethasone sodium phosphate and gentamicin sulfate otic solution
Betamethasone valerate
Bisoprolol - for renewal only
Budesonide - for renewal only
Budesonide-formoterol fumarate dihydrate - for renewal only
Bupropion - for smoking cessation only
Bupropion - for renewal of antidepressant therapy
Butoconazole nitrate
Candesartan cilexetil - for renewal only
Captopril - for renewal only
Carbamazepine - for renewal only
Cefixime - for the purpose of treating sexually transmitted diseases
Cefprozil
Ceftriaxone sodium - for the purpose of treating sexually transmitted diseases
Cefuroxime axetil (oral)
Celecoxib - for renewal only
Cephalexin
Ciclesonide - for renewal only for the prophylactic management of steroid-responsive bronchial asthma
Ciclopirox olamine (shampoo)
Cilazapril - for renewal only
Ciprofloxacin extended release
Ciprofloxacin HCl

Ciprofloxacin HC (otic) [this drug has been discontinued; it will be removed from the list when the regulation is amended]

Citalopram - for renewal only

Clarithromycin (oral)

Clindamycin (oral)

Clindamycin (topical preparation)

Clindamycin phosphate (vaginal cream)

Clindamycin phosphate and benzoyl peroxide

Clobetasone butyrate

Clopidogrel bisulfate - for renewal only

Cloxacillin (oral preparation)

Collagenase

Condylline

Conjugated Estrogens

Conjugated Estrogens and medroxyprogesterone acetate

Cyanocobalamin (Vitamin B12)

Desogestrel and ethinyl estradiol

Dextrose 50 per cent (injectable preparation) - in an emergency

Diazepam (injectable preparation) - in an emergency

Diclofenac sodium and misoprostol

Dienestrol

Diflucortolone valerate

Diltiazem - for renewal only

Diphenhydramine hydrochloride (injectable preparation) - in an emergency

Donepezil hydrochloride - for renewal only

Doxycycline hyclate

Doxylamine succinate and pyridoxine hydrochloride

Econazole

Enalapril maleate - for renewal only

Epinephrine

Epinephrine hydrochloride (injectable preparation) - in an emergency

Eprosartan mesylate - for renewal only

Erythromycin and benzoyl peroxide
Erythromycin and tretinoin
Erythromycin base
Erythromycin estolate
Erythromycin ethylsuccinate
Erythromycin ethylsuccinate/sulfisoxazole acetyl
Erythromycin stearate
Erythromycin with ethyl alcohol lotion
Escitalopram - for renewal only
Esomeprazole - for renewal only
Estradiol-17 beta (micronized)
Estradiol-17 beta (transdermal)
Estradiol-17 beta (Silastic ring)
Estropiate (piperazine estrone sulfate)
Estradiol-17 beta hemihydrate
Estradiol-17 beta norethindrone acetate
Estrone (cone or cream)
Ethinyl estradiol and cyproterone acetate
Ethinyl estradiol/drospirenone
Ethinyl estradiol and ethynodiol diacetate
Ethinyl/etonogestrel (vaginal ring)
Ethinyl estradiol and levonorgestrel
Ethinyl estradiol and norethindrone
Ethinyl estradiol and norethindrone acetate
Ethinyl estradiol and norgestimate
Ethinyl estradiol and norgestrel
Etidronate disodium/calcium carbonate - for renewal only
Ezetimibe - for renewal only
Famciclovir
Fluconazole (oral) - for vulvovaginal candidiasis only
Flunisolide
Fluocinolone acetonide
Flumethasone pivalate/clioquinol compound

