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2003

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SERVICE INTEGRATION IN A HEALTH CARE UNIT: A CASE STUDY OF RADICAL CHANGE

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A Research Project
Submitted to the School of Graduate Studies
Of the University of Lethbridge
In Partial Fulfilment of the
Requirements for the Degree

MASTER OF SCIENCE IN MANAGEMENT

Faculty of Management
University of Lethbridge
LETHBRIDGE, ALBERTA, CANADA

SERVICE INTEGRATION IN A HEALTH CARE UNIT: A CASE STUDY

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Dedication

There are several people to whom I would like to dedicate this project. First of all to my parents whose guidance and support have enabled me to realize many of my dreams. To my sisters for their love of life and their ability to remind me of what is really important in life. To my Grandma who has always believed that I could do anything I put my mind to. Finally, to Ryan whose hugs have carried me through the past year and a half of tears, frustration and laughter. Thank you to each of you.

Abstract

This study focuses on the dynamics enabling or constraining radical change in a health

care unit in a rural region of Alberta. The unit envisioned change from a fragmented,

treatment-based model to an integrative, prevention-based model of health care delivery.

This research adopts a case study approach that relies on multiple sources of data

including written documents and interviews with groups such as physicians, nurse

practitioners (NP), and public health nurses (PHN), who were directly involved in the

changes towards integration. The data indicate that a number of institutional and

organizational elements facilitated and constrained the change. The findings also indicate

that at the time of the study, the unit was experiencing an oscillation between parallel

structures derived from two archetypes in order to maintain quality patient care.

Acknowledgements

I would like to recognise the support of the following people who were instrumental to the success of this study.

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List of Abbreviations

AMA- American Medical Association.

APP- Alternate Payment Plan.

NP- Nurse Practitioner.

PHN- Public Health Nurse.

RHA- Regional Health Authority.

CHAPTER ONE

Introduction

Increasing pressure for government accountability is leading to restructuring within the public sector (Ferlie, 2002). Health care is one of several public sector services undergoing considerable changes. Budget cutbacks and a societal trend towards preventative care (Mason, 1998) are pushing for shifts towards a paradigm facilitating prevention rather than the treatment of illness.

Leatt, Pink and Naylor (1996) indicate that every Canadian province is struggling with maintaining quality care while minimizing the expenditures associated with delivery of health care services. With this increased pressure, several regions across the country are beginning to look towards alternative approaches to health care delivery. O'Keeffe and Mayes (1997) suggest that current models of health care do not facilitate the cooperation of different professional groups and inhibit the development of more efficient models. The authors point out that there is a need for more integrative services (O'Keeffe and Mayes, 1997).

According to Leatt et al. (1996), integration involves the provision of a "coordinated continuum of services to a defined population…" (p. 55). Several authors have suggested that integration can lead to the elimination of redundant services and can result in sustainable cost reduction with improved quality of care (Leatt et al., 1996; O'Keeffe and Mayes, 1997; Mason, 1998).

However, the movement to an integrated model of health-care delivery is far from simple. Although there are considerable benefits to the integration of health care services (Leatt et al., 1996; O'Keeffe and Mayes, 1997; Mason, 1998), many health organizations

are resisting movements toward this type of model (Weiner, Shortell and Alexander, 1997; Caronna and Scott, 1999). Different institutional and organizational forces can constrain the ability of organizations to move from one dominant model to a different one. However, studies have reported that such changes can and do occur. The continued search for more efficient models of health care delivery makes it important to understand the conditions under which major changes towards an integrative model occur and the elements that enable or constrain these changes.

The Research

This case study research explores the dynamics of change in a health care unit. The movement from a fragmented, treatment-based model to an integrative, prevention-based model of care constituted radical or archetypal change (Greenwood and Hinings, 1988) for this unit.

An elaboration of these dynamics provides insight into how organizations change between archetypes and the factors that enable or constrain such initiatives. The purpose of this research is to examine the dynamics of radical change in a health care organization. The goal of this study is to answer the following research questions: (1) What organizational and institutional elements influenced the change in the unit? and (2) How did each of these elements enable or constrain the change?

The following chapter provides a literature review of issues surrounding radical change within institutionalized fields and is followed by a discussion of the methodology in chapter three. The analysis of the data is outlined in chapter four with a discussion of the theoretical implications in chapter five. Finally, chapter six offers the contributions and limitations of this study and provides directions for future research.

CHAPTER TWO

Literature Review

This chapter provides an overview of the literature on radical change, archetypes and the dynamics enabling or constraining radical transformations as they pertain to this study.

Theoretical Background

Weick and Quinn (1999) suggest that the basis for organizational change rests in the idea that the current structure or system fails in some way. As such, an organization must change to accommodate the needs of the system and its members. Weick and Quinn (1999) distinguish between episodic, discontinuous change and evolving, continuous change, which correspond mainly to Tushman and Romanelli's (1985) reorientation and convergence models of change. Greenwood and Hinings (1996) also distinguish between radical and convergent change, pointing out that "radical organizational change, or 'frame bending' as it is sometimes evocatively known, involves the busting loose from an existing 'orientation'" (p. 1024). However, Greenwood and Hinings (1996) further indicate that change can be defined by the "pace of upheaval and adjustment" (p. 1024) whereby evolutionary change is gradual and "revolutionary change happens swiftly and affects virtually all parts of the organization simultaneously" (p. 1024).

The primary focus of this study is on radical, revolutionary change, which, in the present case, involved a fast paced movement towards an integrative, prevention-based model of care from the fragmented, treatment-based template prevalent in the medical

field. This change entailed the alteration or replacement of existing organizational structures and systems with new ones, implying a shift between archetypes.

Recent theoretical developments related to the concept of organizational archetypes have been aligned with the institutional theory. Institutional theory relates to patterns of values and beliefs that exist at the field level of analysis (Dimaggio and Powell, 1980). While the current study involves one organization, and does not involve analysis at the institutional level, one of the purposes of the change was to challenge the prevailing template and to experiment with an alternative one. In this sense, the change was 'frame breaking' and constituted radical, archetypal change.

According to Greenwood and Hinings (1993), an archetype is "a set of structures and systems that reflects a single interpretive scheme" (p. 1052). Shifts between archetypes is difficult and involves a complex array of contextual and organizational elements in order to be successful. The contextual and organizational elements "control and propel movement from one design type to another." (Greenwood and Hinings, 1988, p. 293). The movement from one design type to another is known as a track. An important aspect of tracks

> is the rate at which design arrangements become de-coupled from the prevailing interpretive scheme and become attached to suffusing ideas and values. Tracks… are configurations of interpretive de-coupling and re-coupling. An organizational track concerns whether there is any loss of structural coherence and any displacement of underpinning interpretive schemes, over time (Greenwood and Hinings, 1988, p. 303).

Powell, Brock and Hinings (1999) state that challenging the dominant archetype is critical to an organization's changing to an alternative archetype. While on the surface this seems to be a relatively easy condition to meet, it challenges the very values and beliefs held by an organization (Greenwood and Hinings, 1996; Ranson, Hinings and

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Greenwood, 1980). Values and beliefs serve to provide the foundation for the structure of the organization that is persistent (Ranson et al., 1980). In order for an organization to make radical changes, the values governing the structure of the organization must also change (Amis, Slack and Hinings, 2002).

Several authors have pointed to the role of the professions in determining the values that govern behaviours and structures in organizations. Abbott (1988) indicates that a profession has an established association with rigid rules governing its membership. Professional associations govern and perpetuate the ideas, values and belief systems of the professional group (Scott and Backman, 1990). Greenwood and Hinings (1996) indicate that professional groups can obtain legitimacy when they conform to what is seen as an appropriate form or model. The impact of professional associations on the values and beliefs held by their members can make radical, archetypal change in an organization difficult to achieve. However, such changes may be necessary to respond to internal and external pressures (Powell et al., 1999). While external pressures can create a demand for change to occur, internal pressures must also demonstrate a commitment towards challenging the existing template (Powell et al., 1999).

Powell et al. (1999) state that "entrepreneurial and innovative actions by professionals and their organizations interact with external changes to produce new operating environments." (p. 12). Restructuring is more likely to occur when the organization's interests diverge from the institutional context (Oliver, 1991). Entrepreneurial and innovative organizations may challenge the traditional structures and drive the need for a different method of operating (Powell et al., 1999).

