Exploring the Effects of Change on Nursing Practice

in Acute Ambulatory Care Settings:

A Qualitative Study

Louise L. Martinus, RN, BScN

Department of Graduate Studies in Education

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To Linda and Lidia

who taught me the true value of success
ABSTRACT

As a result of the current changes taking place in the delivery of acute care services, the emergence of acute ambulatory care (AAC) settings is expanding. According to a literature review, the volume, acuity, and complexity of patient care in these settings is increasing while the time the patients spend under the care of nurses is decreasing. Two forces, hospital downsizing and advancing technology, are identified as the major contributors to the shift in acute care delivery. The effects that these changes are having on the clinical nursing practice of registered nurses working in AAC settings are not known.

Given that AAC settings are rapidly expanding, it can be anticipated that the delivery of nursing care will continue to be compressed into a shorter time frame. Therefore, the following qualitative research question was formulated:

What are the problems and issues related to clinical nursing practice in acute ambulatory settings? The purpose of this study was to explore the problems and issues associated with change and clinical nursing practice including the educational needs of nurses working in AAC settings. Specific objectives of the study included the following: (a) to explore the problems and issues related to nursing practice in select AAC settings; (b) to explore the similarities and differences in perspectives related to role expectation between nurse managers, nurse educators, and staff nurses; and (c) to develop a conceptual framework that will guide the construction of an instrument needed for further research.

This study used semistructured individual interviews and focus group
sessions to collect data from the three categories of registered nurses. More specifically, data were collected from one nurse manager, two charge nurses, two nurse educators and fifteen staff nurses, working in three different AAC settings of a major teaching hospital. Collected data were separately analyzed by the researcher and an external rater following grounded theory methodology. By using open and axial coding, the problems and issues identified by nurses were grouped into several major and minor themes. In final analysis, by using selective coding, the four core themes (intensification, moderation, frustration, and adaptation) were extracted. Each core theme was presented and discussed in relation to hospital downsizing and advancing technology. The relationships among the four core themes were discussed and depicted in a model termed the "Impact and Consequence Model on Nursing Practice in AAC Settings."

Implications for further research are discussed and research hypotheses, based on the research findings, are presented.
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CHAPTER ONE: THE PROBLEM

Introduction

As a result of major changes currently taking place in the delivery of acute care services, this research project, "Exploring the Effects of Change on Nursing Practice in Acute Ambulatory Settings: A Qualitative Study," was designed to explore the problems and issues related to clinical nursing practice in acute ambulatory care (AAC) settings. For the purposes of this document it is important to note that problems and issues related to change in nursing practice include the educational needs of nurses working in AAC settings. Knowledge and continuing education, according to the College of Nurses of Ontario (1990) is the first standard of professional nursing practice. Given that this research project is an exploratory study, the educational needs of nurses are addressed under the broader topic of nursing practice in AAC settings. This chapter describes the research problem and introduces the reader to the subsequent four chapters as they relate to this study. More precisely, this chapter covers the following topics: (a) background of the problem; (b) definition of the two main terms used in the study, acute ambulatory care and acute ambulatory care settings; (c) statement of the problem; (d) the purpose of the study including research objectives and rationale; (e) the importance of the study; and (f) the scope and delimitation of the study. In addition, a brief outline of the following four chapters will be provided.
Background of the Problem

As a result of major restructuring currently taking place in the health care system, the delivery of acute care services is shifting from the hospital into the community (Baumgart, 1992; Rielly & Oerman, 1992). Patients who at one time required lengthy hospital stays for their invasive, diagnostic, and therapeutic procedures are now frequently admitted, treated, and discharged for home in the same day, leaving little time for nurse/patient interaction (Smith, 1992). As a result of this shift in the delivery of acute care, nurses working in acute ambulatory care settings often provide complex care to patients in a compressed amount of time.

Two major forces, hospital downsizing and advancing technology, were identified through a literature review as the main reasons for this shift in acute care delivery. Although hospital downsizing is greatly influenced by a stagnated economy and the rising cost of health care (Roch, 1992), strategies for hospital restructuring and downsizing would not have been possible without advancing health care technology. It is, therefore, a combination of these two forces that is responsible for the changes that are taking place in the delivery of acute care services and the impact that these changes are having on nursing practice in acute ambulatory care settings. It is not known how these changes are affecting nursing practice in acute ambulatory care settings.
Defining Acute Ambulatory Care and Acute Ambulatory Care Settings

In order to reflect the current trends in the delivery of acute care services, that is the shifting of acute care from hospital inpatient to hospital outpatient services, the term acute ambulatory care (AAC) was developed. The term AAC was derived from two major concepts, acute care and ambulatory care. The term acute care is described in Mosby's (1994) dictionary as "a pattern of care in which a patient is treated for acute episodes of illness. This pattern of care is often necessary for only a short time, unlike chronic care" (p.27). The term ambulatory care is described as "health service provided on an out-patient basis to those who visit the hospital or other health care facilities and depart after treatment on the same day" (Mosby, 1994, p. 68). Thus, for the purposes of all discussion in this research document the term acute ambulatory care (AAC) has been adopted and an operational definition of AAC stands as follows: AAC is a pattern of health care delivery designed to provide acute care to patients in clinical settings that admit, treat, and discharge patients on the same day. The AAC settings refer to the clinical settings that provide elective acute care services to patients but do not keep patients overnight.

As this research project involves three different AAC settings, the terms commonly associated with AAC settings need to be discussed. The terms frequently associated with AAC settings often reflect the type of acute care services provided to patients in those settings. For example, Smith (1992) noted that acute ambulatory care is sometimes referred to as day care as patients do
not stay in the unit overnight. As ambulatory surgery dominates the services provided to patients in AAC settings the term **ambulatory surgery units** is often used along with terms such as **same day surgery** or **one day surgery units** (Burden, 1988; Figley & Burden, 1991; Masterson, 1990; Redmond, 1993; Summers & Whitaker-Ebbert, 1993). However, surgery is not the only acute care service currently offered to patients in AAC settings. Smith (1992) pointed out that many diagnostic and therapeutic procedures now take place in acute ambulatory settings such as myelograms, angiograms, bronchoscopy, and administration of intravenous medication. In addition, recent discussion with a unit manager of a major teaching hospital revealed that besides doing minor surgical procedures and providing perioperative care to many surgical patients, her AAC setting, termed **Short Stay Unit**, also offered a number of nonsurgical, acute care services. Services such as care of patients before and after endoscopic, diagnostic and therapeutic procedures, pain block treatments, gama globular infusions, and growth hormone studies are only a few examples of the increasing number of non surgical, acute care services offered to patients in AAC settings (M. Santilli, personal communication, August, 1994).

**Statement of the Problem Situation**

Hospital downsizing and advancing technology were responsible for an increase in the volume and services offered to patients in AAC settings, decreased patient stays in hospital, and a reduced amount of time that patients
spend under the care of nurses. Short admissions to hospitals place new demands on nurses working in AAC settings as nurses are expected to provide complex care to acutely ill patients in a compressed amount of time. As a result of this shift in the delivery of acute care services, changes are experienced in the work environment and in the nature of clinical nursing practice. The effect that these changes have on the clinical nursing practice of nurses working in AAC settings is not known.

**Purpose and Rationale of the Study**

Considering hospital downsizing and advancing technology, and combining these changes with the diversity and the complexity of patient care offered to patients in AAC settings, a fundamental question was generated: What are the problems and issues related to clinical nursing practice in acute ambulatory settings? Thus, the purpose of this study was to explore the problems and issues through interviewing registered nurses that included nurse managers, nurse educators, and staff nurses working in select AAC settings. The findings of this research project were used to develop a conceptual framework that will serve as a foundation for further research. Included in further research are the educational needs of nurses working in AAC settings.

Specific objectives of the study included the following: (a) to explore the problems and issues related to nursing practice in selected AAC settings; (b) to explore similarities and differences in perspectives related to role
expectation between nurse managers, nurse educators and staff nurses; and (c) to develop a conceptual framework that will guide the construction of an instrument needed for further research.

Importance of the Study

Given that two forces, hospital downsizing and advancing technology, are the two major contributors to change in the delivery of acute care services, it can be anticipated that AAC settings will continue to expand and that more complex care will continue to be offered to sicker patients in a shorter period of time. It is not known how well nurses are prepared to deal with these changes. This study gave nurses an opportunity to express their opinions about their clinical practice including their educational needs. Knowledge gained from this exploratory research will contribute to our understanding of the effects of change on nursing practice, and will enable future researchers to develop a tool that will further assess the needs of nurses working in similar settings.

Scope and Delimitation of the Study

The main focus of this research project was to explore the problems and issues associated with change and clinical nursing practice in AAC settings as experienced by registered nurses working in these settings. This study did not include the clinical nursing practice of other associated health care providers, such as auxiliary staff or registered practical nurses (RPNs), that may be directly
involved in providing clinical nursing care to patients in AAC settings. The clinical nursing practice of registered nurses was selected for this study as the data collected and interpretation of the data collected, were specifically intended for a population of registered nurses working in AAC settings. Also, as the emergence of AAC settings is expanding and the complexity of acute care services offered in these settings is increasing, it can be anticipated that the clinical nursing practice of registered nurses in these settings will continue to meet new challenges. As registered nurses constitute the majority of staff working in AAC settings and their clinical expertise are imperative to the quality of patient care, the findings of this exploratory study may be used to study the clinical practice of other registered nurses working in similar settings.

Outline of the Four Remaining Chapters

The remainder of this document consists of four chapters. Chapter two presents a review of related literature. Included in chapter two are the following topics: a historic perspective on the evolution of AAC; a discussion of the two major forces, hospital downsizing and advancing technology, that contributed to change in the delivery of acute care services; and the impact of these changes on nursing practice in AAC settings. Chapter two also discusses the main concepts of grounded theory as grounded theory methodology was used in data analysis. Most of the resources used to develop the literature review stemmed from Canadian and American literature. Recent publications of journals,
government documents, research reports and texts, and some unpublished documents were used in this literature review.

Chapter three, Methodology and Procedures, describes the process undertaken in carrying out this qualitative research project. Relevant topics such as (a) description of research methodology, (b) sample selection, (c) selection and description of the settings, (d) field procedures, (e) data collection and analysis, and (f) limitations of the study are discussed.

