THE ROLES AND RESPONSIBILITIES OF
COMMUNITY HOSPITAL
CHIEF EXECUTIVE NURSES IN RURAL MANITOBA:
A DESCRIPTIVE STUDY

by

David Isaac Driedger

A thesis submitted to
the University of Manitoba
in partial fulfillment of the
requirements for the degree of
Master of Nursing

Winnipeg, Manitoba

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Abstract

The purpose of this exploratory and descriptive qualitative research study was to describe the work activities and behaviors of four hospital Chief Executive Nurses (CENs) in Manitoba. The findings in this study provide a profile of the roles and responsibilities of rural CENs within their organizational, geographical, and health care delivery contexts. Henry Mintzberg's (1973) conceptual framework of the nature of managerial work guided the study.

This study made use of triangulated data: 1) preliminary data collection (organizational documents and a pre-observation interview); 2) continuous non-participant structured observation over a convenient three day work period; and, 3) a semi-structured exit interview. Content analysis provided a systematic process for analyzing the qualitative data obtained during the collection period.

Findings from the study indicate that the rural CEN's daily work behavior is characterized by an involvement in a significant number of activities, each of short duration. Mintzberg's (1973) administrative description involving interpersonal, information and decisional roles was supported by the data. Two additional behavioral categories under a supportive cluster, namely clinical support and counseling, were also evident. The data

suggested a cyclical nature to nurse executives' work. The ARIMA Time Series Model, however, only marginally supported this concept. Implications for nursing practice, education and research are discussed in this research report.

DEDICATION

This thesis is dedicated in

memory of my father

Abram Driedger

1917-1991

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I wish to extend my gratefulness to the four nurse executives who participated in the study. You made the research process rich and purposeful.

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Chapter One

Statement of the Problem

Organized nursing service in the health care system is directed by chief executive nurses (CENs) whose pivotal roles is to promote comprehensive, quality nursing care. As an executive and a leader of both professional and auxiliary personnel, the CEN coordinates the interdependent activities of numerous individuals and groups both within and beyond the nursing discipline. The content of the work of Canadian CENs' changes as the health care system evolves, requiring incumbents to function in diversified corporate and professional roles (Canadian Nurses Association [CNA], 1993). Hence, CENs' work requires multiple skills including leadership and managerial competence to administer nursing, the largest provider group in the health care system (Canadian Association of University Schools of Nursing, Canadian College of Health Service Executives, Canadian Hospital Association [CHA], & Canadian Public Health Association, 1986; Pfoutz, Simms, & Price, 1987; Thomlinson, 1991).

Despite the integral roles of nurse managers at all levels in Canada's hospital and health service, few empirical studies systematically analyze these managers and their functions. CENs are the most senior nurse managers in hospitals, yet relatively little is known about them and their work. No Canadian studies on the

rural community hospital CENs' work activities and behaviors were located. This begged the question: What are the roles and responsibilities of community hospital CENs' in rural Canada? Do these roles and responsibilities differ from urban CENs? Other managers? The extent and diversity of issues in rural health care delivery bid a focused plan for developing an empirical body of knowledge on the work content of rural CENs (Bushy, 1992; Weinert & Long, 1991).

Although a few research studies have investigated the work of urban CENs in non-Canadian settings, limited studies examine the specific observable activities and behaviors of rural CENs (Hagen & Wolff, 1961; Henry & Moody, 1986). These rural studies have limited transferability because of the diversity of CEN roles and responsibilities found in various geographical settings, health care delivery systems, and distinct organizational cultures (Rotkovitch, 1983). To understand the contributions to patient care, organizational efficiency, and staff advancement that rural nurse executives provide, research on the roles and responsibilities of community hospital CENs in Manitoba was proposed. A greater understanding of CENs' roles and responsibilities will contribute to the development and refinement of concepts and theory in administration in general, and nursing administration in particular.

Purpose of the Study

The pivotal roles and responsibilities of community hospital CENs' in rural Canada have not previously been addressed. Given this evidence and the significant changes currently being realized in Canadian health care, the purpose of this investigation was to describe the work activities and behaviors of community hospital CENs in rural Manitoba. This exploratory and descriptive study provides a profile of the roles and responsibilities of rural CENs within their organizational, geographical, and health care delivery contexts (Dunn, 1990; Henry, Salberg & Holter, 1991; Raber, 1988).

Research Questions

The following questions provided a guide for the research process:

1) What are the roles and responsibilities of a select sample of community hospital CENs in rural Manitoba?

2) What proportion of the working day do rural CENs spend in various activities and roles?

3) How are the work characteristics of rural CENs similar or different from the characteristics of

managerial work described by Mintzberg (1973)?

4) To what extent do Mintzberg's working roles describe the work of community hospital CENs in rural Manitoba?

Significance of the Study

The literature pertaining to rural, community hospital CENs is extremely limited (Hagen & Wolff, 1961; Henry & Moody, 1986). Previous nursing research has yet to address the question: What are the roles and responsibilities of community hospital CENs in rural Canada? The significance of this study was to gain descriptive information regarding the uncharted roles and responsibilities of CENs in rural Canadian hospitals. Although CENs' work content in general has received somewhat greater attention in the nursing literature, the findings of this study will further contribute to that empirical base. Furthermore, if Mintzberg's (1973) description of managerial work and managerial roles are applicable to the rural CENs' work, this finding would assist nurse executives and others in understanding the respective role-set. Current perspectives and practices in the selection, education and evaluation of CENs may need to be reconsidered as the result of empirically based findings.

Rural CENs play important roles in hospitals and in the delivery of quality, health care in these settings (Henry & Moody, 1986; Jensen, 1960). Preparing nurses for rural, nursing administration has tremendous implications for health care delivery. Identification of CENs' role-set assists the formation of an empirical body of knowledge that would facilitate the preparation of nurses for executive positions in rural, community hospitals.

Conceptual Framework

One of the most influential delineations of managerial work and roles has been developed by Henry Mintzberg (1967; 1973) whose conceptual framework was utilized for this study. Mintzberg's theoretical tenets were derived from his qualitative study of five senior male executives in various industries, in conjunction with an extensive review and incorporation of previous managerial research ([partial listing] Burns, 1954, 1957; Carlson, 1951; Dubin & Spray, 1964; Guest, 1956; Horne & Lupton, 1965; Homans, 1958; Neustadt, 1960; Sayles, 1964; Shartle, 1949; Stewart, 1967). Mintzberg's work has received extensive review and has been supported in its basic tenets by numerous researchers and writers in general management (Choran, 1969; Kurke & Aldrich, 1983; Martinko & Gardner, 1990; Snyder & Glueck, 1980), education (Duignan, 1979; Hannah, 1981) and nursing (Alberta Hospital Association &

Alberta Association of Registered Nurses' [AHA & AARN], 1984; Baxter, 1993; CNA, 1988; Dunn, 1990; Jones & Jones, 1979; Morrison, 1983; Raber, 1988). The extent to which these managerial tenets are applicable to community hospital CENs in rural Canada required further investigation.

A. Core Elements of Managerial Work

All levels of managers' work are remarkably similar and can be depicted in terms of basic roles and working characteristics. Managerial work differences that do exist are related to emphases on specific roles or work characteristics. Although most managerial work is challenging and unplanned, all managers have regular duties to perform. Managers are both generalists and specialists. The unrelenting work cycle characterized by brevity, variety and fragmentation cause the manager to take on a heavy workload resulting in work being addressed superficially. The nature of the work cycle also causes the manager to develop work characteristics that make it difficult to get others' assistance in reducing superficial work. Overall, managerial work is extremely complex (Mintzberg, 1973).

B. Distinguishing Characteristics of Managerial Work

Mintzberg (1973) identifies six distinguishing characteristics of managerial work that have been largely supported by nursing research (Baxter, 1993; Dunn, 1990; Jones & Jones, 1979; Morrison, 1983; Raber, 1988). Managerial work characteristics in general include: 1) a heavy workload at an unrelenting pace; 2) work activities characterized by brevity, variety and fragmentation; 3) preference for live action--current, specific, well defined, non-routine work; 4) an attraction to the verbal media, with much of the manager's time being spent on the telephone and in meetings; 5) multi-contacts (superiors, outsiders and subordinates) but time mainly spent with subordinates and outsiders; and, 6) control through initial commitments and taking advantage of personal obligations.

C. Interpersonal, Informational, and Decisional Roles

Managerial work consists of a set of ten identifiable roles which are categorized into three distinct behavioral categories: interpersonal, informational and decision-making (Mintzberg, 1973). Research in nursing, education, and management support these roles, although the addition of contextual or discipline-specific roles is not uncommon (Choran, 1969; Duignan, 1979; Hannah, 1981;

Morrison, 1983; Raber, 1988). Mintzberg's roles and their functional flow are illustrated in *Figure 1*:

1) **Interpersonal roles** arise from the formal authority accorded the manager by virtue of and status inherent in a position, and from the contacts generated in fulfilling their position. This category consists of figurehead, leader and liaison roles:

a) The <u>figurehead role</u> refers to those symbolic activities and behaviors that are social, inspirational, legal or ceremonial in nature, which the manager is obliged to perform. Activities include attending ceremonies, solicitations, addressing status requests and legal documents.

b) The <u>leader role</u> includes activities and behaviors which motivate subordinates to achieve organizational goals. For example: directing, role modeling, training, performance appraisals and staffing.

c) The <u>liaison role</u> pertains to those activities and behaviors which maintain the manager's self-developed network of contacts and information sources out-side the organization. Activities include mail acknowledgements and external committee work.