Fluoxetine - for renewal only
Fluticasone propionate (inhalation) - for renewal only
Fluticasone propionate (nasal)
Fluvastatin - for renewal only
Fluvoxamine - for renewal only
Folic acid
Formoterol fumarate dihydrate - for renewal only
Fosinopril sodium - for renewal only
Framycetin sulphate
Framycetin sulphate/gramicidin/dexamethasone compound otic solution
Furosemide - for renewal only
Fusidic acid (topical preparation)
Fusidic acid 1% viscous eye drops
Gabapentin - for renewal only
Galantamine hydrobromide - for renewal only
Gentamicin sulphate (otic, ophthalmic and topical)
Gliclazide - for renewal only
Glyburide - for renewal only
Haloperidol - for chronic nausea in palliation
Hydrochlorothiazide - for renewal only
Hydrochlorothiazide/amiloride - for renewal only
Hydrochlorothiazide/candesartan - for renewal only
Hydrochlorothiazide/cilazapril - for renewal only
Hydrochlorothiazide/enalapril - for renewal only
Hydrochlorothiazide/eprosartan - for renewal only
Hydrochlorothiazide/irbesartan - for renewal only
Hydrochlorothiazide/lisinopril - for renewal only
Hydrochlorothiazide/losartan - for renewal only
Hydrochlorothiazide/pindolol - for renewal only
Hydrochlorothiazide/quinapril - for renewal only
Hydrochlorothiazide/spironolactone - for renewal only
Hydrochlorothiazide/telmisartan - for renewal only
Hydrochlorothiazide/triamterene - for renewal only

Hydrochlorothiazide/valsartan - for renewal only
Hydrocortisone (topical preparation)
Hydrocortisone-17-valerate
Hydroxyzine hydrochloride (oral preparation)
Ibuprofen
Irbesartan - for renewal only
Imiquimod
Indapamide - for renewal only for hypertension
Insulin - for renewal only
Ipratropium bromide - for renewal only
Ipratropium bromide (inhaler or nebulizer solution) - in an emergency
Ipratropium bromide/salbutamol sulfate - for renewal only
Isosorbide dinitrate (oral, sublingual) - for renewal only
Ketoconazole (topical)
Ketoprofen
Labetalol - for renewal only
Lansoprazole - for renewal only
Levocabastine HCl
Levofloxacin
Levonorgestrel
Levonorgestrel releasing intrauterine system
Levothyroxine sodium - for renewal only
Lidocaine hydrochloride 1 per cent and 2 per cent, with or without epinephrine (local anaesthetic)
Lisinopril - for renewal only
Lorazepam (injectable preparation, oral and sublingual) - in an emergency
Losartan potassium - for renewal only
Lovastatin - for renewal only
Mebendazole
Medroxyprogesterone acetate (injectable preparation and oral)
Mefenamic acid
Meloxicam - for renewal only
Mestranol and norethindrone

Metformin hydrochloride - for renewal only
Metoprolol - for renewal only
Metronidazole (oral and topical preparations)
Minocycline hydrochloride
Mirtazapine - for renewal only
Misoprostol
Mometasone furoate
Mometasone furoate monohydrate
Montelukast sodium - for renewal only
Moxifloxacin
Mupirocin
Nadolol - for renewal only
Naproxen
Naproxen sodium
Naratriptan - for renewal only
Nateglinide - for renewal only for the treatment of type 2 diabetes mellitus
Nicotine patch
Nifedipine - for renewal only
Nitrofurantoin
Nitroglycerin SL or spray - in an emergency
Nitroglycerin (sublingual) - for renewal only
Nitroglycerin (transdermal) - for renewal only
Norelgestromin and ethinyl estradiol (transdermal patch)
Norethindrone
Norethindrone acetate/ethinyl estradiol
Nortriptyline - for renewal only
Nystatin (oral)
Ofloxacin
Olopatadine HCL
Omeprazole - for renewal only
Orlistat - for renewal only
Oseltamivir phosphate
Pantoprazole (oral) - for renewal only

Paroxetine - for renewal only
Penicillin V
Perindopril erbumine - for renewal only
Perindopril erbumine-indapamide - for renewal only for hypertension
Phenazopyridine HCl
Phenytoin - for renewal only
Pindolol - for renewal only
Pioglitazone - for renewal only
Pivampicillin
Podophyllum resin
PPD-B (Mantoux)
Pravastatin - for renewal only
Prednicarbate
PregVit
Progesterone
Propranolol - for renewal only
Quinapril - for renewal only
Rabeprazole - for renewal only
Raloxifene HCL - for renewal only
Ramipril - for renewal only
Ranitidine HCL (oral)
Repaglinide - for renewal only for the treatment of type 2 diabetes mellitus
Risedronate sodium hemi-pentahydrate - for renewal only
Rivastigmine hydrogen tartrate - for renewal only
Rizatriptan - for renewal only
Rosiglitazone - for renewal only
Rosuvastatin - for renewal only
Salbutamol (inhaler or nebulizer solution) - in an emergency, for renewal
or for use in spirometry
Salmeterol xinafoate - for renewal only
Salmeterol xinafoate/fluticasone propionate - for renewal only
Sertraline - for renewal only
Silver sulfadiazine