Chapter four, Findings (Analysis and Evaluation), presents research results as they relate to the study question and each of the study objectives. Included in data analysis are the categories or themes related to the research problems and issues. These themes are supported by examples cited by nurses during individual and focus group interviews. Also included in data analysis are the perceptions and attitudes of nurses toward the roles of staff nurses, nurse educators, nurse managers, and hospital management. Four core themes are identified, discussed, and used to develop a conceptual framework depicted in an impact and consequence model.

Chapter five, provides a summary of each chapter, including a review of the research objectives and research findings. The conclusion is based on interpretation of the literature review and research findings. Included in discussion are the four core themes and their relevance to nursing practice in acute care settings. In addition, this chapter discusses implications for further research and suggests hypotheses that could be tested with quantitative research methodology.
CHAPTER TWO: LITERATURE REVIEW

Introduction

The concepts of acute ambulatory care and acute ambulatory care settings are not new. Rather, these are old ideas of modern medicine transformed into new practices in order to meet the current health care needs of society. In reviewing the literature it was noted that, although the evolution of acute ambulatory care as we know it today dates back to the 1890s, a major shift in the delivery of acute care services did not take place until the 1990s. Two major forces, hospital downsizing and advancing technology, emerged as the main reasons for this current shift in acute care delivery. Therefore, the purpose of this chapter is to examine the literature for the effects of change, namely hospital downsizing and advancing technology, on nursing practice in AAC settings in order to justify a need for further research in this area. This chapter will address the following topics: (a) the historical background and evolution of AAC during the modern era of medicine; (b) current changes in the delivery of acute care services as a result of hospital downsizing and advancing technology; and (c) the impact that these changes are having on nursing practice in AAC settings. In addition, this chapter will discuss the main concepts of grounded theory as grounded theory methodology was used to guide the data analysis of this exploratory study.
Historical Background

Modern medicine, marked by the onset of empirical science and advancement in technology, greatly contributed to the evolution of AAC as we know it today. For example, the discovery of chemical anaesthesia by Dr. Long and Dr. Morton in the 1800s made ambulatory surgery a more viable medical option in treating illness and disease (Singer, 1993). In addition, new developments in diagnostic technology such as stethoscopes, thermometers, roentgen rays, and the new concept of asepsis, formulated by Pasteur and Lister, opened diagnostic possibilities for surgical interventions (Oetker-Black, 1993; Singer, 1993).

Singer (1993) noted that ambulatory surgery had been successfully performed in Scotland since 1890 while in the United States the first recorded ambulatory surgery took place in 1918 at the Downtown Anaesthesia Clinic in Iowa. Although several physicians strongly advocated early postsurgical ambulation as a form of speedy recovery, early ambulation remained a controversial subject in medical circles for several decades.

At the beginning of the 20th century most U.S. physicians believed that prerequisite physical and mental rest was mandatory for successful surgical interventions (Oetker-Black, 1993). Thus, patients scheduled for surgery in the hospital or at their home were often placed on bed rest for several days and visitors were forbidden 24 to 48 hours prior to surgery (Oetker-Black, 1993). However, by the 1960s patient preparation and postoperative ambulation
changed dramatically as patients were admitted to hospitals only 24 hours prior to surgery and the focus in postoperative care was placed on early ambulation. Oetker-Black (1993) noted that patients were expected to ambulate in the first 24 hours after surgery. This new trend in patient care, early ambulation, along with advances in surgical techniques, anaesthesia, and supportive therapy contributed to the emergence of AAC settings in the 1960s and 1970s in North America. Singer (1993) noted that same-day surgery programs that called for admitting, treating, and discharging patients in the same day were instituted in Michigan and California in the 1960s. In the 1970s AAC, termed surgicenter, emerged in Arizona and served as a prototype for other hospital-based or free-standing AAC centres (Singer, 1993).

The decade of the 1980s witnessed a proliferation of AAC especially in the area of surgical diagnostic and therapeutic procedures. Maple (1987) noted that between 1979 and 1984 outpatient surgery in the United States increased by more than 100% while total surgical procedures increased by only 10%. The projected figures for outpatient surgery in the U.S. for the early to mid-1990s were estimated at 60% (Eddy & Coslow, 1991; Maple, 1987). In Canada, trends similar to the U.S. were taking place. Smith (in Baumgart & Larsen, 1992) noted that a major shift from traditional acute inpatient care began in the 1980s as a result of decreased financial resources, advancing technology, and more knowledgable consumers. Skene (1990) estimated that 40-45% of all surgical procedures performed in hospitals would be offered to patients in AAC settings.

In conclusion, it can be noted that AAC evolved slowly through the era of
modern medicine up to the decades of the 1980s and 1990s. While the decade of the 1980s witnessed unprecedented growth in the delivery of acute ambulatory care, the decade of the 1990s is witnessing rapid change in the delivery of acute care services.

**Hospital Downsizing**

Smith (1992) noted that a major shift from traditional acute inpatient care to acute ambulatory care began in the early 1980s as a result of decreasing financial resources and advancing technology. It was not until the early 1990s that a major restructuring and refocusing took place in the delivery of acute health care services. For example, in Canada more than 40% of health care funds were consumed by the hospital sector (Baumgart & Larsen in Baumgart & Larsen, 1992). For the year 1992-93 the Ontario government allotted $7.4 billion or 43% of the Ministry of Health budget to the operation of hospitals (Ministry of Health, 1992). On January 18, 1995 a Canadian national newspaper, *The Globe and Mail*, cited a national project indicating that Canadians could save $7 billion by cutting inefficiencies in the delivery of health care (Coutts, 1995). A research project, prepared by Queen's University—University of Ottawa, revealed that $140 million could be saved by reducing patient stay in acute care hospitals, and an additional $75 million could be saved by substituting more same day surgeries for inpatient care (Angus, Auer, Cloutier, & Albert, 1995). Considering the rising cost of health care it is not surprising that the government chose to
reduce hospital funding and closely monitor hospital expenditures.

In response to reduced funding, hospitals began to consider cost saving strategies that included bed closures and the shifting of acute care services from inpatient to less costly outpatient settings. For example, Ball (1991) predicted that between 3,000 and 5,000 beds would be closed as a result of changes in hospital funding. MacLean and Mix (1991) pointed out that the hospital cost per patient could be cut in half by providing services to patients on an outpatient basis. In addition, Jacobs, Nichols and Dubitz (in Angus, Auer, Cloutier & Albert, 1995) reported that in Canada, "on average, direct inpatient costs ($841 per case) exceeded outpatient costs ($204 per case) by $637" (p. 56). Thus, decreasing the number of costly inpatient beds, downsizing, and increasing the volume and services in AAC settings seemed a logical solution to the problem of cost containment.

Advancing Technology

Sandelowski (1993b) categorized health care technology into two groups: information producing technology and technology used for therapeutic interventions. Information producing technology, Sandelowski (1993b) noted, includes technology used to diagnose diseases, screen pathogenic conditions, and monitor body functions. The second group, intervention technology, refers to technological devices and procedures used to treat disease, body dysfunctions, and injuries (Sandelowski, 1993b).
The literature review indicated that both types, diagnostic and therapeutic technology, are rapidly advancing allowing invasive and often complex procedures to take place in AAC settings. For example, Smith (1992) noted that various invasive procedures such as mylograms, angiograms, and endoscopies that at one time required inpatient admissions are now offered to patients in AAC settings. In addition, advancing technology has made it possible for people to live longer and stay at home with their chronic illnesses. It is, therefore, not uncommon to have patients with continuous ventilation, total parenteral nutrition, and intravenous medication treated in AAC settings (Maloney, 1992).

Technology used for therapeutic interventions also greatly contributed to the volume and acuity of patient care in AAC settings. For example, the advent of laser surgery has replaced some of the current but more traditional surgical procedures making it possible for patients to be admitted, treated, and discharged for home in the same day (Rielly & Oerman, 1992). Laser procedures such as cholecystectomies, mastectomies, and uterine ablation, according to Summers and Whitaker-Ebbert (1993), can be safely performed on an outpatient basis. Redmond (1993) pointed out that surgeons use high technology with relative ease such as high power scopes and fiberoptic/endoscopic instruments to perform rather complex therapeutic surgical procedures on patients coming through AAC settings. Michel and Myrick (1990) predicted that new radiographic procedures will eliminate more traditional surgical procedures for coronary artery bypass thus increasing the need for AAC services.
As most of these diagnostic and therapeutic procedures were performed on the elderly with existing complex health care problems both the volume and the level of patient acuity have increased in AAC settings contributing to impact on nursing practice (Michel & Myrick, 1990; Redmond, 1993; Smith, 1992; Summers & Whitaker-Ebbert, 1993).

The Impact of Changes on Nursing Practice

According to the literature review two major forces, hospital downsizing and advancing technology, have a subsequent impact on nursing practice (Baumgart & Larsen, 1992; Fawcett-Henesy, 1991; Redmond, 1993; Ruzicki, 1989; Sandelowski, 1993b; Thorne, 1992). A common theme, altered nursing practice, appeared throughout the literature review. As this common theme is comprised of two major components, changes in nursing work environment and changes in nursing practice roles, an explanation of each will follow.

Nursing Work Environment

Increased volume, greater patient acuity, and more services offered to patients in AAC settings were some of the changes taking place in nursing work environments. Masterson (1990) noted that "nurses today are confronted with the conflict of the administration's expectation of increased productivity while functioning with fewer staff members" (p. 40). Some of the strategies used by hospital administrators to increase volume and decrease costs include
increasing patient turnover in AAC settings, reducing nursing hours, and including staff nurses in the decision-making process (Masterson, 1990). In addition, Schaffner and Almon (1994) pointed out that nursing in the ’90s called for doing more with less. "Nurses will continue to do what they have always done as nurses--physical assessment, patient education, preventative care--but perhaps in a different practice setting" (Schaffner & Almon, 1994, p.3).

Changes in the work environment such as implementation of the Shared Governance Model, noted Burden (1988), and the current trend in compressing layers of management (Schaffner & Almon, 1994) may offer new opportunities and new responsibilities to staff nurses. However, new responsibilities, Ruzicki (1989) pointed out, decrease the valuable time nurses spend with their patients. Decreased time spent with patients may hinder the effectiveness of interpersonal communication, (Perry, 1994; Redmond, 1993), and reduces opportunity for valuable patient care and patient education (Ruzicki, 1989). Therefore, based on the literature review, it can be concluded that current changes in the nursing work environment alter nursing practice with respect to direct patient care. Nurses are expected to take on additional responsibilities for patient care often without adequate educational preparation while performing all of their routine work in a compressed period of time.