FIGURE 1: MINTZBERG'S MANAGERIAL ROLES

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┌─────────────────────────┐
│  FORMAL AUTHORITY       │
│    and STATUS           │
└─────────────────────────┘
            │
            │
┌───────────────────┐      ┌───────────────────┐      ┌─────────────────────────┐
│  INTERPERSONAL    │      │  INFORMATIONAL    │      │  DECISIONAL             │
│    Figurehead     │      │    Monitor        │      │    Entrepreneur         │
│    Leader         │──────│    Disseminator   │──────│    Disturbance Handler  │
│    Liaison        │      │    Spokesperson   │      │    Resource Allocator   │
│                   │      │                   │      │    Negotiator           │
└───────────────────┘      └───────────────────┘      └─────────────────────────┘
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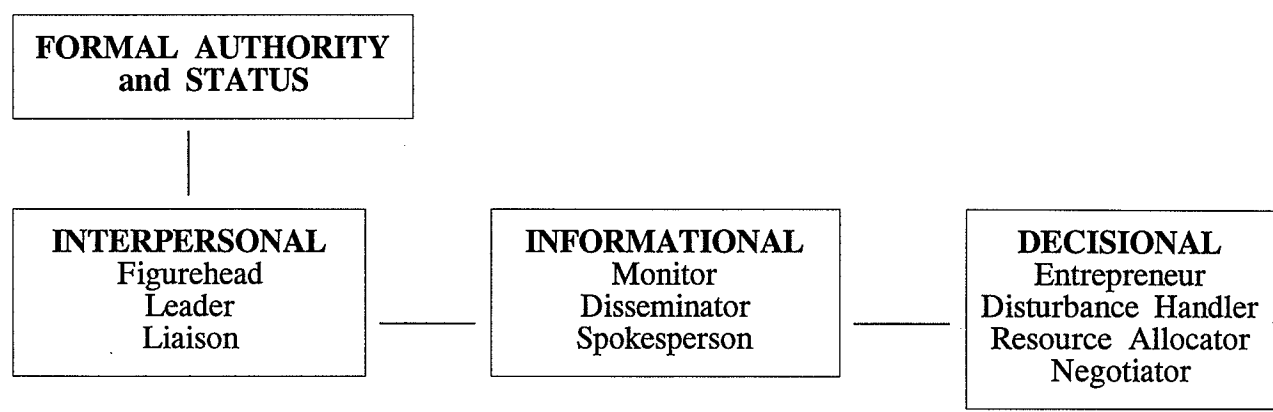
Source: Mintzberg, 1973, p. 59.

2) The **informational roles** are supported by the interpersonal roles. Information processing activities and behaviors make the manager an organizational 'nerve center':

a) The <u>monitor role</u> involves inquisitive activities and behaviors that enable the manager to develop an understanding of the internal and external environment. Categories of information include internal operations, external events, analyses, ideas, trends and pressures.

b) The <u>disseminator role</u> includes those activities and behaviors that involve transmission of valued and factual information, from both outsiders or subordinates, to other organizational members. The manager may forward mail or memos, or facilitate review sessions.

c) The <u>spokesperson role</u> includes activities and behaviors which involve the external transmission of organizational information; comprising of such activities as external committee meetings and contacts, and handling mail.

3) **Decisional roles** are the final dimension of managerial work. Decisional activities involve the process of making and interrelating organizational decisions; the process being dependent on the understanding acquired in the

informational roles:

a)   The _entrepreneur role_ refers to activities and behaviors which incorporate innovations to facilitate organizational improvements.   Role examples include "improvement projects", policy, procedure or protocol initiation, strategic planning and ad hoc committees.

b)   The _disturbance handler role_ involves corrective activities and behaviors of unexpected conflicts, grievances and crises within the organization.   Managerial involvement, for example, may be required for interdepartmental feuding, collective agreement disputes or an occupational disaster.

c)   The _resource allocator role_ includes those activities and behaviors for appropriating organizational assets including finances, time, supplies and equipment, and human resources.

d)   Finally, the _negotiator role_ pertains to those activities and behaviors where managerial representation is required for non-routine negotiations with individuals or organizations.   Examples include negotiation of a collective agreement, finalizing a shared service agreement, and obtaining government funding for innovative programming.

D. Managerial Work Variation

Managerial work variation is considered the norm. Work variations may be realized by any of the following contingencies: 1) <u>environmental variables</u>, including characteristics of the internal and external culture, the product and/or service offered, and the organization; 2) <u>job variables</u>, including position level within the organization and the scope of supervision; 3) <u>person variables</u>, including the executives' personality and style; and, 4) <u>situational variables</u>, including a host of time related factors (Mintzberg, 1973).

Contextual and discipline-specific managerial roles are also common. For example, Mintzberg (1973) alludes to two additional roles often realized in the managerial work of smaller institutions (Choran, 1969) which may be applicable to the rural CEN: the <u>substitute operator</u> role whereby the manager of a smaller organization performs staff functions due to minimal human resources; and, the <u>specialist</u> role whereby the manager undertakes a non-transferable expert task. Other researchers who have used Mintzberg's conceptual framework have also found it necessary to add context or discipline-specific roles (Choran, 1969; Duignan, 1979; Hannah, 1981; Morrison, 1983; Raber, 1988). For example, Raber (1988), in her study of front-line nursing managers, added the <u>clinical expert</u> role with <u>substitute nurse, coordinator</u>, and

education recipient sub-roles. Although managerial activities and behaviors vary, all managerial work manifests the above core roles (Mintzberg, 1973).

E. Summary of the Conceptual Framework

Empirical findings in nursing, education and management have supported Mintzberg's (1973) work. Mintzberg's theoretical delineation of managerial work was considered to be an appropriate framework for this study of community hospital CENs' in rural Manitoba. The work of rural CENs may reveal different emphases placed on each managerial role, but it is difficult to envision nurse executives excluding any one role. Managerial work variation is common, and for rural CENs additional role dimensions may exist which have yet to be empirically documented. Research on these complex, complementary executive roles is required to develop a theoretical base for understanding and improving the managerial practice of community hospital CENs in rural Canada.

Assumptions, Delimitations and Limitations

A. Assumptions

The investigator assumed that:

1) The "purest" data source to describe rural CENs'
   work activities and behaviors can be realized by
   observation of CENs' in their work environment;

2) Rural hospitals' distinct philosophy,
   organizational structure and culture may dictate a
   unique CEN role-set; and,

3) CENs have their own perceptions and expectations
   concerning work activities and behaviors, and
   through work have developed numerous skills. CENs'
   perceptions, expectations and experiences may
   influence their work activities and behaviors
   (Dunn, 1990).

B. Delimitations

The study was delimited:

1) To resource limitations and the time-consuming
   nature of observational data collection, thereby
   restricting the sample size to four CENs. CENs of
   25-100 bed rural Manitoba community hospitals, who
   had been in the position for a minimum of one
   year, made up the convenience sample; and,

2) To a description of the CENs work activities and

behaviors, which *does not* reflect details regarding managerial style, appraisal of the CENs' skills and abilities, or evaluate the organizations' practices.

C. Limitations

The following represent the limitations of this study:

1) The settings' specific scope of CEN roles and responsibilities limits the transferability of the findings of this study beyond the Provincial, rural community hospitals of this bed size;

2) A convenience sample size of four CENs limits the transferability of the study findings. The acquisition of in-depth, comprehensive information via triangulated data collection methods, however, helps offset this limitation;

3) Structured observations include an element of subjectivity which may influence data collection and analysis. The following techniques were used to reduce subjectivity:

   a) prior to the observation period the informants were requested to share during the observation

period the 'what and why' of their activities

and behaviors (Snyder & Glueck, 1980); and,

b) interpretation of activities were periodically

   checked with the CEN being observed; and,

4) Observer presence may effect the "natural

   situation" causing the CENs to consciously or

   unconsciously alter their activities and behaviors

   (Choran, 1969). The researcher was also known to

   the CENs as he is currently employed as a nurse

   executive in a rural, community hospital.

   Mintzberg (1973), however, argues that managerial

   work likely does not change as most work is

   dictated by others. Other investigators suggest

   that social settings have a tendency to be stable

   over time and therefore observer presence is less

   of a threat to data credibility then generally

   recognized (Choran, 1969; Lincoln & Guba, 1985).

   The effects of the researcher's presence were

   minimized by:

a) guaranteeing anonymity of each CEN and the

   organization in the documentation and

   presentation of all research data;

b) the researcher only remaining an 'observer-as-

participant' (Gold, 1958) with no involvement
in actual work activities; and,

c) ensuring observer neutrality; expressions and
reactions remained neutral and non-judgmental.

Definition of Terms

The following definition of terms facilitated
structured observation and the data analysis utilized in
this study:

1) **Chief Executive Nurse:** "...the senior nurse in a
health care organization responsible for managing
the nursing organization and the clinical practice
of nursing throughout the institution" (Mark,
Turner & Englebardt, 1991, p. 186). The CEN
reports to the chief executive officer (Simms,
Price & Pfoutz, 1985).

2) **Work Activity:** "...a single event with an identity
of its own. It had an observable beginning and
ending in a time continuum. It ended when a major
change occurred in one of the elements or
dimensions of the...[CEN's]...behavior..."
(Duignan, 1979, p. 64).

3) **Work Behavior:** the manner in which CENs act,
   operate or conduct themselves, including observable
   habits or tendencies (Dunn, 1990; Morehead &
   Morehead, 1981).

4) **Roles:** an organized set of activities that belong
   to a socially defined position that underlie the
   functional purpose(s) for given work (Biddle, 1979;
   Merton, 1957; Mintzberg, 1973; Raber, 1988).

5) **Responsibilities:** include the specific actions,
   tasks, activities and behaviors for which a CEN is
   accountable (Dunn, 1990; Raber, 1988).

6) **Rural:** Any setting within the province of Manitoba,
   outside the cities of Winnipeg and Brandon proper.

7) **Community Hospital:** Any health care facility in
   rural Manitoba that had a minimum of 25 acute care
   beds, and a combined total of acute and long-term
   beds that did not exceed 100.

Conclusions

This exploratory and descriptive study sought to
obtain a better understanding of the work content of
community hospital CENs in rural Canada. To that end, the

research plan was to engage in preliminary data collection, structured observation, and conduct an exit interview with a convenience sample of community hospital CENs in rural Manitoba. Data were recorded and analyzed to provide both a work profile of individual CENs and an overview of all informants. Findings were then compared and contrasted against Mintzberg's (1973) description of managerial work and other administrative research literature. A critical examination of relevant literature is necessary to provide a foundation of knowledge about managerial work in general, and CEN work specifically.