In the highly institutionalized medical field there is a focus on developing the distinction between professional groups (Scott and Backman, 1990). Denis, Lamothe, Langley and Valette (1999) describe a trend of re-organizing the current system of health care delivery in Canada from a provider-driven archetype focusing on treatment to a population-driven archetype focusing on the integration of care. Denis et al. (1999) point out that in this context, certain groups of professionals may see a way of increasing their level of influence over other groups through a new health care model. Groups who have more power are able to control what changes, if any will be made to their role and ultimately the success of those changes. Although there may be differing levels of power, collaboration between groups can occur if the change provides the opportunity for other groups to obtain additional power or it is in the interest of the dominant group to make significant changes to the existing system (Greenwood and Hinings, 1996).

Traditionally the dominance of physicians enables them to negotiate with other groups of professionals and governing bodies to secure the resources (Denis et al., 1999) necessary to make changes within the organization. Resources can take many forms including financial funding, access to personnel or programs and legitimacy, all of which can impact the ability of the organization to make radical, archetypal change.

Denis et al. (1999) specify that political, ideological, economic, and technological pressures facilitate changes in the existing orientation of health care organizations. While some of these pressures help precipitate change, other pressures enable the organization to pursue persistently and to achieve radical change (Greenwood and Hinings, 1996).

Chapter three outlines the methodology used to investigate these dynamics and describes the case chosen for this study.

CHAPTER THREE

Methodology

This research adopts a case study approach to explore the dynamics of radical change in a health care unit that envisioned a movement from a fragmented, treatment-based model to an integrative, prevention-based model of care. The study is driven by the following research questions: (1) What organizational and institutional elements influenced the change in the unit? and (2) How did each of these elements enable or constrain the change? The previous chapter outlined the literature surrounding archetypes and radical change. This chapter focuses on the methodology utilized to answer the research questions. It will describe the research approach, the case, the sources of data and the steps taken towards analyzing the data, and presenting the findings from the study.

Research Approach

Eisenhardt defines the case study as "a research strategy which focuses on understanding the dynamics present within single settings" (1989, p. 534). The case study approach is often used when the researcher has little control over behavioural events in a contemporary setting (Yin, 1994). It also "copes with the technically distinctive situation in which there will be many more variables of interest than data points" (Yin, 1994, p.13). Given the complexity of the change and the need to include several health care groups in the analysis, the case study approach is well suited to understanding the elements enabling or constraining the changes in the health care unit. Case studies can be used for a variety of purposes (Eisenhardt, 1989). This study aims at the application, elaboration and/or extension of concepts related to enabling and precipitating dynamics of radical change as they pertain to shifts between archetypes.

The present study investigates a health care delivery unit in rural Alberta. The system of health care delivery in this rural area includes a physician owned and operated medical clinic, a hospital, a public health unit, and an extended care unit operated by the provincial government through a regional health authority (RHA). Health care delivery within this region has moved towards increasing the provision of integrated services offered by different professionals. The physicians in the medical clinic cooperated with the RHA to initiate a pilot project aimed at implementing organizational changes that challenged the dominant template prevalent in the medical field. This study focuses on the changes that occurred in the physician-operated health care unit.

Physicians were motivated to identify and implement an alternate model of health care in response to a trend whereby services and funding were being diverted to larger centers. As one participant indicated;

> If clients go elsewhere outside of our community, then a certain amount of money is taken out of that pot. So [the physicians] have to work very hard to maintain the services, to keep the clients coming back to them.

The fragmented, treatment-based model of care that prevailed before the changes raised concerns amongst health care practitioners, specifically physicians, about the quality of health care. With the cooperation of the RHA, physicians investigated the viability of an integrative, prevention-based method of care. Public meetings and health care professional forums were utilized to identify key objectives to guide the reform of health care delivery within the community. Table 1, adapted from Williams, Dastmalchian, Boudreau, and Janz (2001) outlines the envisioned changes.

Table 1- Elements of the fragmented, treatment & integrative, prevention archetypes

Description	Fragmented, Treatment-Based Model	Integrative, Prevention-Based Model
Interpretative	*Raison D'Etre*: • Treatment of patients who are ill *Principles of Organizing*: • Professionals specialize in specific areas of health care for specific problems • Autonomous practice by physicians • Little communication between practitioners • Assessment and treatment by physicians only • Primary patient care by physicians • Little physician involvement in administrative tasks *Evaluation Criteria*: • Success in treating ill patients	*Raison D'Etre*: • Health care promotion and prevention • Treatment of patients who are ill *Principles of Organizing*: • Integrative care focusing on the education and care of the patient • Team based approach to patient care • Extensive communication between practitioners to offer integrative services • Assessment and treatment at varying levels by physicians, PHNs and NP • All practitioners play a role in patient care • Physician involvement in administrative tasks *Evaluation Criteria*: • Health care and wellness • Population health measures

Structural	*Physical Location*: •Services dispersed between different locations within the community *Compensation*: •Fee-for-service matrix for physicians *Information Systems*: •Each location keeps patient records •Physician access to pertinent patient information *Service Delivery*: •Focus on treating illnesses •Limited focus on prevention •Limited education by both physician and PHNs, each working independently of the other	*Physical Location*: •Primary care services offered within one centralized location *Compensation*: •Flat fee for patient population *Information Systems*: •Patient records centralized •Universal access to pertinent patient information *Service Delivery*: •Patient treatment, monitoring, and education shared by different professionals including physician, NP, registered nurse and PHNs, all co-located in physician owned clinic •Institution of education, prevention and treatment programs (e.g., well baby, asthma clinic, diabetes clinic) jointly designed and administered by the different professional groups

As Table 1 indicates, changes were envisioned in values, structures and systems. This project was seen as being distinctive from other integration initiatives because of the scope and magnitude of integration undertaken. One respondent stated:

> If you've only picked out one piece of the project, it's not gonna really show what it can do. You have to put the thing together in order to really drive it. And that's what makes it distinctive, it's bigger maybe than we should have done, because it's so much. And maybe we could have had more success if we did it smaller. But on the other hand it is distinct because we've tried to put as many of the pieces together as we could. I don't think it would work any other way.

Respondents described the change as being significant and distinctive in terms of scale and magnitude. In fact, since the change involved the interpretive schemes, structures and systems, it can be classified as a radical change.

Data

Cases rely on multiple sources of data (Eisenhardt 1989; Yin 1994). Patton (1999) indicates that multiple sources of data can provide insight, context and can increase the overall credibility of the findings. The data for this study are derived from interviews as well as a variety of written documents including organizational charts, minutes of meetings and regional newsletters. In order to ensure the confidentiality and anonymity of the case and respondents, identifying characteristics were removed.

Primary Source of Data. The main source of data consists of nineteen interviews with different groups of health care professionals including physicians, registered nurses, a NP, PHNs and a project co-ordinator. Table 2 provides the number of interviews per group.

Table 2- Number of interviews per group of practitioners

Group	Number of Interviews
Physicians	8
Nurse Practitioner	1
Public Health Nurse	3
Clinical Nurse	3
Home Care Nurses	3
Project Co-ordinator	1

These groups were selected because of their involvement in the changes and/or because the integration of services directly affected their roles and responsibilities.

The interviews were conducted before I became a member of the research team. They were conducted by three members of the larger research team as part of a three year research project. The interviews were conducted two and half years into the project and were structured to address a number of issues including structural factors (i.e., incentive systems, information systems, and co-location), roles, changes in roles, changes in the organization, individual and group experiences with the changes and the factors facilitating or inhibiting changes. Examples of the types of questions asked are provided in Appendix A.

These interviews are particularly suited to the purpose of the present study since they provide information on how changes are viewed by individuals from different groups as well as information on factors that facilitate and hinder integration. Although I was not involved in the process of conducting the interviews, I played the major part in the analysis of the data presented in this study as outlined in the next section.

Other Sources of Data. Additional sources of data were utilised to understand the context of the changes occurring. They also serve to verify the extent to which various groups are involved throughout the changes towards integrative care. These sources include documents such as internal memos, minutes of meetings, and organizational charts. Archival records such as regional newsletters and newspaper articles were also utilised for this study.

Analysis and Presentation

Eisenhardt suggests an early identification of the research question and possible constructs, although it is important to recognize that "both are tentative in this type of research" (1989, p.536). The analysis process is iterative and involves travelling back and forth between the data, extant literature and the emerging theory (Elsbach, 1994).

The initial step in the analysis of the gathered data involved the reading of all printed interview transcripts and written documents in their entirety. Each document was then re-read while making labels or short descriptions in the margins of the text. Miles and Huberman (1994) indicate that this process provides a deeper understanding of the data and can suggest new interpretations or connections to other data.