**Nursing Practice Role**

According to Larsen and Baumgart (in Baumgart & Larsen, 1992), nursing practice consists of two major roles, the role of patient caregiver and the role of
patient care coordinator. The role of the caregiver refers to patient assessment and direct patient care while the role of the coordinator ensures that effective care is delivered to patients through coordination of services such as nursing, medicine, dietary and social services among others (Larsen & Baumgart in Baumgart & Larsen, 1992).

With respect to the role of the caregiver, literature indicates that nursing practice is continuously changing in AAC settings in order to meet the changing needs of patients. Fries (1986) predicted that the requirements for nursing care will shift from "a pure care provider to a role of helping people help themselves" (p.18), referring to nursing care as "nursing for independence" (p.17). Fawcett-Henesy (1991) pointed out that in view of advancing technology, more work can be done at the patient bedside on an outpatient basis. As acute services are often dominated by high speed technology, continued Fawcett-Henesy (1991), new nursing skills will need to be developed through continuing education in order to effectively care for patients who spend a very limited time in hospitals. Figley and Burden (1991) identified over 40 specific clinical skills that nurses need to have in order to handle unexpected events in AAC settings.

Larsen and Baumgart (in Baumgart & Larsen, 1992), noted that the work of patient care coordinators at the bedside is not new, but the role of the coordinator has received limited attention from organizational theorists. The work, continued Larsen and Baumgart (in Baumgart & Larsen, 1992), although becoming increasingly more complex, "goes unrecognized by most people outside of the nursing profession" (p.224).
The literature indicates that the term coordinator is often used to describe what nurses do in AAC settings but the role of coordinator is not clearly defined. For example, Redmond (1993) noted that as a result of increased volume, acuity, and complex procedures offered to patients, nurses have an increasing responsibility in coordinating information among the health care professionals such as physicians, surgeons, anesthesiologists, and other departments including radiology, cardiology, and the laboratory. Haines (1992) pointed out that in addition to providing care and education to their patients, nurses are also responsible for ensuring that the necessary consents and laboratory tests are in order. With respect to coordinating patient care at the bedside, Seaman and Seaman (1991) noted that, "Because of the need to compress use of health services into as short a period as possible, while still assuring quality outcomes of care, precise coordination of patient services is critical" (p.283). In addition to coordinating care at the patient bedside, nurses are often expected to take on the responsibility of a charge nurse that includes coordinating other staff responsibilities, day-to-day activities, and in-house cases with the attending physicians (Kidwell, 1992).

In conclusion, it can be noted that hospital downsizing and advancing technology are impacting on nursing practice calling for changes in the work environment and nursing practice roles. Although it is evident from the literature review that nurses are taking on increased responsibility with respect to direct and indirect patient care, it is not clear how well nurses are prepared from an educational perspective to cope with these changes.
Grounded Theory

The term *grounded theory* was coined by two sociologists, Barney G. Glaser, and Anselm L. Strauss', in the 1960s, as they developed a method of generating a theory from systematic analysis of field data (Glaser & Strauss, 1967). According to Strauss and Corbin (1990), grounded theory is a theory that is "inductively derived from the study of the phenomenon it represents" (p. 23). Grounded theory consists of two main elements: conceptual categories that classify concepts and their properties, and hypotheses that attempt to explain relations among the categories and their properties (Glaser & Strauss, 1967).

Grounded theory calls for the three major types of analyses often referred to as coding. The three types of analyses or codings include open coding, axial coding, and selective coding (Strauss & Corbin, 1990). Drawing from the explanation of the three types of coding by Strauss and Corbin (1990), a brief introduction to each type of coding will follow. According to Strauss and Corbin (1990), open coding is the first step in data analysis. Open coding is used to develop categories in terms of their properties. The process of open coding calls for breaking down data into parts that reflect an event, asking questions about the event, and comparing the similarities and differences between events. Similar events are then labelled and grouped to form specific categories (Strauss & Corbin, 1990).

Axial coding is the second step in data analysis. Axial coding is used to connect the categories, including their properties, that were developed through
open coding. The process of axial coding, although more complex in nature than open coding, is similar to open coding in that continual comparisons between categories are made and the questions are asked about the data. The purpose of axial coding is to develop larger categories or themes that reflect causal conditions, context, intervening conditions and strategies, and the consequences of intervening conditions and strategies (Strauss & Corbin, 1990).

Selective coding is the third and final step in data analysis. The purpose of selective coding, according to Strauss and Corbin (1990), is to integrate all the interpretive work in order to form a grounded theory. Integration is obtained through the process of selecting the core categories or themes and systematically relating them to other categories or themes. Included in the selective coding process is validation of relationships among the categories or the themes (Strauss & Corbin, 1990).

Polit and Hungler (1995) pointed out that the purpose of grounded theory is to develop categories and generate hypotheses and that the purpose does not include testing of hypotheses. The end product of grounded theory studies, continued Polit and Hungler (1995), often results in a conceptual or theoretical model that attempts to explain the phenomenon under study. In conclusion, it can be noted that considering the characteristics of grounded theory and the nature of this project, grounded theory was deemed appropriate to guide data analysis of this exploratory study.
Summary

Although acute ambulatory care in the modern era of medicine dates back to 1890s, the major shift in the delivery of acute care services from hospital inpatients to hospital outpatients did not take place until the early 1990s. Hospital downsizing and advancing technology were identified as the two major forces responsible for this shift in the delivery of acute care services. As a result of hospital downsizing and advancing technology, the volume, acuity, and services offered to patients in AAC settings are increasing and affecting the nursing work environment and nursing practice roles in these settings.

These changes place greater demands on nurses' knowledge base, time, responsibility, and accountability. Literature indicates that research reflecting the effects of these changes on nursing practice including the educational needs of nurses in AAC settings is minimal. This exploratory research project, guided by grounded theory methodology in data analysis, was designed to develop a research foundation upon which further studies with respect to nursing practice can be based. Chapter three discusses the research strategies used to collect and analyze data for this study.
CHAPTER THREE: METHODOLOGY AND PROCEDURES

Overview

This is a qualitative study designed to explore the effects of change on nursing practice including the educational needs of nurses working in AAC settings. The two major research techniques for data collection included semistructured, individual and focus group interviews. The participants included registered nurses working in three select AAC settings in a major teaching hospital. All subjects who agreed to participate in the study were interviewed. Individual, semistructured interviews were attended by one nurse manager, two charge nurses, and two nurse educators, while focus groups were attended by fifteen staff nurses. All individual interviews and focus group sessions were audio-taped and transcribed into text. Data were analyzed by the researcher and the external rater following grounded theory methodology including the sequence of open, axial, and selective coding. Two major limitations are noted in the study.

Description of Research Methodology

Research strategies used a combination of semistructured, individual and focus group interviews. The rationale for collecting data through the individual interviews and focus groups included the following: (a) Individual interviews were chosen to collect data from a small subsample of nurses as, according to Strauss and Corbin (1990), individual interviews are an effective method of
collecting a full range of opinions from individuals. Thus, individual interviews were thought to be an appropriate strategy to collect data from five nurses who had different responsibilities in each AAC setting; (b) Focus groups were chosen to collect data from staff nurses as staff nurses represented a larger population of registered nurses working in AAC settings. Focus groups offered the advantage of obtaining opinions from a larger number of participants in a time-efficient manner and allowed for the exchange and building of ideas among participants (Stewart & Shamdasani, 1990).

A semistructured interviewing process, recommended by Wilms and Johnson (1992), was used in both individual and focus group sessions in order to collect data relevant to the research question. It was expected that four to eight staff nurses would attend each focus group and that a total of four to eight focus group discussions would take place. Higher numbers were precluded because of the small size of the nursing units and available staff. As pointed out by Wilms and Johnson (1992), small groups of nurses guided by a facilitator can be encouraged to talk freely about problems and concerns encountered during the provision of patient care in their clinical settings. A semistructured interview instrument, a questionnaire (Appendix A) comparable to that used in individual interviews of nurse manager/charge nurses and nurse educators (Appendix B) were used to facilitate the focus group discussions. Minor differences in wording existed in the semistructured interview instrument due to the differing perspectives of nurse manager/charge nurses, nurse educators, and staff
nurses. For example, nurse manager/charge nurses and nurse educators were asked to discuss the problems and issues concerning the clinical practice of staff nurses, while staff nurses were asked to discuss problems and issues relating to their own practice, the practice of their colleagues, nurse manager/charge nurses and their nurse educators.

Sample Selection

The total pool from which the sample was drawn included 32 subjects, registered nurses, working in three different AAC settings in a major teaching hospital. The pool included 25 full-time and part-time staff nurses, one full-time nurse manager, two full-time charge nurses, and two part-time nurse educators. Registered nurses were selected for the study as they represented a majority of staff working in AAC settings and because their clinical expertise is vital in providing quality care to all the patients coming through the AAC settings.

Selection and Description of the Setting

Criteria for selecting the setting included the following: (a) work setting where the length of patient stay was short and patient acuity level was high; (b) a major teaching hospital where patient care interventions were influenced by advanced technological developments; and (c) a major teaching hospital that had recently experienced downsizing. Considering the study criteria the three AAC settings in a major teaching hospital were used for this research project.
Although the three AAC settings occupied adjoining space in the same hospital, each setting has a different history, internal organization, and culture. A brief discussion on the background of each AAC setting is necessary in order to better understand the changes that have been taking place in these settings. For the purposes of confidentiality the three AAC settings will be referred to in this document as Unit One, Unit Two, and Unit Three respectively.

Unit One opened in 1979 with one full-time and one part-time staff nurse and served 10-15 patients per day. At the time of this study, Unit One was staffed with 11 registered nurses including the two staff nurses transferred from other units as a result of hospital restructuring and downsizing. Nursing services provided on Unit One included the following: preoperative and postoperative care provided to 36-40 surgical patients per day; preoperative anaesthetic assessment for surgical patients; assisting physicians with procedures carried out under local anaesthetic; caring for patients receiving treatments in Unit Two and Unit Three; and, caring for patients with gamma globulin infusions or taking part in growth hormone studies. The estimated caseload for Unit One in 1994 was 24,000 cases. During 1993-1994 hospital downsizing, the mix of patients had become increasingly more diverse. Sicker patients were receiving a broader spectrum of invasive procedures.