Chapter Two

Literature Review

The characteristics of managerial work is a common theme in nursing publications. A review of the literature, however, revealed limited discussion of the Chief Executive Nurse's (CEN's) roles and responsibilities, and little about the rural CEN's work activities and behaviors. A broad, yet selected literature review was undertaken to provide a foundation for the proposed study, including a critical examination of the following: (1) CENs' within Canada's health care system; (2) general management functions and CENs' work; (3) methodologically similar studies; and (4) nursing administrative research.

The Chief Executive Nurse Within Canada's Health System:
A Historical Perspective

Canada's CENs work within a health care system that has undergone significant change over the last fifty years, and is likely to significantly alter within the next decade. Although nursing services within hospitals existed in Canada prior to the 1940's, community nursing practice was more prominent during this time. Initiation of both the federal government's National Health Grant Program and hospital and medical care insurance during the

post-World War II era, resulted in the opening of more than 80,000 new hospital beds by the late 1960s (Taylor, 1987). Hospitals evolved from hierarchical charitable or military institutions to large modern organizations (Smith, 1988; Torrance, 1987).

The opening of thousands of institutional beds increased the need for nurses and auxiliary personnel; changing the pattern of nursing administration and practice. In the 1960's nurses performed work which now is the responsibility of a variety of allied health and support departments within hospitals (Smith, 1988).

Canadian health services and hospital growth continued well into the 1970s, until federal and provincial governments began questioning the escalating costs. As a strategy to cap costs, shared services and linkages with other hospitals were initiated. In the late 1970's the most effective way to rationalize services and utilize resources was to amalgamate services into one hospital that previously had existed in several hospitals. During the 1980s, the move to better coordinated and more integrated services among hospitals continued. In the 1990s common strategies to contain costs include hospital megastructures and the merger of hospitals and regional health providers under one administration (Lemieux-Charles & Wiley, 1992). In rural Manitoba, for example, merger of geographically proximal hospitals and health care agencies for the provision of comprehensive regional health

services, has been proposed.

CENs have pivotal roles in the maintenance of cost-effective, quality and professional nursing practice throughout the entire Canadian health care system (CNA, 1993). The CENs' roles and responsibilities will continue to be redefined in the context of discipline specific trends, general management evolution, and health care reform occurring both at the organizational and system levels (Brueckner, 1978; Lemieux-Charles & Wiley, 1992).

The CNA (1988) suggests that discipline-specific trends "...may include nurses as the primary entry point to health care services, increased autonomy for practicing nurses, and an integration of role for nurses practicing in various settings" (p.1). In light of organizational complexity and more advanced practitioners, nurse executives will be required to more fully incorporate decentralization and participatory management to enhance decision-making and effect appropriate change. Health care reform will continue with altered funding bases, rapidly changing technology, growing consumer involvement, and the shift of care from institutions to the community (CNA, 1993).

CENs must be educationally and experientially prepared to fulfill the evolving roles and responsibilities of their pivotal, professional and corporate position (CNA, 1988). Since CENs assume an administrative position well beyond discipline-specific functions, a review of the

literature that deals with this component of their work is required. The terms 'managerial' and 'administrative' are used interchangeably.

General Management Functions and Chief
Executive Nurses' Work

CENs have roles and responsibilities comparable to other managers (CNA, 1988). A review of the general management literature reveals that CENs work is similar to managerial functions of administration, education, business and industry (Chapman, 1968).

A review of the literature gleaned that managerial work in nursing and general management have similar descriptors. Tead (1959) argues that the essential components of administration are: planning, organizing, staffing, initiating, delegating, directing, overseeing, coordinating, evaluating and motivating. These components appear congruent with dimensions commonly noted in the classical management and nursing literature (Barnard, 1938; Carlson, 1951; CNA, 1988; DiVincenti, 1977; Haas, Porat & Vaughan, 1969; Mahoney, Jerdee & Carroll, 1965; Newman, 1951; Shartle, 1949; Simms et al., 1985; Stewart, 1967; Sullivan & Decker, 1988; Terry, 1953).

More recently, management researchers have sought to more fully operationalize the role components for different managerial levels. For example, Allan's (1981)

field study of 1,476 government managers revealed 57 tasks within the following dimensions: employee supervision, harmonization, information handling, analytic-evaluation, change initiation, and monitoring. Although some activities were performed by all managers, senior managers dealt more with planning, policy, programming and coordination activities. Executive positions had additional fiscal, hiring, firing and spokesperson responsibilities. Managers, however, differed in the relative emphasis placed on each of the six dimensions. The list of administrative dimensions and tasks described above may not, however, fully reflect the dimensions of nursing administration work.

A. The Chief Executive Nurse - A Conglomerate Role

According to the nursing and general management literature, CENs' role may sometimes be described as a conglomerate of middle and senior management, and may include some front-line managerial roles (CNA, 1988; Griffin, 1984; Stoner, 1982). Thus, the CENs' middle management and front-line operational activities may have an impact on senior administrative roles and functions.

Guest (1956) utilized structured observation to determine the work activities and behaviors of 56 foremen who were involved in front-line activities. The study revealed that foremen jobs were characterized by

interruptions, variety and discontinuity. Abdication of their supervisory role was required when operational problems occurred. Similarly, CENs who assume front-line managerial responsibilities may ultimately attend to fewer administrative responsibilities (Chapman, 1968).

Due to limited resources, CENs may also incorporate middle management functions into their roles and responsibilities. In their exploratory study, Horne and Lupton (1965) used self-reporting instruments to examine the work activities of 66 middle managers. The researchers grouped their participants' self-recorded, activity patterns into functional dimensions. Seventy-five percent of middle manager's time was spent in organizing, unifying and regulating activities; the time remaining involved formulation, discussion and planning revisions with employees.

In support of Horne and Lupton's (1965) organizing, unifying and regulating findings, Uyterhoeven (1972) argues that middle managers require the effective execution of upward, downward and lateral relationships. The CEN, for example, would need to relate upward to corporate management; outward to colleagues, other professionals, to the community and consumers; and downward to nursing and ancillary personnel within the hospital and home settings (Chapman, 1968; Hagen & Wolff, 1961; Henry & Moody, 1986).

Promotions of CENs is at times based on previous

exemplary practice as a functional specialist - the professional dimension, and not the administrative dimension that their position requires (CNA, 1988; Leatt, 1981). A repertoire of middle management relational skills may need to be learned. The degree and significance of middle managerial roles and responsibilities on the CEN role-set requires further investigation.

B. The Work Of Chief Executive Nurses Described Within General Management Theoretical Frameworks

Theoretical frameworks for managerial roles in general have been developed in the management literature. Three frameworks (Stewart, 1967; Mintzberg, 1973; and, Katz, 1974), that have been applied to nursing administration will be examined.

i) Stewart

Stewart (1967) conducted a study of top and middle level managers in a wide range of industries. Stewart concluded that there are five types of managers: emissaries - outward oriented and generally employed at the top management level; writers - often staff specialists; discussers - frequently middle managers who spend a great deal of time both with colleagues and in

meetings; troubleshooters - often first line managers whose work was fragmented and who tended to deal with crisis situations; and, committee persons - frequently middle managers who had contact with a wide range of persons at different levels of the organization and spend much time in meetings.

Stewart's (1967) characteristics of managers are likely relevant to nurse executives. For example, the CEN could easily be envisioned as an emissary, as an out-of-scope nurse. As second-in-command in many health facilities, the CEN could easily incorporate the discusser and committee person roles. Finally, a CEN may be expected to troubleshoot in a front-line staffing crises. In light of CENs having both middle and senior management responsibilities, Mintzberg's (1973) theory will be examined to enhance Stewart's (1967) description of managerial work.

ii) Mintzberg

Mintzberg (1973) reviewed the classical management literature and determined that despite the research conducted, managerial work was inadequately described as researchers had merely examined peripheral characteristics, such a manager's perceptions of their own work. Thus, Mintzberg, using a triangulated data collection approach, sought to determine how five male

senior executives from different disciplines spent their time and performed their work. Data analysis of organizational documents, direct observations, and exit interviews allowed Mintzberg to conclude that managerial work was remarkably similar and could be described in terms of ten complementary roles grouped in three distinct categories comprising of interpersonal, informational and decisional roles.

Using identical or similar methodologies, Mintzberg's findings (1973) have been supported by numerous researchers in general management, education and nursing. It is well documented, for example, that: managerial work is interpersonal; there is dependence on others for initiating contacts; and work activities are characterized by brevity, variety and discontinuity (Allan, 1981; Carlson, 1951; Duignan, 1979, 1980; Dunn, 1993; Hannah, 1981; Kurke & Aldrich, 1983; Martinko & Gardner, 1990; Raber, 1988; Snyder & Glueck, 1980).

CENs' work has been described, but not researched, according to Mintzberg's (1973) complementary interpersonal, informational, and decisional role categories (AHA & AARN, 1984). The degree to which hospital CENs approximate these roles and responsibilities, especially in relation to first-line and middle management functions, is unknown.

Interpersonal Roles

The interpersonal roles arise from the formal authority accorded the manager by virtue of and status inherent in the position, and from the contacts generated in fulfilling their role. The manager is responsible for the work of a group of persons, for fostering an innovative, creative and productive milieu, and for the employment of appropriate personnel for the department and/or services. For example, the CEN may act as a liaison officer and as an ambassador for nursing and for the facility through various contacts (AHA & AARN, 1984).

Informational Roles

The second managerial role-set, based on the interpersonal roles, is informational. The executive role allows access to a broad range of information. The manager constantly monitors the internal and external environments for information and disseminates this data as appropriate. Information is also communicated to the appropriate parties external to the organization who influence its operation. The manager also provides expertise to outside persons or groups in various capacities (AHA & AARN, 1984).