After reading and making notes of each interview transcript, a broad list of codes was generated. This list of codes was then modified based on discussions with my supervisor who was also working independently with the same data set. After condensing the initial list of codes, five researchers working as a part of the research team and working independently of each other, met to discuss the code lists that were generated. Through extensive discussions, the researchers co-generated a list of preliminary themes as well as a definition for each theme. These researchers, working

independently used the code list to code a section of the same interview. The section of coded text was then compared and discussed leading to further revision of some codes' boundaries. Patton (1999) indicates that independently analyzing the same data to compare findings is critical in reducing potential bias that can come from a single perspective.

The co-generated list, as displayed in Appendix B, was then used to code each interview transcript and written document. To facilitate the storage and retrieval of quotations during the analysis process, ATLAS was used to assign codes to specific sections of text and retrieve the quotations created.

The final stage of the data analysis process involves an in depth analysis of the coded data to identify themes, patterns and possible explanations for phenomena emerging from the data. I traveled back and forth between the data and the emerging theory looking for evidence that supports or disconfirms the emerging theory and modifying the theory as disconfirming information became evident. Lengthy discussions with my supervisors were undertaken throughout this process. Several findings are summarized in tables as advised by Miles and Huberman (1994). The use of extensive quotes ensures that the reader is adequately able to interpret the data verifying the explanations provided (Patton, 1999). The findings from this study are compared with the extant literature to allow for the elaboration, extension and/or modification of pertinent constructs (Eisenhardt, 1989).

The next chapter presents the results from the data analysis process.

CHAPTER FOUR

Analysis

This chapter is broken intro three sections and outlines the themes that emerged from the data analysis process. The sections discuss the impetus for the change, the dynamics of the change process and the outcomes of the change.

Impetus

In order to understand the factors that enable or constrain the changes in the health care unit it is necessary to provide some description of the impetus for the project. The initiative was conceived by one of the senior physicians and supported by senior administrators within the Regional Health Authority (RHA). In response to the diversion of services from rural areas to urban centers, physicians were motivated to address concerns regarding the stability of the existing health care system in the community. As such, physicians were required to be innovative to ensure the longevity of the health care unit within the community. This encouraged physicians to approach provincial governing bodies to address funding concerns. One respondent indicated;

> It was physician driven to start with. It was their idea. They were looking for some way that they could keep clients [within the community] and provide the best service that we could possibly provide…It did originate with physicians and it originated with Alberta Health Care, working collaboratively with them to come up with some way of keeping people in their own community.

Process Dynamics

The process dynamics are comprised of two components: institutional and

organizational elements. Each of these elements is analyzed in detail. Tabular

presentations summarize the findings.

Institutional Elements

The institutional elements refer to the dynamics emanating from professional

groups and the governing bodies who have a vested interest in the changes in the health

care unit. Table 3 provides a description of the impact of each element on the change.

Table 3- Institutional elements

Institutional Element	Positives	Negatives
Professions	• Nursing professionals' adherence to a prevention based model of health care delivery	• Physicians' adherence to an autonomous professional model • Lack of an alternative professional model made it difficult for practitioners to work out details of the transition to a more integrated model
Governing Bodies and Institutions	• Support from provincial and regional bodies provided resources and legitimacy to the project • Resources provided by governing bodies increased flexibility and the ability to experiment and innovate	• Some government support was limited to projects that could ultimately be generalized to the rest of the region

Professions

Each group of health care professionals adheres to specific regulations and rules established through professional associations. These regulations guide the conduct of health care professionals and define the beliefs, roles and responsibilities of the practitioner. Some of these beliefs are explicitly taught through the practitioners' education while other aspects are reinforced through other members of the group. One physician stated:

> We're taught some things explicitly, the code of ethics and medical care generally. And we're taught some things implicitly. One of the implicit things is that the physician should always be in charge. And the physician always works autonomously. And I think that there are some very strong cultural paradigms around doctors and what they do.

Professional affiliations governing behaviour can make changes to health care delivery more difficult. Educating health care professionals is a lengthy process and involves associations, educational programs, conferences, and tradition. Professional values and beliefs are strongly rooted in tradition and are difficult to change. One physician stated:

> It seems that we're trying to take existing ways of practicing that we've sort of been handed down from years and years… and we're trying to apply those to a new environment, a new world if you like. And it doesn't always work that well.

The professional associations for particular groups of practitioners can impede the progress of specific initiatives within the health care unit. One example of this influence is the Alberta Medical Association (AMA) which represents the interests of physicians. One physician used the AMA as an example of which groups have a stake in the success or downfall of the project. "The Alberta Medical Association is leery about this project. Physicians tend to be right wing and this project smacks of socialism. The AMA advocates strong physician autonomy and fee-for-service, that's their mandate."

On the other hand, the nursing profession adheres to prevention based values which facilitated the changes for PHNs and the NP. One PHN stated:

> You know there's still going to be sick patients but if you can keep people so they are looking after themselves better by keeping their cholesterol and their blood pressure and stuff better under control, then you don't see them as sick.

The availability of an alternative model of health care could provide a concrete example about the benefits, drawbacks and feasibility of an integrated system. Not having a concrete example of what integration looked like made the transition more difficult for health care professionals. One physician indicated:

> Well the most powerful is an actual working example that you can easily read and see. A clinic where things really do work differently and physicians could come and spend a week and could actually see it happening differently I think is the most powerful. And that's one of the things about this project that's been perhaps the most difficult.

Governing and Funding Institutions

The funding institutions provided resources and legitimacy to the innovation undertaken. Through the cooperation of the province and region, the project was viewed by health care professionals as being a legitimate opportunity to lead changes that could become mandatory in the future. One physician pointed out:

> We decided that we should try something different because we think that health care change is going to come anyway. So why not be on the cutting edge of things, try something different. And we think some of those changes might be imposed anyway. So why not be in a position to have tried them out? Plus it gave us an opportunity to implement some ideas that we wanted to do, be innovative.

Funding institutions played a role throughout the development and implementation of the project within the health care unit. The federal and provincial government, in cooperation with the health region, funded a number of aspects of the

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project. These groups were identified by respondents as having a vested interest in the project and its outcomes. One physician stated:

> Well they [RHA and provincial government] keep coming forward with, Mazenkowski is now, and all of those guys are saying- this is what we need to do. So they've got a political vested interest in saying that the Project was a success. I think that they're going to say- oh it is great. And if it isn't great, and they can't substantiate that, I think they'll be quiet…I think we're still going to see some pressure by the government to say this is the way it needs to go. And pressure from the profession to say no.

Although the RHA provided resources for the changes to occur, some of the resources were limited to elements that could be implemented throughout the region. For example, the information system changes that were implemented in the Project were changes that fit the needs of the region more so than the needs of the health system in the rural region where the Project occurred.

In brief, established professional values and norms of physicians and restriction of initiatives to implementation applicable on a regional level constrained the changes. However, the nursing professional values and the legitimacy and resources provided by governing agencies facilitated the changes.

Organizational Elements

At the organizational level, several structural/systems and social dynamics impacted the changes in the health care unit.

Structural/Systems Elements

Three components comprise the structural/systems elements: co-location, information systems and payment system. Participants identified these elements as being milestones toward the integration of services. Table 4 provides a description of each element and its impact on the health care unit.

Table 4- Structural/systems elements

Structural/ Systems Element	Description	Positives	Negatives
Co-location	• Bringing of different health care professionals into the same location (the physician clinic) to provide health care services	• Increased communication between health care professionals • Facilitated team management through increased availability of different professionals • Increased access to various services for patients at the same location	• Lack of space to facilitate all groups
Information Systems	• Recording all patient information into an electronically based system. • A system of communication for health care professionals	• Increased access to information for most groups • Computer literacy influenced comfort level positively	• Introduction of several alternative software programs within a short period of time led to frustration • Lack of computer skills slowed utilization of information systems • Available software programs had limited capabilities and were not adequate to meet complex user needs
Alternate Payment System	• Use of a salaried system unrelated to number of patients seen • Elimination of fee-for-service as a method of paying physicians for essential services	• Facilitated physician led initiatives to implement support services, co-location and information systems • Allowed physicians to spend more time with patients • Improved efficiency through elimination of repeat visits to physicians	• The need to see a large number of patients per day was eliminated, causing increased waiting time for patients

Co-location

Co-location involved placing dispersed health services within the same facilities. Thus, such services as immunizations, newborn services (well-baby), asthma clinics and diabetic clinics, which were previously dispersed in the community, were moved to the physician clinic. Prior to the integration project, the NP role did not exist. To facilitate the delivery of educational and patient services, the NP was placed within the health care unit.