Unit Two and Unit Three opened in 1987. Prior to hospital downsizing, both units shared nursing staff and both units were managed by the same nurse manager. During hospital downsizing, the two units lost 1.5 of their full-time nursing staff and their nurse manager. At the time of this study, a senior
radiology-technologist managed Unit Two, and the management of Unit Three was passed over to the Unit One nurse manager. Nursing staff in Unit Two consisted of a charge nurse and three to four RN staff nurses. Unit Three staff consisted of one charge nurse and four to five RN staff nurses. Staffing in both units depended on the daily needs of the unit. Between 1993-1994 it was estimated that approximately 95,000 procedures would be carried out in the two units. Hospital downsizing and restructuring meant that a greater amount of nursing care would be required as patient services, volume, and patient acuity increased in both units.

Field Procedures

The first step in field procedures involved dealing with the ethical issues in conducting a study. Prior to establishing contacts with the potential study subjects, the researcher obtained a study approval from an established research ethics committee. After the approval, the researcher met with the subjects to explain the project and to obtain their verbal consents. All participants, including the gatekeepers of the settings were informed of the option that they might withdraw from the research project at any time. A copy of the information sheet (Appendix C) was given to each participant. Anonymity of participating subjects was guaranteed through the use of coding numbers. Participants were assured that there would be no association of names of participants or the settings in the reporting of findings. The subjects were also informed that the data collected,
including the computer and computer files, would be stored in a locked office.

The second step in field procedures included contacting potential participants, explaining the process of the study, and organizing interview sessions. Prior to the study, nurse manager/charge nurses and nurse educators were first approached by telephone to discuss the study. Where necessary, the researcher met with individual subjects to answer any further questions about the study. Nurse manager/charge nurses and nurse educators were included in individual interviews after they responded positively to requests for involvement. As for involving the staff nurses in focus groups, the researcher attended staff meetings in each of the AAC settings in order to introduce the study to staff nurses and to answer any questions. Focus group meetings were scheduled at the time and location that was most suitable for research participants and least disruptive to the functions of each AAC setting. Dates of the scheduled focus groups and requests for involvement were posted in each AAC setting. Volunteering participants were asked to write their names on a sign-up list posted on their unit. The researcher obtained a consent from each participant interested in participating in individual interviews and focus groups. All individual and focus group interview sessions were audio-taped and all tapes were transcribed into text.

Data Collection and Analysis

Data were collected from 20 RNs (63%), from a total pool of 32 registered
nurses who participated in the study. Five individual and five focus group interviews were held over a one-month period. Individual interviews were held with two nurse educators, two charge nurses, and one nurse manager responsible for Unit One and Unit Three respectively.

Three focus groups were held with nurses from Unit One. Two focus groups were held with nurses from Unit Two and Unit Three. A total of 15 nurses, approximately 56% of the 27 full- and part-time staff registered nurses, attended focus groups. Participants included eight nurses from Unit Two and Unit Three and seven nurses from Unit One. As the activities on the units could not allow many nurses to be absent at the same time, focus groups were small. The five focus groups consisted of six, three, two, two and two participants respectively. As previously mentioned, following the process recommended by Wilms and Johnson (1992), semistructured interviews were used to collect data from individual and focus group sessions. The questions presented to staff nurses were broad in scope and similar to those presented to nurse educators, charge nurses, and the nurse manager (Appendix A).

All interview sessions were conducted in the building adjoined to the research site. Individual interviews were conducted either in the researcher's office or the office of the interviewee and lasted approximately 40 minutes. Four focus groups were held in seminar rooms away from but in close proximity to the research site. One focus group met in a Unit One conference room. Focus group interviews lasted approximately one hour. Participants were encouraged to talk freely about issues relevant to the interview questions. All individual and
focus group interviews were audio-taped and all tapes were subsequently transcribed by the researcher.

Data were analyzed using grounded theory methodology as described by Strauss and Corbin (1990). The process of data analysis consisted of a review of the text and a sequence of open, axial, and selective coding in order to identify categories, themes, and relationships among the themes. Confidence in the validity and authenticity of the data analysis and findings was increased through the use of an external rater, a process referred to as triangulation, (Wilms & Johnson, 1992). In qualitative research, according to Wilms and Johnson (1992), triangulation is used by social scientists to ensure that the study findings are not artifacts of a single method, a single source, or a single investigator's biases (Wilms & Johnson, 1992). Therefore, all data obtained from the texts of the individual interviews and focus groups were coded separately by the researcher and the external rater following grounded theory methodology, including open and axial coding. The researcher and the external rater then finalized the categories and the themes through discussion. The purpose of this process, triangulation, was not to validate the coding in terms of proportion of categories or themes agreed upon. Rather the intention was to use the different perspectives of the two researchers, as recommended by Sandelowski (1993a), in order to explore alternative dimensions of interpretation to enrich the analysis. Larger patterns of categories were then identified and the final core themes were extracted through selective coding.
Limitations

Three major limitations were noted in this study: (a) a sample of subjects in focus group interviews did not reflect the opinions of the total pool of staff nurses working in the three AAC settings, (b) data and the interpretation of data were specific to the settings studied, and (c) data and the interpretation of data were influenced by the preconceptions of the researcher. In limitation (a) data and interpretation of data reflect the opinions of 56% of the staff nurses working in the three AAC settings. As for limitation (b), data and the interpretation of data are only generalizable to settings sharing similar investigative properties such as facilities with acute care settings. Conversely, this limitation may also be a strength when contacts and setting-specific details are required.

With respect to limitation (c), the effect of the researcher’s preconceptions on data and the interpretation of data are inevitable as the researcher is the tool in qualitative research and the preconceptions of the researcher can influence data collection and the way data are interpreted. However, two steps were taken to mitigate the problem identified in limitation (c). The first step included the review of literature relating to qualitative research, including grounded theory methodology by Glaser and Strauss (1967) and Strauss and Corbin (1990), that was used as a guide in data collection and data analysis. In Step Two, the researcher selected external rater who did not have a nursing background but had expertise in qualitative research. Dr. Jennifer Blythe, who teaches at the university, is a researcher with a Ph.D. in
Anthropology. Dr. Blythe contributed her qualitative research expertise by separately coding the texts and discussing her findings with the researcher, thus further reducing the research bias.

**Restatement of Problem Statement**

Given that the changes, hospital downsizing and advancing technology, are affecting the delivery of acute care services in acute care hospitals, it is not known how these changes are affecting nursing practice in AAC settings. The purpose of this study was to explore the effect of these changes on nursing practice including the educational needs of nurses working in AAC settings. This study had three objectives: (a) to identify problems and issues related to nursing practice as a result of hospital downsizing and advancing technology; (b) to explore the attitudes of nurse manager/charge nurses, nurse educators, and staff nurses toward the role of the staff nurses; and (c) to develop a conceptual framework that would serve as a foundation for further research. Chapter four will discuss the findings of this exploratory research using the study objectives as a guide.
CHAPTER FOUR: FINDINGS

introduction

The presentation of findings in this chapter will follow the three research objectives discussed in previous chapters. This chapter will begin with a consideration of the major issues and problems that the staff nurses, nurse manager/charge nurses, and nurse educators identified in individual interviews and focus groups. The differences in attitudes toward the role of staff nurses, nurse manager/charge nurses, and nurse educators will then be considered. Where appropriate, quotes from the data collected will be used as examples in support of findings. Finally, the four core themes that form a conceptual framework will be presented and the relationships among these themes, including model building, will be discussed.

Issues and Problems Related to Change

Because of the complexity of findings associated with the first research objective that called for identification of issues and problems related to change in nursing practice in AAC settings, three different approaches in presenting the findings will take place. First, results related to the problems and issues associated with hospital downsizing will be presented, followed by identification of the problems and issues associated with advancing technology. Also, because data analysis indicated that the problems and issues related to hospital downsizing were similar in all three units, the major and complimentary minor
themes relating to all three units will be collectively addressed under the heading "hospital downsizing". However, since nurses in their respective units work with different technologies, the findings relevant to the problems and issues of each unit will be discussed.

**Problems and Issues Associated with Hospital Downsizing**

Data analysis indicated that downsizing affected the totality of nurses' working lives. By using grounded theory methodology, open and axial coding, the following categories and subcategories were extracted: work environment, including time, space, and equipment; nursing roles, including tasks and skills; work-related attitudes, including job satisfaction and interpersonal relations; and, the nurses' perceptions of the well-being of patients. A brief discussion of each category and subcategory follows.

**The Work Environment**

The nurses explained that downsizing throughout the hospital had a profound effect on their units. Bed closures potentiated an increase in services and volume of same-day surgery and new technology made this increase possible. As a result of downsizing, more complex procedures were carried out and patients were sicker, requiring more complex nursing care. These trends caused an increase in stress in the work environment. Specific stressors identified by nurses included time, space, and equipment.
Time. The nurses claimed that, as far as nursing practice was concerned, downsizing had transformed the organization of time. For example, as a result of downsizing, bookings increased, more patients were seen on the units, and patients spent less time under the watchful eye of nurses. Increased patient acuity meant more preparatory tasks had to be performed prior to procedures in a shorter amount of time. Although Unit One had increased their general duty nursing staff by two nurses, nurses believed that proportionately they looked after more patients. Unit Two and Unit Three, combined at the time of downsizing, had lost 1.5 of their nursing staff. Nurses with many years of experience agreed that in no other department had they worked at such a fast pace.

In addition, Social Contract days caused more time-related pressures. While Unit One was closed during the Social Contract days, nurses covering Unit Two and Three had to look after the patients normally cared for by Unit One staff. In preparation for the Social Contract days, patients who could not wait for the procedures to take place were added to already full lists. Nurses expressed that time pressures clearly impinged on the quality of patient care causing nurses additional stress. A staff nurse explained:

We are hurried more than anything, I think. It's quick, quick because there's another one coming in. Quick, quick, quick, let's tidy up and get a bandaid on it. Let's move! It's very, very stressful and hurried.
Space. The nurses believed that although the units had been well designed for their original purpose, the greater volume of patients meant that they were crowded. There were no storage areas and stretchers were left in the corridors. Nurses explained that restrictions on space increased pressures on time and ultimately affected the pace of patient care. For example, in Unit One there were 22 beds but procedures were usually performed on 36 patients daily who required beds. In addition, beds in Unit One were needed for endoscopy patients recovering from invasive procedures. It was necessary for patients to leave as soon as they were adequately recovered. One staff nurse commented:

"Patients are in and out. Barf bags--wheel chairs. Sorry, but your bed can't cool down. We've got to fill it up right now."

Another staff nurse noted that a stressful environment was actually helpful in discharging patients early.

"It's very highly lighted; it's noisy because there are so many other patients around. There are children. People don't want to stay there for a long time after surgery."