Decisional Roles

The final managerial role-set, based on the informational roles, is decisional. The manager uses information to assist in decision making, such as identifying opportunities for improving the overall functioning of the nursing department and/or services. As a 'disturbance handler' the administrator responds to pressures impinging on the organization by external forces. The executive is responsible for organizational structuring, allocating resources, and determining the assignment and coordination of workload within the department. The executive is also accountable for the major decisions within the division and ensures that they are consistent with the overall philosophy of the department and the facility. The manager negotiates with others for access to organizational resources and has the authority to commit resources (AHA & AARN, 1984).

Managers incorporate and adapt the interpersonal, informational and decisional processes to fulfill their work roles and responsibilities (Kazanjian & Pagliccia, 1993). As CENs incorporate multiple management roles and responsibilities, a theoretical framework that addresses skill requirements for the different managerial levels needs to be reviewed.

iii) Katz

Katz's (1974) theoretical framework also lends application to nursing administration. Comparable to Mintzberg's (1973) interpersonal, informational and decisional categories, Katz outlines a role delineation for managerial work. Managers must fulfill three mutually exclusive roles - remediation (correction of deficiencies and inefficiencies), maintenance (preserving a steady balance) and innovation (new projects or directions). Each role is supported by technical, human and conceptual skills. The remedial role requires conceptual and technical skills; the maintenance role necessitates humans skills; and, the innovative role demands both conceptual and human skills.

Skill emphasis varies with managerial level. Lower level managers, for example, require more technical skills or an understanding of the methods and procedures of predetermined activities. Conceptual skills are considered most significant for executives. Human and interpersonal skills are seen as an integral component at all managerial levels. Although it is easy to envision that CENs are engaged in these three roles, this begs the question of which skills CENs considered most significant for their roles.

The three theoretical frameworks give an overview of

the tenets common to all managerial work, yet the literature suggests that variations in managerial work exist. Managerial work variations are often a function of environmental and contextual elements.

C. Environmental and Contextual Considerations

Managerial work presents a dynamic process of activities and behaviors. Managers are described as having definitive responsibilities for ensuring organizational and divisional goal attainment (Leatt, 1985). Managerial roles and responsibilities thus become a function of organizational demands and constraints, yet within these functions managers have opportunities for discretionary behavior (Carlson, 1951; Horne & Lupton, 1965; Stevens, 1981; Stewart, 1976). Thus, environmental and contextual elements - human service organizations, organizational structure and the organizational developmental stage, must be considered when examining the role of community hospital CENs.

i) Human Service Organizations

Hasenfeld (1983) has argued that management in human service organizations such as hospitals is more difficult than other organizations since work focuses on people. Human service organizations can make managing more

difficult because people come to the organization with their own ideals. Second, it is often difficult for managers to set priorities among differing goals (patient care, teaching, community services) and multiple groups - clients, funding agencies, board of directors, other managers, nurses, physicians, and other disciplines.

Managerial roles, including those in hospitals, must be responsive to a turbulent environment, the most notable of which is economic (Drucker, 1980; Skelton-Green, 1993). The CNA (1988) describes the environment in which the CEN works as an open system. The internal environment includes organizational goals, technology, and multiple personnel including managers, staff and clients. Externally the environment involves social, political, regulatory, and economic elements with technological, demographic, and health trends. Managerial roles include actions and strategies that respond to environmental demands. Similar to Mintzberg (1973), Drucker argues that change adaptation and a complex role-set are inherent to any management job; roles and responsibilities that go well beyond the written job description.

ii) Chief Executive Nurses' Work and Organizational Structure

The context, size, and complexity of a health care facility may dictate the CEN's roles and responsibilities

(CNA, 1988). The internal organizational environment in which CENs work, therefore, needs to be addressed. The four main dimensions of organizational structure depicted are: complexity, formalization, centralization and administrative intensity (Ford & Slocum, 1977).

Organizational Complexity

The complexity dimension of structure refers to the degree of differentiation within an organization and may include: the number of hierarchical levels (vertical); the number of functions, departments or jobs (horizontal); the number of operating sites (spatial); and the degree of personal expertise (personal) (Ford & Slocum, 1977). CENs may work in a flat organizational hierarchy; may assume a wide array of functions across departments; may coordinate services in physically separate health care facilities; and may have been promoted to the CEN position as a functional expert.

Mintzberg (1973) hypothesized that the smaller the organization, the more time executives spend in informal communication and unscheduled meetings, have more brief and fragmented activities, are more involved with internal operations, and spend more time substituting for subordinates. Kurke and Aldrich's (1983) replication study of Mintzberg work, supports these hypotheses.

Formalization and Centralization Within Organizations

Formalization is the extent to which policies and procedures, written or unwritten, are specified and/or adhered too. The degree of variation acceptable, must also be considered (Ford & Slocum, 1977). Small hospitals are known to be very formalized (Keith, 1958).

Centralization is the locus of formal control or power within the organization and includes: decision-making authority, the hierarchy of authority, autonomy and participative decision making (Ford & Slocum, 1977). The degree of centralization within Canadian hospitals is not empirically documented but is likely quite varied.

Administrative Intensity

The number of supportive or administrative personnel within an organization, referred to as administrative intensity, may well determine the potential of the CEN as a leader within a health care facility. The ratio of administrative personnel (indirect labor) to the total of production personnel (direct labor) is used to determine administrative intensity (Ford & Slocum, 1977). In many Manitoba's hospitals the CEN is often one of the few, if not the only, nurse "out-of-scope".

iii) Chief Executive Nurses' and Organizational Stage

The organizational development stage may affect the role and responsibilities of managers (Greiner, 1972). Organizational stage development and how it effects CENs' work, therefore, demands attention.

Greiner (1972) argues that organizations are organic in nature and are found in any one of the following stages: 1) organization (entrepreneurial and technological orientation; informal and frequent communications); 2) direction (formal systems introduced); 3) delegation (characterized by decentralization); 4) coordination (decentralized units are merged); and, 5) collaboration (greater spontaneity in management teams, problem-solving teams across functional areas, matrix organization). Organizational developmental stage may dictate the roles and responsibilities of an incumbent CEN.

Managerial work has also been found to be more varied and fragmented in organizations experiencing a high rate of change; whether initiated from the external or internal environment (Kurke & Aldrich, 1983; Mintzberg, 1973; Stewart, 1967). Contextual variations cue and, to some extent, dispose managers toward particular types of behaviors.

In a study of school principals, Martinko and Gardner (1990) found that managerial behavior differences were related to grade level, staff size, geographic location,

socio-economic status and relative urbanization. The latter four dimensions are all relevant to the delivery of health care. CENs may also work with limited resources: fiscal, human, time, educational, and support. Many differences in managerial behavior can be envisioned. For example, a CEN with a smaller staff may spend more time in non-managerial work, whereas those with larger staff may devote more time to giving information, conducting reviews and strategic planning (Henry & Moody, 1986).

Levinson (1988) argues that the evolving executive role will emphasize psychological knowledge, experiential learning, the teaching of organizational behavior, participative management, and the need to understand consumers and employees better. CENs will likely need to be more closely involved with their subordinates over longer periods of time to establish and maintain commitment. Simultaneously, nurse executives will experience feelings of increased helplessness as their role may exceed their cognitive capacity in evolving information and technology systems. How CENs' roles are implicated is not known.

The literature suggests that environmental and contextual elements do have an impact on managerial work. Human service organizations, organizational structure, and the stage of the organization's development may, therefore, demand or constrain CENs' emphasis on specific

managerial roles and responsibilities.

D. Summary

The general management literature has depicted a comprehensive, common description of managerial roles, which is useful in understanding the administrative, 'generalist' dimension of the CEN role. The review was bridged with information pertinent to understanding the community hospital CEN. A review of the literature pertaining to the environmental and contextual elements that may have a significant impact on CENs responsibilities was conducted. These findings were found to be congruent with Mintzberg's (1973) managerial work variations which he argued were contingent on environmental, job, person and situational elements. Most noteworthy throughout the management literature is the frequency by which Mintzberg's methodological and theoretical description of managerial work is supported. Based on this finding, a literature review of methodologically similar studies will ensue.

Methodologically Similar Studies

Preliminary, structured observation and interview, collection tools were used in Mintzberg's (1967, 1973) study. Through analysis of field data and other

researchers' investigations, Mintzberg developed a theoretical framework of managerial work content and roles. This study approach has been used by others in both nursing and non-nursing fields, allowing cross comparison of research findings. The following researchers used all, or part of, Mintzberg's methodology and framework.

A. Nursing

Nursing has utilized Mintzberg's (1967) approach for analyzing in-hospital managerial work; though not yet in rural hospital settings. In an American study of eight head and assistant head nurses, Jones and Jones (1979) used Mintzberg's role delineated dimensions to categorize all significant front-line managerial work activities. Raber's (1988) Canadian study revealed the appropriateness of this approach when examining the work activities and behaviors of four head nurses. In addition to Mintzberg's (1973) managerial roles, Raber identified a clinical category with clinical expert, substitute nurse, coordinator and education recipient roles.

Similarly, in an Alberta study of community health nurse managers, Morrison (1983) identified professional behaviors (leader, expert, and consultant roles) beyond Mintzberg's (1973) categories. Dunn (1990) adapted Mintzberg's methodological approach in her Manitoba study

of front-line managers and found that this approach
provided a comprehensive view of their work. Baxter's
(1993) descriptive research study in British Columbia
found that twenty head nurses' readily perceived their
work within the context of Mintzberg's ten managerial
roles. Some of the roles were more familiar than others
and, therefore, appeared to receive contextual emphasis.
The leader, resource allocator and entrepreneur dimensions
emerged as the most significant roles for these front-line
managers.