Co-location is primarily seen as a positive change toward the integration of services. All groups indicated that co-location facilitated communication between different groups of health care professionals and provided patients with easier access to different services. As one physician indicated:

> Well, I think it facilitates the integration of services when there's co-location. I think, as much as a person would like to think that you can communicate, and you can communicate fairly readily, the communication is enhanced the closer you are physically in the health care system. And for people, it makes it easier for them to access the services.

Respondents attributed increased communication to being located in the same facility. Other participants went on to indicate that co-location made it easier to discuss treatment and status of individual patients with more detail and quality. With more discussions between health care professionals, attempts to effectively manage patients on a team basis also occurred more frequently. As one respondent indicated: "I know before [integration] we've always thought that we worked together, but we kind of worked in our own little stovepipe."

Although each group agreed that co-location was a positive change for the health care unit, concern was expressed about the quality and availability of adequate space to offer co-located services. In addition to concerns regarding the quality of space, some

people believed the health care unit to be less inviting and did not feel as though they were a part of the new group.

Information Systems

Information systems involved implementing an operating system allowing joint electronic charting, recording and managing patient information. Three successive operating systems had been implemented since the inception of the project.

All groups indicated that although there were frustrations associated with the introduction of information systems, considerable benefits were realized. One benefit included improved access to information pertinent to patient management. The information systems enabled various health care professionals to access and record patient information. In allowing different professionals to access pertinent information, professionals were able to respond more quickly to patient needs. Physicians indicated that it was easier to access pertinent patient information, allowing for more time to address individual questions or concerns. One physician indicated:

> I mean if you can look back in the system and see exactly which medication the patient's on. You can look back and find results of blood tests. You make better decisions. And also, it's a faster access to that information. So you look for a lab result and it's right there. Well you're not spending five minutes in your office, five minutes trying to flip through the chart to find that information. Well, that's five minutes that you can be with the patient.

Other health care professionals also indicated that information systems improved access to critical information allowing them to follow up with patient lab tests and treatment schedules, and thus, improved patient management. It enabled members from different groups of health care professionals to identify tasks that had already been completed and issues that needed to be addressed. One respondent indicated:

> I think it's been good that we have access to the information on our clients because not only can we look up tests that have been done, we can look up any referrals to other specialists. And if we notice something, like especially in the lab results, we can draw it to the doctor's attention if it hasn't been done yet.

Although participants indicated that the implementation of information systems had been beneficial, individual comfort levels and frequent changes to programs increased the level of frustration. Learning new systems was considered cumbersome, especially for those who had little or no experience with computers. The frequent changes contributed to levels of frustration, however, workshops and courses helped overcome most resistance towards the implementation of information systems. One respondent indicated:

> Everybody found it a little difficult, yah. And then they changed. So then it was a little bit more difficult cause you're used to one. And they changed back to the same, and now I guess we're going to change again. But yah it was just difficult because we weren't computer literate. Most of us weren't. So it was just kind of stressful to begin with.

Although each group agreed that not utilizing information systems would be a step backward, currently there is no system that adequately meets all health care needs. One physician indicated:

> It's a software project designed from the outset to be something where you record care given. And that's not what we need. The focus needs to be far, far more on management issues, not documentation issues… So to me the key features would be the ability to have interactive guidelines, the ability to communicate with different team members, the ability to follow problems over time, and amongst multiple team members.

Payment System

The alternative payment system is a method of paying physicians for essential services and replaces a fee-for-service matrix predominant in the field. The alternate payment plan (APP) is a salaried system regardless of patient volume or complexity and

frequency of patient visits. Although physicians are the group primarily impacted by this change, the APP allowed the introduction of the NP and also impacted other health care professionals on a limited scale.

There were mixed views among physicians regarding the APP, however, the majority of physicians viewed the new system as being beneficial to their practice. Physicians indicated that the APP allowed them to approach patient care differently. One physician indicated:

> The APP looks at it from a different perspective in looking at we get paid a certain amount to look after the patient. And so we want to look after this patient in the most efficient way possible. And looking at disease prevention as well as disease treatment. So that's given us a different perspective on the way we approach it. And so we are able to delegate responsibilities to other professionals, where we didn't before because if we did then we wouldn't actually get paid for those services. So that's changed quite a bit.

Patient volume is critical to physician income in a fee-for-service matrix and would prevent physician participation in the development of integrative programs, administrative tasks and the delegation of specific responsibilities. With the APP, physicians actively participated in meetings and administrative initiatives, were more content and satisfied with rural practice, and were more likely to attend conferences or become involved in the profession at a higher level. One physician stated:

> If I started watching patient numbers, then I'm not going to be going to meetings and so on. It's a waste of my time. It really is because it's time that I wouldn't be paid for. Whereas right now it's time that I'm paid for.

The APP facilitated the introduction of the NP into the health care unit. With the introduction of this role, the NP was responsible for diagnosing and treating some categories of patients with an emphasis on education. Prior to the APP, the NP would have been in direct competition with physicians, who would have an interest in seeing the biggest number of patients possible.

Without concerns for patient volume, the APP allowed physicians to spend more time with individual patients. Patients have varying needs and require different periods of time to address specific concerns. The APP enabled physicians to spend more time to attend to the individual needs of complex patients. One physician stated:

> I'm focusing more on trying to be more comprehensive and I've actually done a lot more work on communication skills. And so the style of practice has changed for the better, I think. Certainly I feel much more satisfied professionally when I get more comprehensive, spend more time, and clearly make sure that the patient and I deal with the issues appropriately.

The APP also facilitated efficiency through the delegation of specific tasks and responsibilities from physicians to other health care professionals. This eliminated repeat visits with patients whose issues could be dealt with through different health care professionals. One respondent indicated: "And within that learning curve, they learned that they don't have to duplicate what the nurse has already done. The physicians don't have to. So I think that that's been positive. It's saved time. "

While physicians indicated that they were able to view patient care and their practice differently, they did not realize some of the anticipated benefits of the APP. Some physicians indicated that their workload changed because of different patient volumes, extensive involvement in administrative projects, and staffing changes. Physicians indicated that the APP increased patient loads for some of the physicians due to other physicians spending more time with patients. This impacted patient wait times because some physicians in the clinic were not seeing as many patients as they would under a fee-for-service matrix. One physician stated:

> Well you know before the project there were some doctors who don't see as many patients. Don't see the numbers. You know they just don't handle a lot of extra stuff…But it was made worse by the project in the first six months…some of the physicians who felt like… they could definitely spend more time…. There's no volume incentive anymore without fee-for-service.

In brief, the structural/systems elements facilitated availability of and communication between practitioners through co-location, and increased access to patient information due to the availability of information systems. In addition, implementation of the APP encouraged physician involvement in program design and improved efficiency of patient care. Although considerable benefits were realized, lack of space, repeated changes to software, low computer comfort levels and high patient volumes constrained the changes.

Social Elements

Social elements reflect aspects of the change involving interactions between groups of health care professionals. Social elements consisted of leadership and participation, the building of trust between practitioners, the maintenance of physician control and power and the negotiation undertaken. Table 5 provides a description of each element and its impact on the health care unit.

Table 5- Social elements

Social Element	Positives	Negatives
Leadership & Participation	• Practitioners served as leaders within their group for various integrative projects (e.g., well baby, asthma, etc.) • Facilitated implementation and commitment to changes • Facilitated role modification of health care professionals • Project coordinator expedited change process while practitioners continued daily responsibilities	
Trust	• Increased familiarity of professional roles • Increased personal familiarity of practitioners • Facilitated the expansion of roles within the health care unit	
Power & Control	• Delegation of responsibilities to other practitioners reduced duplication improving efficiency • Physicians controlled the pace and extent of changes in the health care unit • Physicians controlled patient referrals into support programs	• Relinquishing aspects of practitioner roles was difficult
Negotiation	• Consensus attained pertaining to changes in practitioner roles • Facilitated role expansion and allowed practitioners to retain key aspects of their role	

Leadership and Participation

Leadership was evident at more than one level in the project. Having physicians and other practitioners lead specific projects, such as the institution of a diabetes program, a well baby clinic, an asthma clinic and others, facilitated implementation through commitment to the change. Physicians indicated that if they were not involved in specific initiatives, it would be difficult to support them. One physician stated:

> And those kinds of programs would grind to a halt here, at least from the physicians' perspective. There wouldn't be physician input. And I suspect that if you take the physician out of that initiative, it probably wouldn't work.