Equipment. Basic equipment such as stretchers, beds, and wheel chairs were not always available. Also, the pressure on equipment meant that breakdown or malfunction of equipment would occur more frequently than in a less intense environment. Nurses saw problems with bedside equipment as an additional pressure that affected their practice and patient care. A staff nurse pointed out:
There is minimal nursing care but if I have to spend 45 minutes on a piece of machinery that doesn't work, it takes me away from patient care even more.

Some nurses commented that the procedure rooms were designed for simple procedures and were not adequately equipped for the complex procedures frequently performed in them. For example, in the nurses' opinion, cardiac monitoring was advisable when certain medications were given, and that the lack of monitoring equipment might compromise patient safety.

Nursing Roles

Nurses recognized that a reduction with respect to the nurse/patient ratio, together with the pressures of time, space, and equipment changed their nursing roles. The change affected the tasks that nurses performed on their units and the skills needed to provide more complete patient care.

Tasks. Nurses found that as a result of downsizing they had to perform more nursing and non-nursing tasks as well as work more quickly or "work smarter." Nurses expressed that the increase in the number of tasks, especially non-nursing tasks, made their bedside nursing role more difficult as their non-nursing tasks took them away from their patients. For example, nurses in Unit Three noted that the employment of a ward aide to wash scopes had helped. However, the lack of a desk clerk in the same unit added to their non-nursing tasks as they had to answer the telephone and schedule bookings. In addition,
charge nurses in Unit Two and Unit Three had to perform administrative tasks as they had lost their unit manager and their units were undergoing management change.

Nurses expressed that feeling stressed and hurried affected their ability to give their full attention to the needs of the patient. While dealing with one patient they were already contemplating how to get ready for the next. There was a tendency to skimp on the time recommended to carry out nursing procedures. One staff nurse explained:

Arterial line compressions should be done for ten minutes to avoid any arterial bleeding. These procedures are now being cut back by two minutes.

Nurses in Units Two and Three also discussed problems of working without sufficient backup. For example, working on Social Contract days was particularly stressful for nurses working in Unit Two and Unit Three. While Unit One was closed, nurses in Unit Two and Unit Three had to look after an increased number of patients which included recovering and discharging all patients, a procedure normally done by nurses in Unit One. One nurse noted:

The radiologist is working on three different patients in three different rooms and I'm the only nurse there. I was expected to do what I was hired to do plus recover all the patients because [Unit One] is closed. So I'm trying to do three people's work and then I have the techs screaming at me because I can't do what they want me to do.
Skills. The nurses stressed the importance of nursing skills for assessing and monitoring the condition of patients during complex invasive procedures. Because the patients were draped during invasive radiology and endoscopy procedures it was necessary to use every cue to assess changes in the conditions of patients. In addition, nurses also expressed that they needed additional nursing skills to assist with a wide range of procedures and to care for acutely ill patients undergoing these procedures. Maintaining diverse and specialized skills was particularly problematic for nurses during the process of downsizing as they were often shifted from one unit to the next, yet nurses varied in their clinical experience and expertise. To keep up with specialized skills, nurses in Unit One reported using each other as resources. However, the support of colleagues was limited in Unit Two and Unit Three as nurses often worked in isolation.

Work-Related Attitudes

Nurses discussed their attitudes toward their work pointing out that both their job satisfaction and interpersonal relations were affected by the process of downsizing.

Job Satisfaction. Staff nurses agreed that their primary responsibility was to their patients. However, they also believed that they had responsibility to their colleagues and to themselves. Nurses in Unit Two and Unit Three reported decreased job satisfaction when compared to the nurses working in Unit One. The main reasons for these differences in job satisfaction were attributed to
experienced staff working well together and stable unit management. For example, while Unit One had organizational stability, including a unit manager and experienced staff accustomed to working together, Unit Two and Unit Three were experiencing organizational change. Nursing personnel in Unit Two and Unit Three were not accustomed to working as a team as staff often worked in isolation. One nurse pointed out that:

We never see each other... because we all work in our own specialized areas.

Although all nurses were critical of hospital policy with respect to the process of downsizing, nurses working in Unit One generally reported satisfaction with their work and attributed their satisfaction to the high quality of team work in their unit. Nurses in Unit Two and Unit Three were less positive about their job satisfaction. Unit Two and Unit Three nurses spoke of feeling guilty when taking breaks because of the workload and because of the "martyr complex" of some nurses who never took breaks. Nurses in Unit Two and Unit Three discussed burnout and gave indirect answers to questions about job satisfaction:

I don't have time to think about job satisfaction. I'm glad I succeeded in doing everything that had to be done and everybody is fine—thankful there have been no major catastrophes.

Interpersonal Relations. Downsizing also affected the attitudes of nurses toward members of other professions. Because downsizing increased the intensity of nursing responsibility, nurses were less willing to perform non-nursing
tasks. For example, nurses were critical of physicians who were dilatory with patient consents, protesting that the compressed schedule meant that nurses could no longer spend time "chasing" them. Nurses were also critical of the scheduling practices of physicians noting that, because of an inappropriate scheduling process, patients were either rushed to the procedure room or left waiting for hours for a procedure to take place. According to the nurses, the physicians had not accepted the implications of downsizing, that is, the increased case load, on nursing practice.

The Well Being of Patients

Nurses expressed concern over the ultimate effects of downsizing on patient care. Major issues included patient safety and deterioration in the quality of service and care. Concerns about patient safety were raised from conditions already discussed in relation to downsizing such as shortage of staff, space, and adequate equipment. Nurses perceived a general deterioration in patient services mainly because of overbooking and a perceived need to accommodate as many patients as possible. While in the unit, patients waited longer for procedures to take place. Sometimes they were returned home because there were no beds for them. Because patients must leave as soon as possible, nurses must have expertise in making decisions as to who will leave. It is also the responsibility of nurses to ensure that patients are fit for discharge. However, the nurses admitted that their higher workload meant that they had less time to interact with their patients than they did in the past. For example,
one nurse stated:

I don't have a lot of time for psycho-social skills... nor can I
give the patients the time they deserve.

Nurses noted that patients, especially older patients, were dissatisfied with their short period in recovery. Nurses also felt that patients and their families often blamed nurses for the inconvenience and stress of cancelled surgeries and procedures.

**Problems and Issues Associated with Advancing Technology**

With respect to technology, nurses noted that advancing technology facilitated hospital downsizing as advancing technology made it possible for an increased volume of patients and an increase in the types of procedures to be carried out in their units. In addition to the categories and subcategories previously discussed under hospital downsizing, data analysis revealed that nurses had concerns relevant to the use of technology in their individual units. Some of the common themes extracted through open and axial coding included the following: concerns over patient safety with respect to the use of technology; knowledge and skills needed to set up, maintain, and trouble shoot the machinery used in patient care; broader knowledge and understanding of procedures that are carried out on individual units including affiliated units such as the operating room, radiology, and endoscopy departments; patient advocacy related to technologically invasive procedures; establishing boundaries between
nurses and other health care professionals; and raising the status of nurses. As the use of technology and nursing control over technology varied in each unit, the nurses' responses to advancing technology will be addressed according to their respective units.

Unit One

Data analysis revealed that Unit One was the least technologically intense of the three areas studied. Conventional use in patient care included monitoring and therapeutic devices such as Dynamaps, electrical (Stryker) beds, intravenous (IV) drips, continuous passive motion (CPM) machines for orthopaedic patients, and pneumatic cuffs used as tourniquets. Nurses in Unit One did not regard their own technology as particularly problematic as most nurses worked in technology intensive areas prior to coming to Unit One. However, nurses noted that insufficient instruction regarding the operation of specific items caused them inconvenience. For example, nurses expressed having difficulty in attaching CPM machines to beds. One nurse commented:

I think in order to work effectively you have to understand how the bed works and you cannot have it [instructions] from six different people because all it does is muddle your mind. So, what you need is an inservice that everyone has to come to.

In addition to understanding and working with technology nurses regard themselves as patient advocates with respect to technology. They expressed two concerns about patient safety. First, although downsizing had encouraged
physicians to carry out complex procedures in day surgery, nurses felt that adequate equipment to support these procedures was not always available. Nurses suggested that some procedures were potentially hazardous because small procedure rooms on their unit were not equipped with sufficient monitoring devices. Second, nurses believed that physicians were sometimes more concerned with the success of a procedure than the well being and the comfort of the patient.

Nurses also pointed out that downsizing and technological growth meant that nurses spent less time with patients and more time making preparations to carry out procedures. A possible effect of downsizing, nurses feared, was that nurses would become more technologically focused and less effective as patient advocates.

Unit Two

Unit Two was more technologically intense than Unit One. Nurses in Unit Two were mainly concerned with technology used to monitor patient procedures. There were fewer nurses in Unit Two relative to other health professionals and nurses were not always present at all procedures. Nurses in Unit Two described themselves as patient oriented and patient advocates, and described other health professionals such as radiologists, technicians, and technologists, as procedure oriented. The following example illustrates how nurses viewed technologists at work:
If they are sitting up in the control box, they [patients] are just a CT [CAT scan] of the head. They are not human and they don't have families.

Nurses also noted that, although technologists do not provide direct patient care, it is often a technologist who decides if a "float" nurse should be called to attend a particular procedure. Nurses believed that technologists lacked appropriate patient assessment skills in order to act as patient advocates and only call nurses when they encounter crisis situations. In addition, nurses pointed out that the absence of a clear boundary between the responsibilities of nurses and technologists was an issue. Nurses were anxious to establish nursing standards for patient care in their unit.

Nurses in Unit Two were also concerned with the status of nurses. They noted that, with respect to decision making in patient care, nurses are last in the "pecking order" of physician/radiologists, technicians, and technologists. Nurses felt that these professionals excluded them from decision making because they are not technologically oriented.

Unit Three

From the three areas studied, Unit Three was most technologically intense. Nurses working in Unit Three needed greater technical expertise than nurses working with the conventional technology in Unit One and Unit Two. Nurses in Unit Three estimated that it may take up to six months to acquire
adequate knowledge of the different instruments, scopes, and different procedures carried out in their units. Nurses noted that they:

Maintained the scopes, problem solved in the room, and assisted the physician while monitoring the patient.

With respect to the use of technology, nurses identified the following:

We have the cardiac monitor and we have the defibrillator, the usual resuscitation instruments, all kinds of instruments and instrumentation that goes down the scopes to do the various tasks.