B. Education

Similarly, other studies using Mintzberg's methodology
and framework have found the need to develop additional
working roles to adequately reflect data content. Hannah
(1981), in her observation of five Canadian deans of
nursing, added the term scholarship (teacher, researcher
and author roles) for a demonstrated group of behaviors.
Duignan (1979), too, found Mintzberg's work useful in
describing the administrative behavior of school
superintendents. Despite the small sample size used in
these studies, the nature of data collection, analysis,
and framework provided a wealth of knowledge in
understanding managerial roles.

C. Small organizations

Mintzberg's (1967) work was also used in an observational study of three small business owners: of an industrial chemical plant, a cosmetic company, and a restaurant corporation. Small company managerial activities were summarized into the basic roles outlined by Mintzberg with the addition of the specialist and substitute operator roles. Though similar in overall activities, managers of small companies used informal media more frequently, held a substantial number of unscheduled contacts and networks, had greater number of brief activities resulting in a higher degree of fragmentation, were more operation-oriented, preferred live action, and blended positional rights with organizational duties (Choran, 1969).

D. Additional Research Dimensions

A decade after Mintzberg's (1967) seminal study, Snyder and Glueck (1980) used structured observation in a study of a school superintendent and a hospital administrator. These researchers found that planning was an integral part of managerial work content; a dimension that Mintzberg minimized in his study. The planning role was identified when study subjects were asked to explain 'what they were doing and why' during the observation

period. This study will incorporate an informant explanation dimension into the research design so that a significant CEN work dimension will not be omitted.

Kurke and Aldrich (1983) also replicated Mintzberg's (1967) study using structured observation to study four senior managers. Mintzberg's field study was supported in all important dimensions. Explanations for finding variation was related to organizational size and the environment (industry, environmental stability and public sponsorship)

In a recent study, Martinko and Gardner (1990) attempted to improve on Mintzberg's methodological limitations by using a larger sample size and statistically contrasting samples of managerial behavior. Unlike most prior studies which only compared study results with those of Mintzberg, this study of forty-one school superintendents emphasized comparisons with other observational studies to derive at managerial work conclusions. In general, managerial work content was supportive of Mintzberg's study findings.

E. Summary

Mintzberg's (1973) structured observation approach, with the addition of preliminary data collection and exit interviews, has accounted for managerial work content in diversified settings. Although Mintzberg's ten managerial

working roles are consistently identified in data analysis, discipline- or context-specific additional roles are common. Since the method and theory appear well grounded in field data, this study utilized a methodology similar to Mintzberg's which allowed for the comparison of managerial work and role dimensions identified in this study against those Mintzberg described.

Nursing Administrative Research

Nursing has recently identified the critical need for nursing administration research at all managerial levels and in diversified contexts (AHA & AARN, 1984; Bushy, 1992; Dunne, Ehrich & Mitchell, 1988; Henry et al., 1987). These authors describe the paradox of nursing administration as the group that ensures the development and implementation of research in a variety of areas, yet have initiated limited effort to study their own role. The paucity of research devoted to understanding and improving the role and responsibilities of executives, including that of the Canadian rural hospital CENs, needs to be addressed.

A literature review of nurse executive practices assists in understanding the role of Canadian CENs. The nursing literature related to the work of CENs is discussed from three perspectives: CENs' role evolution; nursing research that examines the roles and

responsibilities of CENs in general; and research that specifically examines CENs' work in rural and small hospitals.

A. Chief Executive Nurses' Role Evolution

Florence Nightingale, as a superintendent of a military field hospital in 1857, is often portrayed as one of the first and most outstanding CENs. Her extensive role-set included care provision, care management, interdisciplinary education, and research. Nightingale, for example, used statistics in hospital decision-making and the development of standards for health and sanitation, hospital design, organization and management (Smith, 1988). Modern nursing and hospital administration have emerged from the highly structured military and religious institutions. Within these organizations multiple administrative layers created communication and decision-making systems that often were slow to respond to both staff and patient needs (Lemieux-Charles & Wylie, 1992; Simms, 1991; Smith, 1988; Torrance, 1987).

In the late 1800's, hospital CENs were responsible for all nursing care as most bedside nurses were students, the purchasing of supplies, policy and procedure development, in addition to managing the laundry, housekeeping, and the school of nursing (Erickson, 1980; McCloskey, Gardner, Johnson & Mass, 1988). CENs were usually promoted to

their positions based on expert clinical skills (Fralic, 1987). By 1920, CENs were expected to have experiential management skills and in-depth practice knowledge. Although pivotal in hospital operations, CENs did not report directly to the Board of Directors (Erickson, 1980), but through the Chief Executive Officer (CEO), the most senior administrative person within the organization.

By the 1960's the CEN's role evolved into administrative leadership with a limited role in both direct patient care and auxiliary departments (Erickson, 1980; McCloskey et al., 1988). Jensen (1960) and Erickson (1980) recognized that CENs of small and rural hospitals had a uniquely diversified role as they continued to be responsible for auxiliary departments such as pharmacy, admitting, central supply, housekeeping and purchasing; roles that may not be that uncommon for CENs in Canada's rural hospitals in the 1990s.

Differentiated roles among nursing service personnel also occurred in Canada during this era. Educators were among the first staff specialists introduced to hospitals. Today the diversified clinical and administrative nursing roles include graduate prepared clinical nurse specialists, and specialists in infection control, computer applications and nursing information systems management, patient education, financial and administrative management, quality, risk and utilization management, and research (Smith, 1988). Differentiation

of all rural disciplines have lagged behind primarily due to limited fiscal and human resources. As a result, rural CENs have often attempted to incorporate these emerging roles and responsibilities into their job portfolio; thereby becoming a 'jack-of-all-trades' (Chapman, 1968; Simon, 1976).

The change in title from superintendent to director of nursing, to vice president of nursing or CEN, symbolizes the significant role evolution experienced by the CEN from the Nightingale era to the present time. In contrast to the early CEN, whose role was associated with feminine virtues, the contemporary CEN is confronted with diversified corporate roles and responsibilities (CHA, 1985; CNA; 1988; Mark et al., 1991).

B. Chief Executive Nurses' Roles and Responsibilities

Research investigating the roles and responsibilities of the CEN has been limited given the pivotal position these executives hold within hospitals and the health care system. Mintzberg's (1973) conceptual framework addresses the corporate dimension of CENs' work. However, to gain a broader appreciation of the CENs' roles and responsibilities, including the professional dimension, Leatt's (1981) and Stevens' (1981) nursing administrative theoretical frameworks are presented. An overview of CENs' work, as well as CEN research findings utilizing

various methodologies follows.

i) Nurse Managerial Theoretical Frameworks

Leatt's (1981) nursing administrative framework, endorsed by the Canadian Nurses Association and others (CNA, 1988; Lemieux-Charles & Lamb, 1986; Thomlinson, 1991), proposes that CENs manage through both a professional and corporate role. The professional dimension refers to the CEN's knowledge and expertise with respect to professional nursing, the ability to exert nursing leadership, and the ability to act as advisor on nursing matters to the organization's executive team. The corporate - executive dimension addresses the CEN's involvement in organization-wide policies and/or participation in the organization's executive team to determine policies, priorities, allocation of resources, and other management functions (CNA, 1988; Thomlinson, 1991). CENs carry out the professional and corporate role dimensions through the following managerial activities: delivery of nursing care services, management of fiscal and human resources, and information and environmental control (CNA, 1988). The CEN's roles and responsibilities focus most extensively on corporate functions (AHA & AARN, 1984; Leatt, 1981).

In contrast to Leatt's broad perspective of nurse executive roles, Stevens (1981) delineates a more

functional model. She suggests that CENs have both an 'achieved' and 'elastic' role consisting of three components: the sociologic aspect concerned with societal expectations; the rational component comprising the specific job functions and responsibilities assigned; and the personal component concerned with individual choice. Stevens, whose framework was derived from three general management theories (Greiner, 1972; Katz, 1974; Mintzberg, 1973), hypothesizes the following CEN roles and commensurate skills: (1) the 'Innovator' role with goal setting skills; (2) the 'Expander' role with bridging skills; (3) the 'Refiner' role with analytical skills; (4) the 'Stabilizer' role with problem solving skills; and, (5) the 'Revolutionary' role requiring negating skills. Role emphasis is dependent on the environmental elements and individual choice. The success of each CEN may be a reflection of the match or mismatch of the incumbent's activities, and their response to organizational development.

CENs, therefore, appear to be professionals within a corporate position that has societal, rational and personal determinants. The professional-corporate position roles and responsibilities are supported by the development and utilization of myriad managerial skills. Skill emphasis is dependent on contextual and personal elements. The two nurse managerial frameworks presented, delineate a broad and complex CEN role that

frequently extends beyond the nursing discipline. The investigator was unable to locate empirical studies using these frameworks. Research findings provide a fuller description of the work content of CENs.

ii) Chief Executive Nurses' Work - An Overview

In general, the literature depicts CEN roles with professional, administrative, clinical, educational, and research dimensions (AARN & AHA, 1984). The role is labor-intensive, requires 24-hour service, has a relatively unpredictable and uncontrollable work flow, has multi-role senders, and has multi-responsibilities. The CEN's primary nursing role includes: the setting and implementation of standards and goals, ensuring quality care, provision of human and capital resources, and the facilitation of staff functioning and change process. Personnel functions require the development and dissemination of policy, and the degree at which it is carried out depends on organizational supports and individual choice(s). Although implicit in the theoretical frameworks described above, educational and research responsibilities, although diversely applied, are an integral part of every CEN role. In their managerial role CENs must also cope with role ambiguity due to disparate goals of various groups, while maintaining the integrity of the nursing division (Adams, 1988; Arndt &

Laeger, 1970a & b; Carey, Craighead & Netzel, 1988; Henry et al., 1991; Henry & Moody, 1986; Leatt, 1981; Mark et al., 1991; McClure, 1979; McKay, 1993; Merton, 1957; Poulin, 1984a; Scalzi, 1988; Simms et al., 1985; Snoek, 1966; Wadsworth, Clark & Hollefruend, 1986). A more detailed examination of CEN research methodologies and findings is presented.