By being involved with creating these initiatives, physicians had an interest in ensuring success of the project. After investing time and energy, professionals became committed to the changes. One physician indicated: "I don't know if you could say vested interest, but I wanted it to work because I put some time and effort into this program. And I think I'm personally involved in wanting it to work."

Although physicians primarily led teams, members from other professional groups also served as leaders within their group. Representatives from health care professional groups served on different integration committees and reported relevant information back to their colleagues in the profession. Members of groups were also responsible for leading specific components of larger initiatives. Their leadership of, or participation in integrative activities, increased their commitment to the change. One representative indicated:

> I got involved with a chronic disease group, which is a multi-disciplinary group through the project. I… kind of keep an eye on the clinical practice guidelines and evidence based practice around the identified chronic diseases that we wanted to initially work on. And so I'm championing that.

Participation in the planning and implementation stages also facilitated changes to a more integrated model. Involvement allowed health care professionals to represent their group's interests while being able to modify their role in accordance to key objectives. One physician stated:

> When I came here there was the expectation that I would do something. And it was a positive expectation, not a bad one. And I had a choice to bow out if I wanted to. But they said you could do this, you could do that. And I was invited in. And I think that's constructive. Because if you're invited in and you're part of something you tend to, it tends to drive change and help the transition.

Participants also recognized the value in having a project coordinator. Health care professionals indicated that a project coordinator allowed changes to occur more quickly. The role of the project coordinator was to facilitate the objectives of the health care unit while other health care professionals carried out daily responsibilities. One respondent indicated:

> I think if any group tried to actually do this on their own without somebody actually being dedicated, and not pulled away by another job, but dedicated to doing this, it wouldn't happen. [The project coordinator has] got skill levels in many areas around research as well as organizational change. And I mean that's the whole deal, we're going through organizational change. And she has really facilitated just a lot of the process. And when there's a fire, she's there to help put it out. And I think that's really important.

The project coordinator's tasks involved keeping groups informed of the progress of the changes and facilitating completion of tasks required to implement specific initiatives. One physician responded:

> And there's lots of demands on your time. I think that one of the things that worked in our specific instance was that we had a project manager who was able to take issues and move things forward… Because we can't do a lot of the leg work that's needed to talk with other people sometimes and facilitate those changes.

Trust

Trust between health care professionals was identified as a critical component to the implementation and success of the project. Trust between health care professionals was facilitated through increased communication, involvement through the planning process, access to information and familiarity with respective health care professional roles. One physician indicated:

> I experienced it to realize what the roles are. I think it's understanding again the details of what exactly this means. You know [the nurse] will do this and I will do this. I think that's important and necessary.

Respondents went on to indicate that it was equally important to know the health care professionals on a personal level. Individual knowledge of health care professionals facilitated trust between practitioners through personal associations. One physician stated:

> But it's not enough, I think the experience here really has been because I know the person, and because I feel an affinity for her as a part of the team, I think that the trust comes from that. And I think if you don't have that level of trust that comes from personal knowledge, it's probably the biggest limiting factor.

Professional and personal familiarity of health care professionals was facilitated through co-location. Co-location increased the daily interactions between health care professionals and provided the opportunity for practitioners to demonstrate their skills on a professional level and develop comfort with one another on a personal level. One physician indicated:

> Having [the nurse practitioner] here means that I get to see her and bump into her in the passage and talk to her every day. And I've got to know her and built that trust…And that's true of the public health nurses too.

Trust also facilitated the development of non-physician professionals' role within the health care unit. For example, trust, allowed the NP to play a patient role and

facilitated the expansion of her role over the course of the project. One physician indicated:

> And the nurse practitioner that we have, once I got to know her, I trusted her very well. She's a very experienced person [who has been] basically almost functioning as a general practitioner anyway. So there was a lot of trust we had in her. And so there was not a lot of worries I had about any transitions.

Power and Control

Throughout the project, physicians controlled the pace of change and determined which initiatives would proceed. The following quotation, for example, refers to decisions about information systems.

> I guess mainly it was the physicians that made that decision. It wasn't so much the, it wasn't an integration team decision… I guess probably because it was the physicians that actually it impacted the most in terms of their day to day practice, the use of it. So that's who we basically brought these recommendations to.

> In addition to controlling what changes occurred, physicians controlled referrals to other health care professionals and programs within the health care unit. Physicians referred patients whose needs could be supported through specific programs in the health care unit (e.g., asthma education). Physicians suggested that patients were more responsive to these programs because of physician recommendations. As one physician indicated:

> And I think the fact that the physicians… are trying to enable patients to see other professionals such as nurses and things like that, and we're accepting that. I think that patients have been accepting of that well. So if it's recommended by the physician, they'll sort of go.

> Relinquishing aspects of the patient relationship was difficult for physicians. Control over the patient relationship defined the physician and their role in traditional health care models. New models of health care require physicians to utilize other health

care professionals for specific aspects of patient care. This reduced aspects of the physician relationship with patients. One physician stated:

> There was a relinquishing of responsibility to other providers like nurse practitioners, public health nurses. There was this feeling that you lost some of the relationship with patients because now they were seeing other people. And we weren't in absolute total control of everything. And that relationship was difficult.

This issue was resolved by devising roles for other health care professionals that did not overlap with the physicians' role, and by delegating to other professionals those tasks that physicians did not deem to be central to the performance of their role. One physician stated:

> Our nurse practitioner came, and for six months we said: Don't see any patients. Just build the guidelines and the protocols and your role. Tell us where you want to fit and what you want to do… She's got her own piece of the pie. It's not the same piece of the pie. So that was kind of revealing to all of us to see that. And I think also, maybe it also was good for us to kind of ease into it. Because that piece of all the pieces was the most threatening.

Through delegation, physicians were able to control which aspects of their role would be relinquished to other practitioners. Delegation had the benefit of reducing the number of repetitive tasks occupying considerable amounts of physician time (e.g., blood pressure follow up visits). Through the elimination of redundant services, physicians were able to manage their time more effectively. Physicians indicated that it allowed them to spend more time with complex problems and allowed them to think about their practice differently. One physician indicated:

> I can deal with more problems more effectively because I don't have to be dealing with every issue myself. And that was hard for me, and now I certainly give [the nurse practitioner] a lot more time. And rightfully so, because I recognize the value of having somebody good enough to deal with those problems.

Negotiation

Duplicated services were eliminated after negotiating who would be responsible

for their execution. This approach involved groups of health care professionals

negotiating the changes in a series of meetings. The focus of these meetings was to attain

agreement about the proposed changes. One physician stated:

> Well we actually, pretty up front said you know okay let's list the things I do and the things that you do, and those that are duplicated, let's negotiate who does it. And so it was clearly a sit-down negotiation. And there's clearly some discomfort in that approach. But, and there's still some discomfort around it. It's not complete. But it's certainly much more comfortable working together now.

Negotiating changes to the roles and responsibilities facilitated the expansion of

the NP and PHNs roles. Groups were able to retain aspects of their positions that defined

key elements of their role. One respondent stated:

> We basically looked at what each professional was doing before. And then we said well where's the duplication? And then what we did was we agreed to leave the nurse to do this part of it, and the physicians do this part. So it was through looking at what we had done before and then agreeing upon what we would do for the future.

In brief, leadership and participation, trust, power and control and negotiation

enabled changes within the health care clinic through the development of commitment,

expedition of changes with the project coordinator, increased professional and personal

familiarity of practitioners, and expansion and delegation of roles and responsibilities to

reduce duplication.

Outcomes

The outcomes represent the impact of the changes on the health care clinic under

investigation. Tangible differences between the past system and the system prevailing at

the time of the interviews were evident for the participants and researchers. Table 6

identifies some of the differences between the unit prior to the changes and the unit at the time of the study.

Table 6- The health-care unit before the changes and at the time of the study

Description	Fragmented, treatment-based model	(Partial) Integrative, prevention-based model
Interpretive	• Autonomous practice by physicians • Little communication between practitioners • Assessment and treatment by physicians only • Primary patient care by physicians • Limited focus on prevention and education • Little physician involvement in administrative tasks	• Increased interaction between practitioners but physicians still act autonomously when support structures are absent • Increased communication between practitioners • Physicians and NP treatment of patients • Physicians refer to specific programs while maintaining control over patient relationship • Increased focus on prevention and education, but treatment still a major component of physician role • Increased physician involvement in administrative tasks
Structural	• Services dispersed between different locations within the community • Physician access to pertinent information • Fee-for-service matrix for physicians	• A variety of services available in a single location (physician-operated clinic) • Increased access to patient information for different professional groups • Salaried payment system for physicians

Physicians indicated that prior to integration, they were relatively autonomous. However, over time they came to see their role differently, thinking less independently and involving other health care professionals more frequently. One physician stated:

> The role of autonomous physician, I mean certainly my role as a physician has changed for good since I've come here. I tend to think less autonomously. I tend to include more people. I tend to broaden the number of occasions when I try and include other people. And I think I've learned and this experience with the project has taught me a lot academically.