One nurse noted that after six months she was still not comfortable with the "technological side." This long learning curve created a problem when there was not sufficient personnel on the unit to provide assistance with learning and patient care. The charge nurse noted that she did all the clinical teaching with respect to the use of technology and that she had no reliable backup.

With respect to the use and control over technology, the practice in Unit Three differed from the practice in Unit One and Unit Two. For example, a charge nurse in Unit Three pointed out that she, along with her staff, controlled the use of expensive instruments such as scopes and took responsibility for their maintenance and correct use. The charge nurse also acted as a resource person with respect to the use of instruments for other staff in the unit. Having authority in this area of technology increased nursing staff confidence in interacting with physicians, the type of confidence that nurses in Unit One and Unit Two did not exhibit. The charge nurse explained authority of nursing staff as follows:
I really feel that we control. It's our unit and we manage and maintain...We know the routine and we know the equipment and only certain physicians are allowed to use the equipment and the new fellows--I spend some time with them when they first come to show them the operation of the scopes and what I expect of them.

Keeping current with new developments in rapidly advancing technology was an issue for nurses working in Unit Three mainly because they lacked time to attend educational events and lacked learning resources. However, the charge nurse described her method in keeping current as self-directed. Her efforts in keeping current included reading professional journals, attending conferences, consulting with colleagues in other institutions, and learning from other professionals. She adapts what she learned to her practice and shares her knowledge with her staff.

**Attitudes Toward the Role of Staff Nurses**

The second objective of this research called for exploring the similarities and differences in the perspectives of nurse manager/charge nurses, nurse educators, and staff nurses on the role of staff nurses. The purpose of this data analysis was not to extract any particular categories or to establish any specific themes. Rather, the purpose was to compare the perspectives of the three categories of nurses in order to gain better insight into the problems and issues associated with change and nursing practice in AAC settings. This section will
first present the perspectives of nurse manager/charge nurses and staff nurses, followed by a description of perspectives related to nurse educators and staff nurses.

**Nurse Manager/Charge Nurses and Staff Nurses**

The perceptions of nurse manager/charge nurses and staff nurses did not differ greatly. Staff nurses in Unit One spoke highly of their unit manager, describing her as an excellent manager who listened to what they had to say and encouraged staff autonomy. Similarly, the nurse manager indicated respect for her staff in Unit One giving them much credit for their experience and clinical problem-solving skills. With respect to Unit Three, the nurse manager admitted that she was only beginning to become acquainted with staff as she recently took over management of the unit and could not comment on the role of the staff nurses. Staff nurses in Unit Three agreed with this assessment and pointed out that they were carrying out most of the administrative functions. As previously noted, Unit Two no longer had a nurse manager. Unit Two was managed by a senior technologist and had a charge nurse who was also new to her job. The charge nurse and the staff nurses of Unit Two made similar points during their interviews.

While staff nurses generally expressed satisfaction with their unit manager/charge nurses, they were dissatisfied with the process of hospital downsizing. The negative comments of staff nurses were directed toward "they,"
hospital top management and the decision makers who affected human resources, working conditions, and the safety of their patients. Nurses explained that they were not consulted or even informed of hospital decisions with respect to downsizing. In addition, nurses noted that redeployment of management led to individuals supervising areas with which they were relatively unfamiliar. The staff nurses felt that the patients were put at risk because of insufficient staffing. On a more personal level staff nurses felt unappreciated and uncared for. One nurse expressed her feelings as follows:

I don't feel that anyone cares about me or my needs as a nurse.

I think it's a shame that the hospital hasn't realized that we are being stressed. Even though we are a business, we are human and we do need to feel that what we are doing is important.

Staff nurses also recalled happier times and compared their negative feelings to the more positive experiences they had before downsizing. Nurses concluded that in an attempt to cut the hospital budget, the hospital ignored their human needs.

**Nurse Educators and Staff Nurses**

The two nurse educators saw themselves as working with staff nurses primarily to identify their learning needs. Both nurse educators explained that they had expertise in conventional nursing practice and had no expertise in technology. Also, both nurse educators recognized that they had limited
knowledge of the specialized aspects of nursing care that staff nurses required in their respective units. Knowledge regarding use and care of technological devices as well as patient care during the use of such devices had to be acquired from other sources.

While nurse educators did not feel confident about commenting on the role of staff nurses, they did discuss and agree with the issues raised by the staff nurses. For example, both nurse educators were aware of the problems associated with an increased intensity of nursing work, the lack of resources on individual units, and the limited power that staff nurses had in decision making concerning management of their units.

Staff nurses differed in their perspectives with respect to the roles and responsibilities of their nurse educator. For example, staff nurses from Unit Two and Unit Three spoke positively about their nurse educator while recognizing that she was new to their unit and could devote only a certain amount of time to their educational needs. Unit Two staff nurses noted that:

Basically we see our nurse educator as more significant now because we don't have a nurse manager.

In contrast, staff nurses in Unit One had little to say in favour of their nurse educator. Staff nurses did not think that their nurse educator was sufficiently involved in staff education and that the inservices that the nurse educator organized were rarely useful. Because staff nurses in Unit One were interested in acquiring knowledge with respect to specific nursing skills, they were dissatisfied with their nurse educator's lack of specific knowledge. In order to
meet their learning needs and compensate for the lack of effective inservices, the staff nurses in Unit One turned to a self-directed learning approach. For example, nurses wanted to learn about latex glove allergies and organized their own inservice. Staff nurses in Unit One also pride themselves on being self-directed learners. One nurse commented:

Somebody is going to show me or I am going to find out how it [equipment] works, even if it is the fellow who delivers it or whoever!

Staff nurses from all three units agreed that their educational needs were not fulfilled and noted that while physicians had time set aside for educational activities there were no such provision made for nurses. In addition, staff nurses complained that even when educational resources were made available, they had no time to use them. One nurse commented that:

They call us away for meetings, and meetings take priority over education and nursing.

Orientation of the new staff to the units consisted mainly of senior staff teaching junior staff. Some nurses believed that this approach to training the new staff had positive attributes as it allowed for supervised hands on experience. Other nurses believed that a more formal educational setting would better facilitate their learning needs. One nurse explained:

I think it would be nice to have a classroom setting to see the equipment and how it works. I find that most of it is learning on
the job which is not the best. I find my attention is focussed on the patient. I may not always be concentrating on the equipment.

Instructions, with respect to the use of new technology, were initially carried out by a representative from the company that sold the equipment to the hospital. Staff nurses noted that the inservice conducted by the company representatives varied in its effectiveness.

Another issue discussed by the staff nurses included the need to acquire a broader knowledge base that would assist them in providing more holistic patient care. Staff nurses commented that they understood only their own jobs relevant to their individual units and knew very little about the procedures or patient care that took place on other units. For example, nurses in Unit One said that they knew little about the procedures that took place in the operating room and in the endoscopy department even though they were expected to care for the patients from those areas. Nurses believed that this lack of broader knowledge limited their own ability to provide effective patient teaching. In addition to building a broader knowledge base about technology and direct patient care, staff nurses believed that increased knowledge about changes and new developments on other units would better facilitate their team approach to patient care.

Formulating the Conceptual Framework

The third and final objective of this research project was to formulate a
conceptual framework that would serve as a foundation for further studies. By using grounded theory methodology, selective coding, as recommended by Strauss and Corbin (1990), four core themes of categories were extracted. These themes include: intensification, moderation, frustration, and adaptation. Each theme is comprised of many variables (see Appendices D and E). Intensification and moderation are most evident in issues arising from external and internal forces impacting on nursing practice. Frustration and adaptation are responses by nurses to intensification and moderation. As each core theme reflected the issues specific to hospital downsizing and advancing technology, each theme will be discussed in relation to hospital downsizing and advancing technology. In addition, a conceptual framework reflecting the relationships among the four core themes will be presented.

CORE THEMES IN RELATION TO HOSPITAL DOWNSIZING

Intensification, an external force that affected nursing practice, was one of the most persistent themes that emerged as a result of downsizing. Issues raised by nurses included limited human resources to deal with an increased workload caused by an expansion of services offered to patients, rising case volume, and an increase in the number of sicker patients requiring more care. These factors contributed to higher stress in the workplace and were instrumental in increasing the number and types of tasks that nurses reported performing and the skills that they needed. Nurses reported experiencing
reduced work satisfaction because the intensity with which they were expected to work detracted from the quality of care they were able to give to patients. Patient dissatisfaction, as reported by nurses, created additional stress for nurses and confirmed their belief in the deterioration of services they delivered to patients.

Moderation, was another common theme that emerged as a result of hospital downsizing. Moderation is an internal force or the setting's (individual unit) response to intensification that also affected nursing practice. Moderation included the setting's response to increased volume, service, and acuity in patient care. In general terms, nurses believed that their units lacked adequate internal forces to effectively deal with downsizing. More specifically, in addition to an increased workload, nurses raised concerns over the following issues: staff and management instability in their respective units, insufficient space to provide patient care, rapid patient turnover, lack of time for direct patient care, lack of administrative support and interest in the well being of staff, and interpersonal relations with physicians, technologists, and other departments. In addition, nurses reported resenting taking on additional responsibility for patient care, and having their nursing roles expanded with respect to skills and responsibility without adequate educational preparation and inservices.

Data analysis suggested that the differences in the effectiveness of moderation existed in the three units studied. For example, in Unit One, where staffing and management were stable, a congenial team of nurses was able to cooperate to minimize the effects of the intensification of their work. In contrast, nurses working in Unit Two and Three were experiencing organizational change
as they lost staff and their manager to downsizing. These nurses reported working in isolation with little support from colleagues and expressed greater levels of stress and lesser job satisfaction than their colleagues working in Unit One who were not experiencing the same internal changes.

Frustration, is a theme reflecting nurses' response to the intensification and insufficient moderation from the individual units. Frustration increased the stress experienced by nurses and exacerbated workplace issues. Individual stress was evident in the nurses' reports of tiredness, irritability with colleagues, and lack of self-care evidenced by failure to take breaks. Other issues related to relations with other health professionals and to the hospital as an institution. Nurses felt that in the past they had picked up the slack left by other workers. The nurses' reaction to an increased workload was to become increasingly dissatisfied with carrying out non-nursing tasks. There was also evidence of dissatisfaction with the status of nurses as members of the health care team together with a desire for greater respect and a role in decision making. Low job satisfaction was reported by staff nurses in the work setting that lost their staff and a nurse manager to downsizing. Nurses in all settings expressed dissatisfaction and frustration with the hospital as an institution. While accepting the need for budgetary restraints, nurses saw an apparent lack of concern by policy makers for staff and patients. This was evidenced by the hospital's lack of consultation with nurses during the restructuring of individual units.