C. Research of Chief Executive Nurses' - Methodologies and Findings

Nursing research has identified additional dimensions of work performed by CENs utilizing various research methodologies in different contexts. Findings by Poulin (1984b), Simms et al. (1985), and Henry et al. (1991) will provide a fuller description of CEN work content.

Poulin (1984b) used an interview guide to examine the structural and functional components of the CEN's role as perceived by twelve executives. Simms et al. (1985) concurred with Poulin that the evolving CEN role manifests: increased coordination with decentralization of control at operational levels; the need for advanced clinical knowledge; and leadership and managerial acumen for the broad spectrum of responsibility in patient-care departments, outreach programs and the corporate dimension. The findings support Leatt's (1981) theoretical framework in that the CEN functions at a

corporate level, provides leadership, integrates and coordinates highly specialized professionals, develops effective delivery of care systems, and is a catalyst in nursing. Poulin (1984b) concludes, and is supported by many researchers, that the diverse and advanced CEN role demonstrates the need for significant educational and experiential preparation (Bushy, 1992; Gray, Dick & Stitt, 1988; Fruend, 1985; Henry & Moody, 1986; Kirk, 1987; Simms, et al., 1985; Stevens, 1978; Thomlinson, 1991; Waters, 1980).

Simms et al. (1985) utilized the constant comparative method to investigate the role of thirty acute care, long term and home care CENs. Data collection methods included observing two CENs for a month, in addition to a literature review, taped interviews, biographic forms, monthly calendars and organizational charts. Some CENs' roles identified in this study were essentially analogous with managerial working roles noted by others (Brueckner, 1978; Mintzberg, 1973; Thomlinson, 1991) and included: image setter, spokesperson, change agent, people developer, trouble-shooter, creator of a professional practice environment, upgrading divisions, developer of a humane environment, improving staff relationships, supporting organizational mission and goals, ensuring quality patient care and collegiality. Clinical practice was generally facilitated via provision and allocation of appropriate resources. CENs of small hospitals were

specifically noted for serving as mediators in interpersonal relationships between staff, as well as clients. This methodological approach provided rich data concerning the complex CEN roles and the evolution of the roles in response to contextual elements.

Similar to the Simms et al. (1985) study, the role of ten Norwegian CENs was examined via observation, interviews, questionnaires and relevant organizational documents. Henry et al. (1991) found that CENs' prioritized roles were: achieving balanced allocation of resources; goal setting and implementation; keeping on top of a large set of diverse activities; attending to multi-groups; motivating and evaluating employees; getting corporation from other managers and from those in staff positions. Similar to findings in rural and general management research, a large proportion of CEN time was spent in interpersonal activities (Chapman, 1968; Henry & Moody, 1986; Henry et al., 1991; Mintzberg, 1973).

The role of CENs is evolving as a result of change in health care paradigms which includes among others, increased morbidity of patients (especially geriatric consumers with multi-system needs), increased role differentiation, medical technology, cost-containment, increasing regulation, and declining length of patient stay as a result of a shift toward ambulatory and community health care. In such a system, the challenge to effectively promote quality nursing care is essential.

Researchers envision a future CEN role that is markedly different than that displayed today. CENs future role-set will be comprised of coordination, communication, integration, flexibility, complexity, dynamism, interrelated with nursing professional values and autonomy (Poulin, 1984a). Styles (1988) concurs that societal trends will force the CEN to emphasize roles that attend to information, people, variety with flexibility, and quality. The envisioned roles will require the blending of masculine and feminine values, and administrative and professional values, amid scarce resources of capital, people, equipment and systems (Fralic, 1987; Leatt, 1981; Mark et al., 1991; Stevens, 1981; Styles, 1988).

The few nursing research studies conducted to date have identified an evolving CEN role that has many descriptors as that of managers in general. Rural and small hospital research pertaining to CENs' work will be examined to further assist in the understanding of the roles and responsibilities of these managers.

D. The Chief Executive Nurse In Rural and Small Hospitals

Nursing research investigating the role and responsibilities of CENs in rural and small community hospitals is limited, and non-existent with respect to Canadian CENs. A large number of Canadian hospitals are

located outside of urban centers. CENs are responsible for nursing services in these facilities, yet little is known about their roles and responsibilities. How their work compares with urban CENs and other managers is not known. The few American studies conducted give some insight into the roles of rural and/or smaller community hospital CENs.

Rural CENs, like those in urban settings, are responsible for at least the nursing division including practice standards, developing discipline specific policies and procedures, resource allocation, hiring and firing of personnel, and aspects of budgeting. CENs in smaller hospitals tend to emphasize both formalized activities and day-to-day operations. Many rural CEN role activities encompass discussing, planning, implementing and evaluating elements related to patient care, personnel, and staffing issues (Carey et al., 1988; Chapman, 1968; Henry & Moody, 1986; Jensen, 1960; Keith, 1958; McMillan, 1983).

Just as rural general duty nurses become generalists in practice as a result of both working on combined units and lacking the support of auxiliary disciplines on-site, rural CENs become generalists in both nursing and managerial dimensions when they assume multiple roles in nursing and management across departments. Limited fiscal and human resources fosters a "jack-of-all-trades" role that occasionally involves the CEN providing direct

patient care (Chapman, 1968; Henry & Moody, 1986; Simon, 1976).

As part of a more extensive study, Hagen and Wolff (1961) used interviews to examine the behaviors of CENs in six American hospitals with a bed capacity ranging from 115-137. This study found that CENs spent most of their time with the CEO, assistants and supervisors and had more direct contact with front line staff than CENs of larger hospitals. These researchers also found that CENs of smaller hospitals made more direct observations and had more frequent staff interactions, yet concurrently experienced more barriers and less effective communication within the institution. Carey et al.'s (1988) findings suggest that the highly diversified CEN role requires balancing relationships with core role senders: administrative superiors, department heads, nursing colleagues and significant others (physicians, patients, families and labor unions).

Similarly, in a descriptive study involving sixty-nine CENs, Chapman (1968) found that CENs in hospitals of less than 100 beds had more clinical involvement, fewer administrative functions, more unplanned meetings, and minimal staff flexibility; elements which contribute to job fragmentation. CENs' nursing specific administrative time was minimized as they performed numerous non-nursing administrative functions.

Henry & Moody's (1986) non-experimental field study of

ten Florida CENs in acute care, rural hospitals of less than 100 beds found that CENs structure their work around professional, organizational, financial and consumer/ market agendas; suggesting a hybrid nursing and management role. Similar to Mintzberg (1973), these researchers found that CENs gather information for agenda-setting purposes largely from informal, interpersonal discussions. Task activities are derived from these agenda activities. CEN work activities were also noted to be extremely fragmented. These CENs interfaced directly and frequently both with their staff and the general public. Study findings also suggested that rural CENs' experience significant role strain as a result of assuming multi-roles coupled with a limited support system, the attempt to balance scarce resources, working with limited information needed for decision-making, strained relationships with a variety of groups, and having to enact a community political role.

An awareness of the above findings is significant for a rural CEN who is often the only nursing administrative person, who frequently assumes additional administrative responsibilities, and who works within a 'personal' environment. To date, the roles and responsibilities of Canada's rural CENs' are not empirically documented as no research study has been conducted. Contextual variables related to rural CENs' role also require further investigation. In the limited literature available

describing nursing administration in rural and small hospitals, the CEN role is described as complex and diversified and requires individuals that have well developed clinical nursing, communication and management skills.

E. Summary of Nursing Administrative Research

In summary, the diversified and often stressful CENs' professional and administrative position involves: quality service commitment in an era of cost containment, pressures to increase productivity, expanded roles for nurses, the managing of multiple patient-service departments, rapidly expanding technology, increased regulation, a growing lay public awareness of medical science, new corporate level functions, multi-role senders, changing systems and organizational structures, role overload and role ambiguity (Adams, 1988; Arndt & Laeger, 1970a & b; Henry & Moody, 1986; Merton, 1957; Poulin, 1984a & b; Scalzi, 1988; Snoek, 1966; Wadsworth, Clark & Hollefruend, 1986). How these factors relate to the Canadian rural community hospital CEN's role-set needs investigation. Furthermore, the CEN role is expected to continue to evolve with health care reform.

Literature Review Conclusions

The characteristics of managerial work in relation to CENs' roles and responsibilities was examined in a review of the literature, including the following: (1) CENs' within Canada's health care system; (2) general management functions and CENs' work; (3) methodologically similar studies; and (4) nursing administrative research. Canadian CENs work within unique contextual and environmental elements that impinge on their roles and responsibilities. The professional nurse working in a generalist management position fosters many, and sometimes conflicting, roles and responsibilities.

A review of the nursing literature reveals a limited number of studies that examine the work activities and behaviors of CENs. None of these studies were conducted in a Canadian setting. The literature suggests that rural CENs face similar yet different challenges and role definitions than that of their urban counterparts and other managers. Research studies on CENs, however, are of limited value as managerial roles and responsibilities have not been specifically examined. The majority of the studies conducted focused on expectations, perceptions, or peripheral work characteristics, rather than actual CEN work content.

Mintzberg's (1967; 1973) research findings concerning managerial work have had a significant impact upon

academic and administrative thinking. This theory has yet
to be evaluated in terms of rural CENs and their roles and
responsibilities. In light of the growing complexity and
significance of the Canadian CENs' roles, and the impact
of administration upon nursing practice, education and
research, there is an urgent need for CEN roles and
responsibilities to be studied.

Given the nature of the research questions under
investigation, and the paucity of relevant research
findings in the literature, an exploratory and descriptive
research design was used in this study of community
hospital CENs in rural Manitoba. The literature suggests
that Mintzberg's (1973) methods of triangulated data
collection have proven useful in the context of nursing
management. Grounded in the context of business
administration, Mintzberg's theory has required expansion
to analyze and interpret the complexities found in studies
related to managerial work content in the field of
nursing.