Although physicians indicated that they tend to think less autonomously, the inclusion of other practitioners was largely dependent on the availability and existence of programs that support integration. One physician made the following statement:

> As I'm working with a patient with asthma, I'm also considering myself part of a team. And I'm referring asthma patients to educators to involve them in the management of this patient…Then I walk in the next room and I see somebody who has attention deficit disorder say. Something which really there are no support structures for. And I walk into that situation and now I'm an autonomous physician and I do it myself. And I'm flipping between these roles, depending on the patient problem.

Respondents indicated that integration included improved communication among health care providers, less repetition of services through delegation to other practitioners and more convenient access for patients by offering a variety of services in a single location. They also pointed out that integration improved quality of care. Working collaboratively with other health care professionals ensured adequate information was provided and reinforced to patients. As one physician stated:

> Now I know that I'll teach it and the educators will teach it. Now there's two people. Now my influence has increased by the power of two. And then of course as you add a further person reinforcing the same message, I feel my influence has increased again. I also feel that I can do a better job. I can put in, being a part of the team, I can put in personally this time that I would to, if I did it all myself. And yet the quality of the job is better.

Efficiency was also realized from changes in the unit. For example, changes to the physician payment system encouraged them to seek more effective methods of delivering patient care. One physician stated:

> We're trying to look more at how to best, and most efficiently look after patients whereas before, the fee-for-service model basically looks at how many services you can deliver to the patient…whereas the APP looks at it from a different perspective… and so we want to look after this patient in the most efficient way possible

There was general satisfaction with integration. Participants indicated that, given the opportunity, they would go through the process of integrating services again. One physician indicated: "My sense is that probably most people would say yes, they would do it again." Respondents went on to suggest that even if funding was no longer available for the project, some of the implemented changes would be retained. The following respondent stated: "I think that the things that are in place now will probably continue… I think we've got the mindset now of cooperating with other providers. And I don't think that will change regardless of the funding now."

In general, participants viewed the outcomes of the changes positively and considered that the health care unit had realized many of the envisioned changes. In the next section, the findings of this study are compared to the extant literature.

CHAPTER FIVE

Discussion

This chapter links the findings from the data analysis to the extant literature and attempts to expand this literature. The literature that addresses change in organizations operating in institutionalized organizational fields is of specific relevance in this case (Denis et al., 1999; Greenwood and Hinings, 1996; Oliver, 1992). In this chapter, I discuss and qualify the changes that occurred in the health care unit and focus on the factors that precipitated and enabled (Greenwood and Hinings, 1996) or constrained the changes.

The Change

The change in the health care unit appeared to be radical and revolutionary. Major changes occurred within a short time that simultaneously affected different aspects of the organization. However, it cannot be concluded that the transition of the health care unit towards an integrative, prevention-based model was complete. Physicians indicated shifting between the two models based on patient needs and availability of various support programs.

It is difficult to find a track in the Greenwood and Hinings (1988) model that best describes the shift that occurred in the health unit. Although several authors (Cooper, Hinings, Greenwood and Brown, 1996; Greenwood and Hinings, 1993; Kitchener, 1999) identify various archetypal tracks, none of them adequately represent the case in this study. At the time of the study, the system could be described as transitioning toward an embryonic integration archetype where "structures and processes nearly consistently

reflect the ideas and values" (Greenwood and Hinings, 1988, p. 303) of the integrative, prevention-based archetype. The system appeared to be undergoing a re-orientation. However, the fragmented, treatment-based archetype seemed to prevail simultaneously with the embryonic integrative, prevention archetype. Cooper et al. (1996) describe sedimentation, which involves the layering of one archetype over another where structural and process changes within the organization are not secure. Sedimentation is defined as "the persistence of values, ideas and practices, even when the formal structures and processes seem to change..." (Cooper et al., 1996, p. 624). The changes in the health care unit were secure and practitioners oscillated between the two models only when integrative support structures were absent for specific patient categories. Therefore, the criteria that Cooper et al. (1996) establish for sedimentation do not seem to apply to the findings from this study.

Kitchener (1999) describes a "hybrid" structure resulting from the failure to gain support from professionals for the intended changes, leading to the co-existence of new structures and systems with old ones. The shift between archetypes in the health care unit studied here did not occur because of lack of support by professional groups within the unit, although it did result in the co-existence of new and old structures and systems representing different interpretive schemes. The present case demonstrated a pattern of reformative commitment to change by all groups of health care professionals; however, because integrative structures did not exist to handle every patient situation, health care professionals were required to shift between the two models to manage patient care. Thus, it was the absence of supporting structures and not of commitment that led the professionals to oscillate between the two archetypes. However, the oscillation did not

represent "temporary reversals of direction" that can be encountered in a re-orientation track (Greenwood and Hinings, 1988, p. 307). Rather, the oscillation occurred on a regular basis, as different categories of patients were encountered, even in alternating appointments on the same day.

Greenwood and Hinings (1988) indicate that archetypes are ideal types representing coherence between structures and processes on one hand and the underpinning values and beliefs on the other. They further state that such ideal types are constructed by the observer and that "as with all ideal types,… our observations of empirical occurrences could yield nothing but deviations" (p. 300.) In fact, the case of the health care unit points to incoherence between some practices that are fragmented and autonomous and the belief system that was shifting towards the appreciation of integration. It is possible that professionals' apparently unproblematic movement from one template-in-use to another is explained by the fact that both templates are underpinned by the general value of attending to patient needs. Furthermore, since professionals had acquired the behavioural scripts associated with both templates and the transition scripts associated with movement from one template to another (Ashforth, 2001), they were able to call on the template that best applied to the patients' needs. This study raises questions about the possibility of co-existence of two structural systems without the prevalence of the tension assumed to be present in what Greenwood and Hinings (1988) call the "schizoid incoherence" state. The dynamics in the health care unit indicate that the prevalence of *parallel structures* is not necessarily a source of tension in organizations. It also indicates that retaining structures from a past archetype, despite major changes otherwise, can play a functional role in attending to daily

activities. Nevertheless, it is maintained here that the health care unit was experiencing a

re-orientation since there appeared to be a major shift towards integration in the

"provinces of meaning," which as Greenwood and Hinings (1988, p. 300) indicate,

should be given initial primacy in determining in which archetype an organization should

be classified.

Oliver (1992) indicates that certain conditions are necessary for an organization to

shift from a dominant interpretive scheme to an alternative one. These conditions are

examined in the framework established by Greenwood and Hinings (1996), who identify

precipitating and enabling dynamics critical to radical change. According to their model,

precipitating dynamics consist of *interest dissatisfaction* and *value commitments* and

enabling dynamics consist of *power dependencies* and a *capacity to act*.

Table 7 summarizes the findings on precipitating, enabling and constraining

dynamics as they pertain to the changes in the health care unit.