Simvastatin - for renewal only
Sodium cromoglycate (ophthalmic and nasal preparations)
Spironolactone - for renewal only
Sulfacetamide sodium
Sumatriptan - for renewal only
Telmisartan - for renewal only
Terbutaline sulfate - for renewal only
Terconazole
Terbinafine (topical use; or oral use for the treatment of onychomycosis only)
Tetracycline hydrochloride (oral preparation)
Timolol - for renewal only
Tiotropium bromide monohydrate - for renewal only
Tobramycin 0.3% ophthalmic solution
Topiramate - for renewal only
Trandolapril - for renewal only
Tretinoin (topical)
Triamcinolone acetonide
Trichloroacetic acid 50-80%, Dichloroacetic acid 50-80%
Trimethoprim
Trimethoprim and sulfamethoxazole (oral preparation)
Valacyclovir hydrochloride
Valproic acid - for renewal only
Valsartan - for renewal only
Venlafaxine - for renewal only
Verapamil extended release - for renewal only
Zafirlukast - for renewal only
Zanamivir
Zolmitripan - for renewal only

Laboratory Tests List

(Lab Regulation 682)

On January 1, 2009, the Ontario government amended Regulation 682 under the Laboratory and Specimen Collection Centre Licensing Act, adding two new entries (nos. 117-118 below) to the list of laboratory tests that nurse practitioners can order.

Revoked. [Antibiotic Sensitivity is covered under tests that are cultures.]

Chlamydia - culture isolation or non-cultural assays by fluorescence or ELISA techniques. [Includes urine chlamydia.]

Cultures - cervical, vaginal, including GC culture, Gram smear, yeast, identification (e.g. Germ tube).

Cultures - Cultures - GC culture and smear. [Includes PCR testing for GC on urine.]

Cultures - other swabs or pus - culture and smear (includes screening).

Cultures - sputum - culture and smear.

Cultures - stool culture, including the necessary agglutinations and culture for campylobacter.

Cultures - tuberculosis, including ZN or fluorescent smear.

Cultures - urine calibrated volume to include plate, turbidimetric or photometric techniques.

Cultures - throat swab, for streptococcus screen only.

Cultures - urine, screening, actual culture without identification.

Smear only, Gram or Papanicolaou stain.

Wet preparation (for fungus, trichomonas, parasites).

Cultures - fungus, including KOH preparation and smear.

Smear only, special stain e.g. ZN, inclusions, spores, diphtheria.

Parasites and ova (faeces concentration).

Parasites and ova, smear only, special stain.

Pinworm (Scotch tape prep).

Direct smears - oral, larynx, nipple discharge, vulvar.

Cervicovaginal specimen (including all types of cellular abnormality, assessment of flora and/or cytohormonal evaluation).

Sputum per specimen for general and/or specified assessment (e.g. cellular abnormality, asbestos bodies, lipid, hemosiderin, etc.). [Includes sputum cytology.]

Serology HIV Antibody.

Albumin, Quantitative. [Albumin/creatinine ratio - ACR, Microalbumin.]

Amylase.

Bilirubin, total.

Bilirubin, conjugated.

Carbamazepine, Quantitative (Tegretol).

Calcium.

Chloride.

Cholesterol, total.

Creatinine (eGFR). [For more information, visit the Ontario Association of Medical Laboratories website.]

Gamma glutamyl transpeptidase.

Glucose, quantitative (not by dipstick). [Excludes glucose tolerance test and glucose tolerance test in pregnancy]

Glycosylated hemoglobin - Hgb A1.

High Density Lipoprotein Cholesterol.

Iron, Total - with iron binding capacity.

Lead.

Lithium.

Occult Blood.

Phosphatase, Alkaline.

Phosphorus (inorganic phosphate).

Potassium.

Protein, total.

Quinidine.