Chapter Three
Research Methodology and Procedures

The purpose of this study was to explore and describe the roles and responsibilities of community hospital CENs in rural Manitoba. In this chapter the research design, trustworthiness, study setting, study sample and selection process, ethical considerations, data collection, study informants, and data analysis are described.

Research Design

This exploratory and descriptive study was based upon a non-experimental, research design (Wilson, 1985). Triangulated data collection methods were used in this study and included: 1) preliminary data collection (organizational documents and pre-observation interviews); 2) structured observations; and 3) semi- structured exit interviews (adapted from Dunn, 1990; Mintzberg, 1973; Raber, 1988).

The literature indicates that a non-experimental research design is appropriate when: 1) an investigation needs to be conducted under natural conditions; 2) an investigator is dealing with a study question about which little is known; 3) field data concepts need further clarification; or 4) the intent of the study is to gain insight about a particular group of people (Abdellah &

Levine, 1986; Polit & Hungler, 1991; Wilson, 1985). To
date, little is known about the role of the community
hospital CEN in rural Canada. The researcher attempted to
discern the activities and behaviors of the study
participants via the three data collection methods; a
process that assisted in capturing the informants' world
more fully.

Establishing Trustworthiness

The naturalistic paradigm focuses on the development
of a consummate depth of knowledge, variable over time and
place. The scientific rigors of qualitative research
cannot be evaluated in terms of positivistic criteria:
reliability, validity and objectivity (Sandelowski, 1986).
Lincoln and Guba (1985) have therefore developed four
tests of rigor for qualitative scientific inquiry, namely:
truth value, applicability, consistency and neutrality.

Truth value is concerned with *credibility*. The truth
value of a study reflects the accuracy of the descriptions
and interpretations of the phenomena being studied
(Lincoln & Guba, 1985). Credibility was enhanced in this
study by the range and depth of triangulated data
collection methods (preliminary data, structured
observations, and exit interviews), informal and formal
informant checking, and the use of constant comparative
analysis of data. The "...truth [was] subject-oriented

rather than researcher-defined" (Sandelowski, 1986, p. 30). Minimal observer-interference was ensured by abiding with and verbally reinforcing consent principles. Inquirer introspective memos and informant-check exit interviews also contributed to the establishment of credibility. The investigator also maintained prolonged engagement in the field setting through 98.5 hours of structured observation.

Applicability addresses the issue of *fittingness* or *transferability* of data for nurse executives in other contexts (Lincoln & Guba, 1985; Sandelowski, 1986). Each rural hospital and CEN role-set entertains uniqueness, thus, restricting transferability of findings. Mintzberg (1973), however, argues that the nature of managerial work is similar across domains, providing a working framework whereby core CEN activities may be transferable to other CENs and varied contexts. To address this criterion, the investigator provided a detail description of the informants, context and sampling procedures used.

Consistency concerns *auditability* with similar persons and contexts (Lincoln & Guba, 1985; Sandelowski, 1986). Naturalistic inquiry recognizes multiple realities and therefore exact study replications are unlikely. The study's auditability, however, was enhanced by using a well defined and established coding and data recording systems (Dunn, 1990; Mintzberg, 1973; Sandelowski, 1986).

Neutrality addresses *confirmability* which is achieved

with the establishment of credibility, auditability and fittingness. Naturalistic inquiry requires the researcher to explicitly report the field data so that others may confirm it. Members of the investigator's thesis committee audited both the process and the product of the research study.

Thus, the investigator addressed trustworthiness in this study by attending to credibility, fittingness, auditability and confirmability (Sandelowski, 1986; Yonge & Stewin, 1988).

Study Setting

After obtaining access for approval through the *Letter of Initial Contact* (*Appendix A*) from the convenience sample of four informants, the study was conducted at each of the respective community hospitals in rural Manitoba, Canada. Rural hospitals in Manitoba refers to those facilities outside the cities of Winnipeg and Brandon proper.

Study Sample and Selection Process

This qualitative research study made use of non-probability sampling. Convenience sampling allowed the investigator to engage in research with available persons (the CENs' and persons they interact with) at a given time

(Abdellah & Levine, 1986; Parse, Coyne & Smith, 1985; Wilson, 1985).

The convenience sample for this study were CENs (Directors of Nursing, or equivalent titles) selected from the community hospitals in rural Manitoba who met the hospital size criterion. Manitoba Health was contacted for a master list of all CENs who were currently employed in 25-100 bed, rural community hospitals. Four informants were ultimately chosen for an activity observation period totaling twelve days. Such a sample size and time period compared favorably with similar studies where data comprehensiveness off-set the sample size (Dunn, 1990; Morrison, 1983; Raber, 1988). Two additional CENs were selected to serve as alternatives, in the event that (an) informant(s) was unable or unwilling to participate, or if additional data sampling was deemed necessary by the investigator.

All female CENs, with a minimum of one year's experience in their current position, that fell within the hospital size criterion were invited to participate in the study via a *Letter of Initial Contact* (*Appendix A*). The investigator then chose a convenient sample from those CENs willing to participate. A *Letter of Confirmation* (*Appendix B*) was then sent to each informant of the convenient sample. CENs' names and the involved hospital were coded and the coded identification list was maintained in a secure space for the duration of the study

and for future research reference.

Ethical Considerations

The investigator incorporated the *Canadian Nurses'*
Association Ethical Guidelines for Nursing Research
Involving Human Subjects (CNA, 1973), ethical
considerations specific to non-experimental research, and
secured approval from the Ethical Review Committee of the
Faculty of Nursing, University of Manitoba (*Appendix C*),
to protect the rights of both the informants and the
investigator (Armiger, 1977; Munhall, 1988).

Informed consent, via a disclaimer, and
confidentiality are basic ethical tenets in any study
design (Armiger, 1977). "Informed consent means that
individuals involved in the study knowingly, voluntarily
and intelligently give consent to participate" (Dunn,
1990, p. 47). CENs consenting to participate in the study
were provided with written explanations of the study prior
to the observation period (*Appendices A & B*). CENs who
agreed to participate received a copy of the disclaimer
(*Appendix D*).

This descriptive study did not involve an inherent
'at-risk' population. However, an ethical conflict
between the role of researcher-as-observer versus a
registered nurse or as a practitioner could have arisen
during the observation period. Hence, it was important

for the investigator to evaluate potential dilemmas in advance, where the actions of informants needed to be protected or disclosed.

Study informants were fully informed of the research objectives, the role of informant and observer, the scope of data collected, plan for analyses and reporting of findings. Participation in the study was voluntary. CENs selected did have the right to refuse participation in the study. Informants also had the right to withdraw from the study at any time, even after the study had begun.

The investigator withdrew from observing and recording any activity that either the CEN, or those they interfaced with, requested not to be noted. CENs were informed at the onset that the researcher would immediately discontinue all research activities upon the informant's request to withdraw from the study.

Confidentiality was maintained by protecting names and all data collected via observation and interviews. The CENs were assured that neither their identity or that of the hospital would be discussed beyond the investigator and his thesis committee members, including any of the collected data, reports or future publications resulting from the study. A code number was assigned to all CENs participating in the study; the list of CENs, hospitals, and assigned code numbers kept in a secure space by the investigator. Throughout the research process field-notes, interview records and transcribed data were

kept by the researcher in a secure space. The investigator, and his advisors, had access to this data as required.

Data Collection

A. Preliminary Data Collection

Following the selection of informants and consent via a *Disclaimer (Appendix D)*, preliminary data collection ensued. Preliminary data collection involved: a) attaining organizational documents; and, b) conducting a pre-observation interview.

i) Organizational Documents

Preliminary data collection included collecting organizational information at the beginning of the three day on-site observation period. The preliminary data, as identified in the *Letter of Confirmation (Appendix B)*, were the hospital's mission statement, a pictorial of the organizational structure, the nursing philosophy and the CENs' job description. Additional anecdotal data were collected via structured observations throughout the study as information surfaced (Dunn, 1990; Raber, 1988). The organizational documents were analyzed utilizing a matrix organizational analysis.

ii) Pre-Observation Interview

The in-person *Pre-Observation Interview (Appendix E)*, at the beginning of the first day of the observation period, provided an occasion for the researcher to review with the informants the purpose and methods of the study, to answer any questions, and to gain preliminary hospital and personal information. The pre-observation interview time ranged from fifteen to forty-five minutes in duration. The pre-observation interview data were reviewed using 'thematic content analysis' (Burnard, 1991).

B. Structured Observation

Modeled after the research of Mintzberg (1967; 1973) and similar methodological studies (Choran, 1969; Dunn, 1990; Raber, 1988; Snyder & Glueck, 1980), this phase of the study involved the use of continuous non-participative structured observation to collect data on specific CEN activities and behaviors over a three day period. This method necessitated the use of a record keeping form (Polit & Hungler, 1991). The researcher observed, recorded and coded the activities and behaviors of rural CENs over the defined observation period. The observations took place during the CENs' regular working day and were carried out from the start until the

conclusion of each CEN's workday (Dunn, 1990).

Choran (1969) states that continuous structured observation allows the researcher to record the activity as to place, purpose, contacts and time, permitting concurrent development of classifications and anecdotal recordings. Structured observation enhances the consistency of humans as an observation instrument and facilitates behavioral correlations (Sandelowski, 1986). Disadvantages of structured observation include limited sample size, misperception of activities and behaviors, potential change of informants behavior, and investigator exclusion from confidential activities (Lincoln & Guba, 1985).

The study incorporated an ongoing informant information sharing process to enhance comprehension of observed activities. This process was established in the pre-observation interview where the investigator requested the informants to explain 'what they were doing' and 'why' during the observation period. The investigator's role remained 'observer-as-informant' whereby interactions were limited to periodically seeking clarification of events (Gold, 1958). These measures decreased the limitation of misperceptions or only the recording of individual physical activities (Snyder & Glueck, 1980).