Table 7- Precipitating and enabling dynamics

Precipitating Dynamics	Enabling Dynamics	Constraining Dynamics
Interest Dissatisfaction • Federal and provincial bodies addressed the need for changes in the health care sector • Resource scarcity motivated the search for alternate templates by physicians • Physician dissatisfaction with the current template motivated the change to an integration model *Value Commitments* • A reformative pattern of value commitment whereby all professional groups supported a new template facilitated the change • Opposition from professional associations was overcome through the legitimacy and support offered by the provincial government	*Power Dependencies* • The dominant physician group championed the change • Maintenance of physician power despite changes enabled the shift *Capacity to Act* • Government support of the project created interest in other health care regions further enhancing the project's legitimacy and commitment to the change • Participation in the changes created a vested interest in the success of the project • The lack of an observable working model allowed flexibility in designing the changes and adapting them to the skills available • Identification of skills and competencies of practitioners facilitated delegation and elimination of redundant tasks • Leadership at multiple levels enhanced the ability of the unit to make changes through continuity and commitment to the changes • Structural/systems changes supported the goals of the project and helped establish trust and new patterns of interaction between practitioners • Incentives ensured the sustainability of changes in the unit	*Power Dependencies* • AMA opposition to a different archetype • Relinquishing aspects of professional role to other practitioners was difficult *Capacity to Act* • Lack of an alternative professional model made it difficult for practitioners to work out the details of the changes required • Conditional support by governing bodies to generalizable initiatives • Structural/systems manipulations can create practitioner frustration through new space constraints, lack of technology skills and increased patient volumes (for some practitioners) resulting from changes in the payment system

Precipitating Dynamics

The data indicate that physicians were motivated to champion initiatives in response to pressures external to the health care unit. The Mazenkowski and Romanow reports on the state of the health care system in Alberta and in Canada, commissioned by provincial and federal governments, indicated that the Canadian health care system was in need of revamping and that alternate models needed to be investigated. The recognition by provincial and federal bodies that changes were required facilitated the emergence of alternate templates. It provided the opportunity for physicians and nursing professionals to question the prevailing template, a condition that Powell et al. (1999) identify as critical to successful organizational change. Practitioners indicated that there were concerns regarding the availability of resources and the quality of care being offered within the community. Practitioners, and specifically physicians, saw these issues as a consequence of the prevailing template. Oliver (1992) indicates that "problems that threaten the legitimacy or survival of an organization… cast doubt on the validity of organizational procedures that have traditionally served the organization's interests effectively." (p. 568).

As rural services were being diverted to larger centers, physicians recognized the need to address professional concerns. Physicians indicated that the model prevailing before the changes prevented quality patient care and required extensive workloads to manage daily patient volume and administrative tasks. This *interest dissatisfaction* created pressure for change (Greenwood and Hinings, 1996). Physicians identified that the prevailing medical template was the source of their dissatisfaction and thus required fundamental changes.

Among health care professionals, there was widespread agreement that an integrative, prevention-based model would be more efficient and effective than the prevailing template and would address the issues that were the source of their dissatisfaction. Greenwood and Hinings (1996) indicate that opposition from all groups to the prevailing template and preference for an alternate demonstrate a reformative pattern of *value commitment* that precipitates radical change.

Enabling Dynamics

The impact of value commitments on *power dependencies* cannot be ignored. Greenwood and Hinings (1996) indicate that the relationship is reciprocal and can impact the ability of the organization to achieve radical change. They point out that the dominant group in an organization either enables or constrains radical change through the provision or withdrawal of support. The dominant group in an organization has a greater capacity to control changes (Pfeffer, 1992). Given the dominance of physicians in the health care unit, they were able to control the implementation and utilization of initiatives through an institutionally approved hierarchy. In fact, the power of physicians to control and direct the changes was unchallenged for the most part. This was a significant enabler of the change since studies in the health care sector indicate that physician-championed changes have a higher probability of success (Gillies, Shortell and Young, 1997).

The health care unit's *capacity to act* was impacted on two levels. Influences on an institutional level enabled and constrained the physician's ability to promote an alternate template. Government influences increased the capacity of the health care unit to make radical changes. The 2001 government-commissioned Mazenkowski report identified goals and objectives for improving health care in Alberta. These objectives

included a shift from treatment to health promotion and education. This provided the framework for physicians to identify changes in professional goals and practices. At the same time, however, professional associations constrained the capacity to act because the new template espoused by the physicians diverged substantially from the prevailing professional template that promotes physician autonomy and a fee-for-service payment system. This constraint however, proved to be of relatively low significance since the government provided the material resources and legitimacy that enabled the implementation of innovative programs. Changes in the health care unit generated interest from physicians and health care providers from other regions further enhancing the legitimacy of the changes. Greenwood and Hinings (1996) indicate that developments at the institutional level can impact the capacity to act of an organization, thus enabling radical change.

Furthermore, Greenwood and Hinings (1996) indicate that "having sufficient understanding of the new conceptual destination…" (p. 1040) is a condition enabling radical change through the enhancement of an organization's capacity to act. Although members of the health care unit shared a general understanding about the direction of changes, practitioners did not have the benefit of a working model to identify how the conceptualized changes would be implemented. The lack of an observable working model served to both enable and constrain the changes. The absence of a working model provided physicians with increased flexibility and enabled creative and innovative solutions that allowed the involvement of the NP and PHNs in the decisions being made. This maximized the participation of different professionals and their commitment to the changes. The investment of time and energy gave groups a vested interest in the success

of the changes (LeTourneau & Fleischauer, 1999). A vested interest by physicians and nursing professionals enhanced the unit's capacity to act enabling radical change to occur. Although the lack of a working model enhanced commitment, practitioners were frustrated and indicated that they were uncertain about what steps needed to be taken to achieve the goals and objectives outlined for the project. This constrained the changes by impeding the speed with which changes could be implemented.

Another element of an organization's capacity to act is its ability to manage the changes (Greenwood and Hinings, 1996). Managing changes involves identification of skills and competencies within the organization. Early on, physicians identified the skill and competency of the NP and PHNs to reduce repeat and routine patient visits. Delegation of such tasks also allowed the NP and PHN to promote educational components of patient care. Physicians indicated that attending to patient volumes prevented their ability to incorporate health promotion into their practice. Abbott (1988) identifies that the transfer of roles and responsibilities is particularly evident in organizations that are overworked or that may not have qualified individuals to perform the work. The transfer of roles is more likely to occur between related groups of professions because of the knowledge they acquire (Abbott, 1988). This is particularly evident in the health care field where nursing professionals and physicians share pertinent information in managing patient care. Physicians indicated that they were comfortable delegating responsibilities to the NP, whose skills were considered to be advanced. The delegation of responsibilities by physicians enabled radical change by creating new patterns of behaviour between professionals. Over time these behaviours become routine (Ranson et al., 1980).

Leadership is another component of an organization's capacity to act in a radical change situation (Greenwood and Hinings, 1996). Leadership was exercised at multiple levels in the health unit and involved the project coordinator, the physicians and members of other professional groups. The findings are consistent with formulations by Denis, Langley and Cazale (1996) who posit that major change in health organizations is facilitated by "leadership involving constellations of actors playing distinct but tightly knit roles" (p. 17). The data indicate that changes were more effectively executed because the project coordinator was able to coordinate the activities required to achieve project objectives. The project coordinator also ensured completion of initiatives without having to burden medical practitioners with the additional responsibility of coordinating and managing project initiatives. The impartiality of the project coordinator role facilitated change in the health care unit because different groups felt that there was an equal level of respect for their respective roles.

Leadership was also exercised by the physicians who kept pushing for the changes in their negotiations with the health authority and the government. In fact, in the course of the project implementation, the physicians became spokespersons for integrative models of health care and increased their commitment to championing the changes. Members of other professional groups, such as the NP also took leadership of some preventative programs.

In fact, continuity of leadership was noticeable throughout the process. Such continuity enables the changes to endure. Oliver (1992) indicates that the lack of continuity can impede the institutionalization of behaviours by preventing the development of a shared history. In addition to continuity, commitment from all levels is

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also required to sustain radical change initiatives. Commitment to change was

demonstrated by the physicians, NP and PHNs through their involvement in and support

of change initiatives. Commitment to the changes enabled the health care unit to

implement radical initiatives and provided a framework for new behaviours to be formed.

Continuity and commitment were critical when changes to the structure of the

health care unit were implemented. Denis et al. (1999) indicate that structural solutions

may help promote new interactions between professionals. Structural/systems changes in

the health care unit, such as co-location of services and shared access to patient

information created the opportunity for practitioners to interact with one another. Denis

et al. (1999) state that these interactions; "can lead to learning and change in the systems

or ideas that guide professional action." (p. 128). The analysis indicates that as

interactions and negotiations between practitioners were enhanced, familiarity with the

roles of such practitioners and trust in their abilities increased, enabling the shift to a

more integrative model. Interactions and negotiations created the basis for the

development of norms "based on mutual adjustment among professionals searching for

adaptive solutions to improve care." (Denis et al., 1999, p. 129). Over time, new

behaviours began to replace old patterns leading to the reinforcement of the new structure

put in place. Powell et al. (1999) indicate that "structures and systems interact with the

interpretive scheme and will influence and potentially change the very beliefs that

underpin them." (p. 4).

The data indicate that another element that increased capacity for action was an

adequate payment system. Practitioners, and specifically physicians, required appropriate

incentives to generate the opportunity for radical changes to be implemented. Denis et al.