Salicylate, Quantitative.

SGOT (AST).

SGPT (ALT).

Sodium.

Triglycerides.

Uric Acid.

Urinalysis, routine chemical (any of SG, pH, protein, sugar, hemoglobin, ketones, urobilinogen, bilirubin, leukocyte esterase, nitrate).

Urinalysis, microscopic examination of centrifuged specimen.

Digoxin.

Folate, in red cells, to include serum folate and hematocrit.

Estriol.

FSH (Pituitary Gonadotrophins).

HCG (Human Chorionic Gonadotrophins).

Hepatitis Associated Antigen or Antibody Immunoassay (e.g. hepatitis B surface antigen or antibody, hepatitis B anticore antibody, hepatitis A antibody).

Aminophylline (Theophylline).

Diphenylhydantoin (Phenytoin), Quantitative (Dilantin).

Ferritin.

TSH (Thyroid Stimulating Hormone).

Vitamin B12.

Alphafetoprotein screen.

Agglutination Reaction - Screen. [Includes Rheumatoid factor.]

Fluorescent Antibody Tests (Immunofluorescent Studies), Tests for serum antibodies to tissue and cell components - antinuclear.

Pregnancy Test.

Non-cultural direct bacterial antibody or antigen assays by fluorescence, agglutination or ELISA techniques.

Heterophile Antibodies - screen (slide or single tube) - with or without absorption.

Virus antibodies - hemagglutination inhibition or ELISA techniques.

Non-cultural indirect antibody or antigen assays by fluorescence, agglutination or ELISA techniques. [Clostridium difficile toxin assay, Helicobacter Pylori serology.]

VDRL.

Complete blood count (any method). [Includes WBC differential, Platelet count, RBC count, WBC count, Hematocrit and Hemoglobin.]

Bleeding time - Ivy method.

Eosinophil count.

Revoked. [Platelet (thromobocyte) count now included in 73, Complete blood count.]

Revoked. [RBC (ERC) count, excluding manual method, now included in 73, Complete blood count.]

Reticulocyte count.

Revoked. [WBC (LKS) count now included in 73, Complete blood count.]

Revoked. [Hematocrit now included in 73, Complete blood count.]

Revoked. [Hemoglobin now included in 73, Complete blood count.]

Hemoglobin electrophoresis or chromatography to include Hb A2 fraction.

Prothrombin time. [Includes INR]

Sickle Cell preparation.

Partial thromboplastin time.

Antibody Titre.

Antibody Screening.

Blood Group - ABO and Rho (D).

Blood Group - ABO and Rh Phenotype.

Valproic Acid.

Prolactin.

Revoked. [Parathyroid Hormone was deleted in June 2005 at the request of the membership and the regulation was amended by government in March 2007.]

Electrophoresis, serum - including total protein.

1,25 Dihydroxy Vitamin D.

25 Hydroxy Vitamin D.

Estradiol.

Virus Isolation.

Drugs of abuse screen, urine.

Target drug testing, urine, qualitative or quantitative.

Seminal fluid examination (complete).

Smear for spermatozoa only (post-operative).

Inhibin.

Pregnancy Associated Plasma Protein type A (PAPP-A).

Creatine Phosphokinase.

Sickle cell solubility test (screen).

Sedimentation rate.

Newborn Screening Test for: Amino acidopathies - Fatty acid oxidation defects - Organic acidemias - Endocrinopathies - Hemoglobinopathies - Biotinidase - Galactosemia.

T-3, free.

T4, free - absolute (includes T-4 total).

ColonCancerCheck FOBT.

HPV Testing.

Cortisol.

Urea nitrogen (B.U.N.).

ACTH (adrenocorticotrophic hormone).

Vitamin A.

Vitamin E.

Prostate Specific Antigen (PSA), Free.

Prostate Specific Antigen (PSA), Total.

Diagnostic Imaging Test List

Under the Healing Arts Radiation and Protection Act, 1990 and the Nursing Act, 1991, nurse practitioners can order the following X-rays and diagnostic ultrasounds:

X-rays of the chest, ribs, arm, wrist, hand, leg, ankle and foot, as well as mammography.

Diagnostic ultrasound of the abdomen, pelvis (including obstetrical) and breast.

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