Adaptation, a theme reflecting nurses' positive responses to the problems of downsizing, was also noted during this study. For example, there was an
attempt of nurses in each unit to better define nursing roles and responsibilities and to identify tasks that should be done by other health care workers. Nurses saw patients as the ultimate victims of downsizing and emphasized their role as patient advocates. Also, nurses in Unit One, although experiencing similar stress as their colleagues in Unit Two and Three, attributed their high job satisfaction to the experience and congeniality of their staff and to the stable unit management.

Core Themes in Relation to Advancing Technology

Intensification: The introduction of new technology did not automatically make nurses busier. The nurses explained how particular innovations such as the Dynamaps made their work easier. However, in the context of downsizing, a major effect of technological innovation was to give nurses the ability to do more work in a shorter period of time. For example, nurses noted that advancing technology allowed for different and more invasive procedures to be carried out in their respective units. This increase in service contributed to an increase in volume and patient acuity that in turn called for more intense patient care. In addition, nurses reported that as technology replaced more traditional surgical and diagnostic procedures such as laparoscopic and endoscopic interventions, patient turnover was much faster, reducing the time that nurses spent with patients. Therefore, technological advances in the context of downsizing intensified the work of nurses.
Moderation: Many of the specific technological issues that nurses raised were exacerbated by financial constraints and problems associated with downsizing. Nurses believed that new technological procedures were not always adequately supported in terms of equipment, education, or personnel and that the hospital did not adequately support new technological procedures with the appropriate equipment. Nurses believed that the procedure rooms were ill equipped for the complex procedures carried out in them. In their own practice, nurses discussed the problems of keeping technological devices in working order and resented taking time from patients to trouble shoot malfunctioning machinery. In addition, staff nurses and nurse educators reported that limited time, space, and resources were allotted by the hospital for inservice education leaving nurses to be self-directed in acquiring their technological "know-how."

Frustration: Expected to work in an increasingly technological environment, nurses were frustrated by inadequate opportunities for continuing education. A major issue cited by nurses was acquiring a broader knowledge base that would allow nurses to assist with complex technical procedures and provide more holistic patient care to more acutely ill patients. While there were some provisions for acquiring skills in operating conventional technologies through inservices, knowledge about equipment, technical devices, and patient care, was gained haphazardly from the manufacturing representatives and from "experienced" colleagues.

While all nurses used conventional technology, nurses in the three units varied in their control over technological resources and skills associated with
procedures performed in their respective units. This issue over the control of technology affected the nurses' relations with physicians and technologists with whom they worked. Nurses felt that technologists and physicians were sometimes more concerned over the success of the procedure than the overall safety of the patient. Inability to act as stronger patient advocates left nurses feeling helpless and frustrated.

Adaptation: While nurses used sophisticated technological devices, they portrayed themselves as patient focussed. Nurses also took pride in their ability to use traditional, humanistic, nursing skills and values in order to complement what they viewed as mainly technical care provided by physicians and technologists. Although nurses were adapting to advancing technology, they were questioning the need for frequent use of expensive high tech procedures. For example, nurses suggested that economics could be affected and that patients could benefit if health care professionals screened and eliminated unnecessary technological procedures. Nurses noted that by considering reinstatement of conventional, but effective, diagnostic and therapeutic techniques, more patients could be served. The decision of nurses in Unit Two and Unit Three to establish nursing standards for patient care demonstrated their attempt to adapt to technology and to increase nursing effectiveness in a technologically intense work environment.
Conceptual Framework and Model Building

For the purposes of further investigation and research, a conceptual framework has been developed reflecting the main concepts of data analysis in relation to downsizing, technology, and nursing practice in acute ambulatory settings. Following the philosophy of open systems theory where the phenomenon is treated "as if there existed organization, interaction, interdependency, and integration of parts and elements" (Chin, 1980, p.24, in Fawcett 1989, p.14) a conceptual framework reflecting the four core themes was developed. The relationship of these core themes, intensification, moderation, frustration, and adaptation, is depicted in a model entitled the Impact and Consequences Model on Nursing Practice in AAC Settings (Appendix F).

As the title implies, the model consists of two categories, the impact and the consequence categories. The impact on nursing practice, as data analysis suggests, may be external and/or internal. Thus, two themes, intensification (an external force) and moderation (an internal force), fall into the impact category. Similarly, data analysis suggested that nurses responded to impact in two different ways, either with frustration or adaptation. Frustration and adaptation are outcomes of the nurses' responses to external and internal forces, therefore, constituting the category of consequences.

In addition, each theme that makes up the impact category consists of two components. The theme "intensification" includes downsizing and technology, and the theme "moderation", consists of the work environment and nursing roles,
(see Appendix F). In further analyzing the data related to intensification, findings suggested that an interdependent relationship existed between downsizing and technology and that this relationship intensified the external force that affected nursing practice in AAC settings. For example, hospital downsizing was possible (to a certain degree) because of advancing technology. However, it was this relationship between downsizing and technology that contributed to an increase in patient services, volume, and acuity that, in turn, intensified the impact of the external force on nursing practice.

Internally, moderation was divided into two major components, work environment and nursing roles. Each component also included the properties that nurses identified as relevant issues to their practice. For example, nurses discussed staffing and management stability, staff and hierarchical relations, the time that nurses spend with patients, space, and equipment as important work environment issues affecting nursing practice. With respect to nursing roles, nurses identified tasks, skills, experience, knowledge, education, attitudes, and interpersonal relations with others (patients, staff, management, physicians and technologists) as important issues that affected their daily practice.

With respect to consequences, as a result of hospital downsizing and advancing technology, findings suggest that moderation, an internal force, greatly determined to what extent nurses would adapt to intensification. For example, nurses working in Unit One expressed fewer frustrations and found changes easier to adapt to than did their colleagues in Unit Two and Unit Three. Data analysis suggested that effective and stable management, stable and
experienced staff, and strong support from colleagues, promoted adaptation in Unit One. Similarly, frustration was more evident in nurses working in Unit Two and Unit Three as these moderating factors were absent.

**Summary**

Data analyses were carried out using grounded theory methodology, open, axial and selective coding. The results were presented following the study objectives. Findings related to the first study objective, problems and issues associated with hospital downsizing and advancing technology, revealed several major and minor themes. The following themes relating to hospital downsizing were extracted: the work environment, including time, space and equipment; nursing roles, including tasks and skills; work related attitudes reflecting job satisfaction and the interpersonal relations of nurses; and patient satisfaction. Findings reflecting the problems and issues associated with the use of technology in individual units revealed several common themes. These themes reflected concerns expressed by nurses and included the following: patient safety; knowledge base and educational resources regarding advancing skills, equipment, procedures and patient care before and after procedures; patient advocacy; establishing practice boundaries among nurses and technologists; and raising the status of nurses in each unit.

Results related to the second study objective revealed no differences in the perspectives of nurse manager/charge nurses, nurse educators, and staff
nurses on the role of the staff nurses. Perceptions of the staff nurses on the role of nurse manager/charge nurses and nurse educators differed in individual units. Staff nurses in Unit One spoke highly of their nursing manager but expressed few positive comments about the role of their nurse educator. Nurses in Unit One considered themselves to be self-directed, relying little on their nurse educator. Comments from the staff nurses about the nurse manager/charge nurses in Unit Two and Unit Three were not significant as both units were experiencing structural changes with respect to their unit management. In Unit Two and Unit Three, the staff nurses appreciated input and guidance from their nurse educator with respect to defining nursing roles and establishing nursing guidelines for patient care in their respective units. Major problems and issues concerning the educational needs of the staff nurses in all three units included: a lack of hospital support for nursing education including time, space and physical learning resources; and lack of human resources knowledgeable in specialized nursing care relevant to the individual units.

Selective coding revealed four core themes: intensification, moderation, frustration, and adaptation. These four core themes were used to formulate a conceptual framework, the third and final objective of this study. Each theme, consisting of many properties, reflected the problems and issues relative to hospital downsizing and advancing technology. Relationships between the four core themes were depicted in a model termed the Impact and the Consequences Model on Nursing Practice in AAC Settings. The relationships of the four core themes indicated that the impact, consisting of intensification, an external force,
and moderation, an internal force, affected nursing practice. Furthermore, the consequences, consisting of frustration and adaptation, were nurses' responses to the impact. Findings suggest that the internal force, moderation, determines how nurses will respond to impact or to change.
CHAPTER FIVE: SUMMARY, IMPLICATIONS/RECOMMENDATIONS FOR FURTHER RESEARCH, AND CONCLUSION

Summary

Chapter one introduced the background of the research problem, that is, the changes that were taking place in nursing practice in AAC settings as a result of hospital downsizing and advancing technology. Operational definitions for the terms AAC and AAC settings were discussed. The research question, addressing the problems and issues related to clinical nursing practice in acute ambulatory care settings, and the research focus that explored the problems and issues associated with clinical nursing practice in three AAC settings, were presented. The purpose, the importance, the scope and delimitation of the study, and the outcome of this research project, such as the development of a conceptual framework, were presented. In addition, chapter one introduced an overview of the four subsequent chapters.

Chapter two presented findings from Canadian and American literature with respect to the effects of change, hospital downsizing, and advancing technology on nursing practice in various AAC settings. Starting with a historic perspective, the evolution of AAC and AAC settings during the modern era of medicine including changes in nursing practice were discussed. A literature review, dating back to the late 1980s and early 1990s, indicated that hospital downsizing and advancing technology were the major forces responsible for changes in the current delivery of acute care services. As a result of these
changes, the services offered to patients in AAC settings, case volume, and patient acuity have increased. This increase in services, volume, and acuity create more pressure for the nursing work environment and nursing practice roles leaving nurses to provide more complex care to their patients in a compressed amount of time. Chapter two also discussed the main concepts of grounded theory as grounded theory methodology was used to guide the data analysis of this exploratory research project.

Chapter three discussed qualitative research methodology and procedures used to collect and analyze data. Data were collected from three categories of registered nurses, staff nurses, nurse manager/charge nurses, and nurse educators working in three different AAC settings of a major teaching hospital. The methods used to collect data, including field procedures and audio-taping of five individual interviews and five focus group sessions were described. Grounded theory methodology, more specifically, open, axial, and selective coding, was used in data analysis by the researcher and the external rater. Limitations and weaknesses with respect to this qualitative research methodology and findings were noted.