(1999) indicate that incentives increase the likelihood that change initiatives will be successful. Physicians for example, were able to delegate responsibilities to other practitioners in the health care unit without impacting their income. The payment system also allowed physicians to participate in initiatives that would facilitate an increased focus on educational components relating to health promotion, prevention and disease management. Rosser and Kasperski (1999) indicate that moving away from the fee-for-service matrix prevalent in health care provides an incentive to physicians to focus on the prevention and educational components of diagnoses and general health. The data indicate that moving away from the fee-for-service matrix enabled the changes. These structural/systems manipulations facilitated the interaction between professional groups, thus generating knowledge of different professional roles and skills and building trust among the groups.

In summary, the analysis indicates that the capacity for action in Greenwood and Hinings' (1996) model can be extended to include structural/systems manipulations involving changing locations of operations, instituting information systems consistent with the desired changes and implementing new incentive models, all of which facilitate interactions, familiarity and trust.

Constraining Elements

As the analysis and parts of the discussion indicate, a number of forces had the potential to constrain the changes. However, most constraints were overcome. Thus, the opposition by the AMA to the changes proved to be of little consequence given the legitimacy that the project received from funding institutions and a variety of stakeholders. The difficulty in relinquishing aspects of professional roles was resolved

through negotiations and establishment of trust between members of different professional groups. The absence of a concrete model of integration implied a difficulty in working out the details of the changes. However, this difficulty was overcome by the fact that there was no expectation to adhere to a specific model. Problems with structural/systems elements such as co-location, information systems and patient volumes did prevail throughout the changes, but were not strong enough to reverse the re-orientation in the health care unit.

Finally, the data indicate that a complex array of precipitating, enabling and constraining dynamics impact an organization's ability to achieve radical and revolutionary change. Many of these influences are related and reciprocal and thus cannot be investigated in isolation. The discussion has explored the interrelated dynamics that impact the ability of an organization operating in the medical institutional sector to achieve radical change.

Implications/Outcomes

The purpose of this study was to explore the dynamics enabling or constraining radical change in a health care unit. This study shows that a number of elements were potential inhibitors of change such as the implicit opposition by the medical professional association, the problems emanating from the use of new information systems and the difficulty involved in relinquishing aspects of practitioner roles. However, the data indicate that these elements had a relatively minor effect and were substantially outweighed by institutional and organizational forces that both precipitated and enabled the change. Such precipitating and enabling forces include the support of governing and funding bodies, the co-location of services, the implementation of a new incentive system, the championing of the change by the dominant group, the commitment of all groups to the new template, the ability and continuity of leadership, the emergence of trust that facilitated new modes of interaction and others.

While these factors facilitated the movement to a new archetype, the shift was not complete. The system was experiencing a transition at the time of the study. Furthermore, the physicians found themselves oscillating between an integrative, prevention-based model and fragmented, treatment-based model of care, where the archetype-in-use depended on the patient category. Physicians were drawing on parallel elements of the two templates in their daily practices. This change track has not been previously elaborated in the literature and constitutes a contribution of this study. Another contribution is the support for Greenwood and Hinings (1996) model of precipitating and enabling dynamics and the extension of the enabling dynamics to

include a number of social dynamics and structural/systems manipulations such as the flexibility in designing innovative programs, the continuity and practice of leadership at multiple levels, the development of trust between practitioners, the implementation of co-location and the institution of new incentive systems.

From a management practice perspective, this study provides many insights into the conditions under which organizational change is facilitated and is likely to occur. These conditions suggest an array of tactics that can be utilized by managers of change, such as getting buy-in from the different groups by creating dissatisfaction with the status quo, utilizing the institutional context to create pressure for change, capitalizing on the groups' readiness for change, building commitment, securing continual leadership and instituting structural/systems modifications that support the changes.

In addition to providing managers with tactical solutions to implementing change in an organization, this study also highlights changes that emerge as a consequence of deliberate manipulations to the existing structure/systems including increased trust and personal/professional familiarity of practitioners and their roles. These dynamics were not envisioned outcomes from the changes but emerged as the interactions between practitioners changed.

Limitations and directions for future research

This study focused on the health care unit or the organizational level and gave little attention to individual-level dynamics. Further insight could be gained through an understanding of radical change as experienced at an individual level. Although consensus regarding the changes was considerably high in the present case, individuals can perceive and experience change differently. The interviews for this study included

19 individuals from various professional groups but the sample was not exhaustive, nor did the analysis focus on the personal experiences of each individual. Understanding how different individuals perceive integration models and how they experience change could provide more insight into the micro dynamics that enable or constrain such initiatives since conceptualization and implementation of the change is impacted by the cognition and behaviours of individuals in interaction.

Furthermore, this study did not explore the impact of organizational changes at the institutional level. Such exploration, although interesting, was outside the scope of this study. However, given that the health authorities and government were closely watching the dynamics and the results of the changes in the health unit and that the changes produced the desired outcomes for the most part, the potential for diffusion of such changes into other rural areas would be strong. Future research may focus on the impact of such organizational innovation and the health sector.

In addition, although questions relating to the past and present models were asked in the interviews conducted with participants, this study does not use a longitudinal approach to evaluate the differences between the system prior to integration, during integration and after integration. Such longitudinal approach would provide additional information on how changes evolve over time and the extent to which the changes become institutionalized.

As changes in the health care sector continue to occur, it is increasingly important to understand how various elements serve to enable or constrain changes, and to comprehend the different archetypal tracks that organizations follow. This study sheds light on such dynamics as they relate to a health care unit.

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Appendix A- Interview Protocol

1. Could you describe the Project as it stands currently? (What are the Project's distinctive features?
2. How is this model different from the model that prevailed before?
3. What does *integration* mean in the context of the Project?
4. Are there elements from the past that still prevail currently? If yes, what are they?
5. What is your role in this project? (administrative, operational)
6. How has your professional role changed since you started working with the Project?
7. How has your role (or the change in your role) impacted other practitioners?
8. How did you experience the transition?
9. How would you describe your level of satisfaction with the changes? Your dissatisfaction?
10. How do you see the role of (the profession of the interviewee) in general developing in the future?
11. What factors have an impact on this development?

To physicians only:
12. How did/does the APP affect how you practice (or the roles that you perform)?
13. Prior to the APP, what benefits did you anticipate with respect to your work life?
14. What benefits did you anticipate to your family life?
15. Have any of these benefits been realized?
16. What factors made implementation of the APP difficult?
17. What factors facilitated implementation?

General questions:
18. Has the implementation of the IS affected your role? If yes, how?
19. Has the co-location of services affected your role? If yes, how?
20. What criteria should be used to evaluate the success of the Project? (Politicians, administrators in the CHR and Alberta Health, and the public at large)
21. Where did the idea of the Project originate?
22. Has the Project developed in conformity with your initial expectations?
23. Ideally, where do you think the project should be going in the future?
24. Do you believe this will be actualized? If not, why so?
25. Could you summarize the important events in the process of transition from the old model to the current one?
26. Could you summarize the factors that made the transition difficult? **(Probe)**
27. Could you summarize the factors that facilitated the transition? **(Probe)**

Appendix B- Code List with Definitions

Code	Definition
Autonomy	Practice independent of other practitioners
Co-location	Providing different services in the same location
Power	Ability to control
Distinctive	Uniqueness, distinct differences from other integrative projects
Facilitator	Elements that assisted the progression of the Project
Government	Regulating and funding institutions, includes ATT and Alberta Heritage Foundation
Integration-definition	Definition, references
Leadership	Co-ordinator, team managers, individual people (anyone moving the project forward)
Milestones	Key events, accomplishments
Negotiation	Negotiated roles, distribution of duties, decisions about turf
Obstacles	Elements that hindered the change
Past/Present	How things were, how they are now
Patient Care/relationship	Accountability, responsibility, control over patient relationship, quality and type of care/relationship
Payment System	APP, fee for service
Profession	Includes AMA and physicians in general, general practices, beliefs and conditions, values, relates to any profession
Role/value: Physician	Values, beliefs, role, attitude, autonomy, behaviour
Role/value: PHN	Values, beliefs, role, attitude, autonomy, behaviour
Role/value: HCN	Values, beliefs, role, attitude, autonomy, behaviour
Role/value: NP	Values, beliefs, role, attitude, autonomy, behaviour
Role/value: PC	Values, beliefs, role, attitude, autonomy, behaviour
Team Management	Sharing responsibility, any group of 2 or more service providers working together on any issue
Technology	Information systems, computers
Trust	Confidence, reliance (includes references to mistrust)
Vision	Past, present, future direction, where they were, are and believe they should be going