Chapter four described the results of this qualitative research using the three study objectives as a guide in presenting the findings. In order to meet the first objective, open and axial coding helped to identify and group the problems and issues identified by nurses into major categories or themes. With respect to hospital downsizing, nurses believed that their work environment, nursing roles, work related attitudes, and patient satisfaction were affected. As a result of
advancing technology, nurses expressed the following concerns: patient safety; inadequate knowledge, skill, and educational resources with respect to new procedures and the use of technology; patient advocacy; unclear practice boundaries among nurses and technologists; and the low status of nurses in a technologically intense work environment. The second study objective revealed that nurse manager/charge nurses, nurses educators, and staff nurses did not differ in their perspectives on the role of the staff nurses and that the opinions of the staff nurses were not controversial with respect to the role of their nurse manager/charge nurses. However, staff nurses differed in their expectations of the role of their nurse educators. Major concerns regarding nurse educators and staff education included: lack of educational resources, including physical resources and appropriate human resources; and a lack of knowledge and skills with respect to the use of technology, new procedures, patient safety, and patient teaching. As for the third and final objective of the study, the four core themes, intensification, moderation, frustration and adaptation, were extracted through the use of selective coding. Each theme consisted of many properties relevant to hospital downsizing and advancing technology. The relationships of these themes were depicted in an Impact and Consequence model reflecting nursing practice in select AAC settings.

Implications/Recommendations for Further Research

Given that the impact of change on nursing practice is caused by external
and internal forces, the questions that are raised by researchers need to reflect the values and goals of individual institutions. For example, if the goal of the institution is to foster adaptation, then the impact on nursing practice, intensification and/or moderation, needs to be examined. In order to do so a decision needs to be made as to what component(s) of the impact are "workable." If the institution has more control over internal forces, moderating issues such as the work environment and nursing roles need to be addressed. However, if the institutions viewed external forces, that is, intensification that caused an increase in patient services, volume, and acuity as manageable issues, then further research is warranted in that area.

In view of the current emphasis being placed by the government on cost containment in the delivery of acute health care, the conceptual framework developed in this study may be useful in guiding further research related to future hospital downsizing. For example, a study commissioned by the Economic Council of Canada suggested that by removing about 3.2 million bed-days from acute care hospitals in Ontario, or by reducing acute care beds by 20% and the length of stay by 20%, almost $1 billion could be saved (Angus, Auer, Cloutier, & Albert, 1995). Thus, hospitals considering downsizing could examine the readiness of their individual units to change by assessing the strengths and limitations of their moderating factors.

Researchers interested in the study of relationships between the causes and effects of phenomena may also find this conceptual framework a useful tool. For example, the four core themes, depicted in the Impact and Consequence
Model, reflect the relationships between two forces, intensification and moderation, and the effect that these forces have on nursing practice, such as frustration and adaptation. By examining the relationships among the four core themes and by studying their individual properties, the following hypotheses may be generated: If intensification is greater than moderation, frustration in nursing practice will result. Similarly, when moderation equals or is greater than intensification, adaptation in nursing practice occurs. In order to test these hypotheses, a quantitative tool reflecting the problems and issues raised by nurses needs to be developed. Using a more specific example, issues relating to staff education will further illustrate the point. A quantitative study where an instrument that would measure the effectiveness of "improved" educational resources may be useful in testing the following hypothesis: In order to decrease the frustrations experienced by nurses during work intensification, moderating properties relating to staff education must improve.

**Conclusion**

This exploratory study identified many problems and issues relating to nursing practice in AAC settings as a result of hospital downsizing and advancing technology. The issues raised by nurses correspond with the literature review findings in that the impact of change on nursing practice in AAC settings is caused by the intensification of case volume, services offered to patients in AAC settings, and patient acuity. Depending on the effectiveness of internal
moderating forces, intensification may result in staff frustration or adaptation. Thus, moderation is a determining factor that can promote or hinder nurses' adaptation to change. It is hoped that the conceptual framework developed through this study will serve as useful groundwork in developing a quantitative instrument that will measure the impact and consequences of change on nursing practice in acute care settings.
REFERENCES


APPENDIX A: Semistructured Questionnaire for Staff Nurses

The semistructured questionnaire for staff nurses used in focus group interviews.

1. How has hospital downsizing, either directly or indirectly, affected your work on the unit in relation to:

   a. patient care?
   b. nursing practice?
   c. professional knowledge and skills?
   d. work satisfaction?

2. How has downsizing made a difference to your use of technology?

3. What technology-related procedures are carried out on the unit?

4. What technological knowledge should nurses have in order to work effectively on your unit?

5. What do you think are the roles and responsibilities of:

   a. staff nurses?
   b. nurse managers?
   c. nurse educators?

6. What are the significant issues for registered nurses in regards to:

   a. patient care?
   b. nursing practice?
   c. professional knowledge and skills?
   d. work satisfaction?

7. Do you have any suggestions or strategies for change?
APPENDIX B: Semistructured Questionnaire for Nurse Manager/Charge Nurses and Nurse Educators

The semistructured questionnaire for nurse manager/charge nurses and nurse educators in individual interviews.

1. How has hospital downsizing, either directly or indirectly, affected the work on your unit in relation to:
   a. patient care?
   b. nursing practice?
   c. professional knowledge and skills?
   d. work satisfaction?

2. How has downsizing made a difference to your use of technology?

3. What technology-related procedures are carried out on the unit?

4. What technological knowledge should nurses have in order to work effectively on your unit?

5. What do you think are the roles and responsibilities of staff nurses on your unit?

6. What are the significant issues for registered staff nurses in regards to:
   a. patient care?
   b. nursing practice?
   c. professional knowledge and skills?
   d. work satisfaction?

7. Do you have any suggestions or strategies for change?
APPENDIX C: Information Sheet

INFORMATION SHEET

EXPLORING THE EFFECTS OF CHANGE ON NURSING PRACTICE IN ACUTE AMBULATORY SETTINGS: A QUALITATIVE STUDY

Investigator:
Louise Martinus RN, BScN, MEd (Cand.), School of Nursing, McMaster University, Room 2J2, Telephone, (905) 525-9140 ext. 24730 or 22407.

Research project:

Current changes in the health care system are affecting the delivery of acute care services. Patients that at one time required lengthy hospitalization for their invasive procedures are now treated in acute ambulatory settings. Two major forces, hospital downsizing and advancing technology, are identified as main contributors to this shift in acute care delivery. Along with other services offered in acute ambulatory settings it is estimated that 40-45% of all surgical procedures currently offered in hospitals will be offered to patients in ambulatory settings. This brief stay in hospital leaves little time for nurse/patient interaction. The effects that this shift of health care delivery has on clinical nursing practice is not known. The purpose of this study is to examine the critical quality of worklife issues related to the practice activity of nurses in acute ambulatory settings and to explore practice problems and issues regarding the nature of work from the perspective of staff nurses, nurse manager/charge nurses and nurse educators.

Study methodology will include: audio-taped, semi-structured, individual interviews for nurse managers/charge nurses and nurse educators; and focus group sessions for staff nurses. Individuals participating in the study as well as their settings may withdraw from the study at any time.

Data, including all tapes and transcripts, will be stored in a locked office. Computer files will be accessible by password and access to the computer will be locked. Anonymity of the participants will be guaranteed through the use of coding numbers. There will be no association of the names of the participants or settings in the reporting of the results.
APPENDIX D: Four Core Themes in Relation to Hospital Downsizing

The four core themes, *intensification, moderation, frustration* and *adaptation*, reflecting their individual properties and dimensions in relation to hospital downsizing.

**Intensification**
* limited human resources
* increased patient services
* increased case volume
* increased patient acuity
* more invasive procedures
* more intensive patient care
* increased tasks
* increased need for skills
* increased work intensity
* increased stress
* decreased patient satisfaction
* decreased work satisfaction

**Moderation**
* increased workload
* staff and management stability vs. instability
* insufficient space for patient care
* rapid patient turnover
* decreased time for direct patient care
* changes in administrative support for nurses
* strained interpersonal relations with physicians, technologists, and other departments
* increased non-nursing related tasks
* expanded nursing roles
* expanded skills and patient care responsibilities
* inadequate opportunities for educational preparation
* lack of experienced staff with new procedures
Frustration
* work intensification
* insufficient moderation
* increased individual stress - tiredness, irritability, lack of self-care
* ineffective interpersonal relations
* performing non-nursing tasks
* lack of recognized professional status
* loss of staff
* loss of nurse manager
* dissatisfaction with upper management
* lack of management concern for staff and patients

Adaptation
* opportunity to redefine nursing roles
* opportunity to establish the role of other health care workers
* opportunity to act as patient advocate
* staff congeniality
* stable unit management
APPENDIX E: Four Core Themes in Relation to Advancing Technology

The four core themes, *intensification, moderation, frustration, and adaptation*, reflecting their individual properties and dimensions in relation to advancing technology.

**Intensification**
* increased services
* increased volume
* increased acuity
* more invasive procedures
* more intense patient care
* faster patient turnover
* greater intensity of work

**Moderation**
* hospital support for: equipment, personnel and staff education
* technological "know how"
* time, space, and human resources available for staff education
* equipped procedure rooms
* with maintaining functioning equipment
* faulty equipment taking time away from patient care
* clarity of nursing roles and responsibilities

**Frustration**
* expected to work in increasingly technological environment
* inadequate opportunities for education
* lack of knowledge with respect to the use of technology, new procedures, patient care, and patient education
* lack of power in decision making with respect to the use and purchase of technology
* inability to act as stronger patient advocate with respect to invasive technical procedures
* inability to spend more time with patients undergoing stressful technical procedures

**Adaptation**
* ability to provide humanistic care to patients in technologically intense work environment.
* benefit the patient by emphasising traditional diagnostic procedure
* benefit economics by identifying and eliminating unnecessary technology
* opportunity to establish standards for safe and effective nursing practice
APPENDIX F: Impact and Consequences Model

IMPACT AND CONSEQUENCES MODEL ON NURSING PRACTICE IN ACUTE AMBULATORY CARE SETTING

**IMPACT (Change)**

**EXTERNAL FORCE**
*Downsizing*
*Technology*

**INTERNAL FORCE**
*Work Environment*
*Nursing Roles*

**INTENSIFICATION** → **NURSING PRACTICE** ← **MODERATION**

**FRUSTRATION** ← **CONSEQUENCES** → **ADAPTATION**