Observer presence may have affected the CENs' behaviors, and significant data may have been omitted when the investigator was excluded from confidential

activities. Mintzberg (1973) argues that managerial work content does likely not change as most work is dictated by others. Other researchers argue that social settings have a tendency to be stable over time and, thus, there is less of a threat to data credibility than often thought. (Choran, 1969; Lincoln & Guba, 1985). However, to minimize these limitations, the researcher: 1) guaranteed anonymity of each CEN and the involved hospitals in the documentation and presentation of all research data; 2) only remained an 'observer-as-informant' with no involvement in actual work activities; and, 3) ensured observer neutrality by remaining neutral and non-judgmental with expressions and reactions.

Dunn (1990) developed a condensed *Observation Record* (*Appendix F*) from forms utilized by Mintzberg (1973) and Raber (1988). This observation tool was used as it had already been pilot tested and proven useful in the collection and analysis of similar data (Dunn, 1990).

The *Observation Record*, with pre-set activity categories (*Appendix G*), provided the chronological recording of each enacted activity and behavior. The category "other" was used where unique activities could be accommodated. The researcher recorded the time the observed activity began, the duration of the activity to the nearest minute (Choran, 1969), the informants' shared purpose of the activity (Snyder & Glueck, 1980), activity type (*Appendix G*), whether the activity was scheduled or

not, the informants involved in the activity, and the initiator of the activity (self, others, or mutual). A comments/code section provided space for any additional anecdotes the investigator determined were noteworthy. Telephone calls and mail processing (sender, purpose and content) were also recorded, as they occurred, utilizing the same record.

C. The Exit Interview

At the conclusion of the third day of observation, the researcher met with each informant to discuss the 'representativeness' of the observation period to the informants' 'normal' work pattern, and to determine the effect of the investigator upon the CEN's work activities and behaviors. Additionally, a sequence of semi-structured questions (*Appendix H*) were asked during the tape-recorded interview in an attempt to capture additional work characteristics or contextual elements that the CENs' determined noteworthy. The interviews were conducted over the period of time it was required to answer the interview guide, which ranged from twenty to sixty minutes in duration among the informants. The exit interview data were reviewed using 'thematic content analysis' (Burnard, 1991).

Procedures

Prior to the on-site investigation period, the selection of a convenience sample of study informants and the confirmation of observational period times and dates, occurred.

Preliminary data collection occurred with the pre-observation interview, and revealed information about the hospital and/or informants that would initially have been overlooked. An in-person pre-observation interview was conducted with the informants to:

1) describe the research study's purpose;

2) clarify the researcher's role;

3) explain the informant's role; and

4) obtain an initial overview of the involved hospital and the informant.

The observation period began immediately after the conclusion of the pre-observation interview on the first day of the three day observation period, and ended at the completion of each CEN's work day. The investigator followed each CEN, referred to as 'mobile positioning' (Wilson, 1985), throughout the entire observation period. To achieve the study's objectives the researcher informed the informants from the onset that they were to proceed with their regular workday, and asked that the purpose of the researcher's presence be explained to others in the hospital. Additionally, hospital personnel were informed

by the respective CEN that, upon their request, the researcher would immediately withdraw from observing and recording any activity they requested not to be noted.

An ongoing informant information sharing process was also established during the pre-observation interview. For example, the informant may have been writing a letter to an employee. The CEN verbally indicated to the investigator that she was following up on an earlier conversation. The investigator only questioned unclear activities and did *NOT* participate an any of the CENs' work activities.

The tape-recorded exit interview was conducted at the conclusion of the third observation day using a semi-structured interview guide (*Appendix H*).

Data Analysis

Systematic methods for field data analyses were required for the different phases of data collection.

A. Organizational Documents

The organizational documents were analyzed by using a matrix comparative analytical approach.

B. Pre-Observation and Exit Interviews

The pre-observation and exit interviews were analyzed using 'thematic content analysis' (adapted from Burnard, 1991, pp. 461-466). The data analysis procedure described below was conducted once the preliminary data collection and the semi-structured, exit interviews had been completed and interviews had been transcribed verbatim as recorded. Analysis was conducted on a personal computer using a word-processing program.

Stages of Analysis

1. Notes were made after each interview regarding the topics discussed in the interview. The researcher also used introspective memoing about ways of categorizing data during the observation period.

2. Transcripts were read through and notes made throughout the reading on recurring themes within the transcripts.

3. Transcripts were read through again and as many headings as necessary were written down to describe all aspects of the content.

4. The list of categories were surveyed by the researcher and clustered under higher-order headings.

5. The new list of categories and sub-headings were also worked through to produce a final list.

6. Transcripts were re-read alongside the final list of categories and subheadings to establish the degree to which the categories cover all aspects of the data. Adjustments were made as necessary.

7. Each transcript was worked through with the list of categories and sub-headings, and 'coded' accordingly. Italic coding was used here to distinguish between each piece of the transcript allocated to a category and sub-heading.

8. Each coded section of the interviews was copied out of the transcript and all items of each code were collected together. The 'context' for the coded sections was maintained by keeping an original copy of the entire transcript readily available.

9. The copied-out sections were placed under appropriate headings and sub-headings.

10. All of the sections were filed together for direct reference when the findings were "written-up." Copies of the complete interviews and the original tape recordings were kept for cross-referencing during the writing stage.

11. Once all the sections were together, the writing process began. The researcher started the first section with select examples of data that had been filed under that section and offered a commentary that linked the examples together. The researcher then continued on to the next section until the whole project was written up.

12. The research linked the data examples and the

commentary to the Structured Observation data and the literature - especially Mintzberg's (1973) theoretical framework.

C. Structured Observation

Analysis of the structured observation phase involved coding of all work activities and behaviors as they occurred, with further analysis off-site.

i) Data Coding

Each unit of work behavior on the Observation Record was coded to facilitate data identification. Duignan's (1979) definition of activity was used as follows:

> A single event with an identity of its own. It had an observable beginning and ending in a time continuum. It ended when a major change occurred in one of the elements or dimensions of the [CEN's] behavior (p.64).

Numerous additional terms and definitions for coding behavior were adapted and included from similar studies (Dunn, 1990; Mintzberg, 1973; Raber, 1988): scheduled and unscheduled meetings, desk work, telephone calls, travel, tours, personal time, secretarial activities and 'other' events (Appendix G).

ii) Observational Record Analysis

Observational Record analysis involved a categorizing process with frequency response summations and conclusions; a process adapted from methodologically similar studies (Hannah, 1981; Mintzberg, 1973, Raber, 1988). The process included:

1. Dividing the daily observational notes into the units of activity as defined in the preceding section;

2. Identifying behavioral categories on the Observation Record both in the field and at the end of each day using Mintzberg's role categories as a guide, while separating out any additional, unidentifiable behavioral units;

3. Generating new categories of behavior to coincide with the unidentifiable behavioral units discussed above and labeled accordingly;

4. Imputing all of the data from the Observation Record on to Quattro - a computer software program;

5. Sorting the data according to the types of media used as defined in the preceding section;

6. Tabulating a daily summary sheet that totaled units of activity, the duration of the day, the range and average of activities for the day, and the time and percentage of time spent utilizing each type of activity.

7. Re-sorting the data according to the informants in each activity and computing the time and percentage of time spent according to activity informant on the daily summary sheet;

8. Re-sorting the data into categories according to the work behavior and computing the daily summary sheet total time and percentage of time for each category; and,

9. Developing cumulative categorical totals and percentages for all of the informants for comparative purposes that enabled an overall picture of work behaviors to emerge.

The above steps do not reflect a linear process. Analyzing the data via a 'matrix' process enhanced coding, categorization and conceptualization of emerging themes (Stern, 1980). This data were compared and contrasted with the interviews and the literature.

D. The ARIMA Time Series Family of Models

The ARIMA (*autoregressive integrated moving average*) model, a family of time series models, was utilized in an attempt to identify if there were cyclical patterns in CENs' work content (Box & Jenkins, 1976; Makridakis, Wheelwright, & McGee, 1983). As a battery of related techniques geared to selecting the appropriate member(s) from a general set of models allows ARIMA, via a single technique, to address cyclical and seasonal aspects within a complex data set. The model incorporates the consideration that observations over time are dependent on each other. More commonly used statistical methods such as regression or ANOVA that assume observations are independent of each other, are inappropriate approaches for the cyclical work question because we know such dependencies over time exist in the data (J. Sloan, personal communication, January 18, 1994).

The ARIMA time series model assumes that today's score is dependent upon yesterday's score, which is dependent upon the day before, and so on. As such, the observations of the informants' were considered dependent upon each other and were in fact a product of the CENs' past performance. In this study the dependent variable was the amount of time the informants' spent on an activity, while the independent variable was time.

Several types of influence may also effect the CENs'

activity level each hour; well beyond the simple assumption that it depends on what happens the hour before. The time of day, month, season, year, and so forth, all have an effect on how the CEN may spend an amount of time later. Therefore, modeling was used to determine whether or not there was a cyclical pattern in CENs' activities.

The ARIMA model process begins with an inspection of the correlational structure over time, with the goal of identifying the type of carry-over effect that are present within the data. There are three types of carry-over effects that can be identified and incorporated into an ARIMA model: 1) autoregression; 2) moving averages; and, 3) integration (J. Sloan, personal communication, October 7, 1993). Each type is described below.

The autoregressive (AR) process assumes that one day's score is a function of the previous day's score, and so on. Hence, if the CENs' activity score of yesterday was significant, it might indicate that today's score would follow that trend (J. Sloan, personal communication, October 7, 1993).

The long term effects were modeled by looking at a more general trend in the time series, by aggregating individual scores into successive averages over given periods of time. This mathematical approach is called a moving average (MA) because of the movement through the time series which allows for sorts of averages in search

of a pattern. For example, during data analysis the researcher wanted to determine the effect of one-half hour time series data by averaging all the scores in each day, and checking if there was a pattern in the daily data. This averaging can be done by combining every pair of scores, every trio or so on, for any kind of trend (J. Sloan, personal communication, October 7, 1993).

For the readers purpose it is important to know only whether or not each type of model term (AR or MA) is included and what form each takes. The AR and MA effects are identified by viewing exponential decays in the autocorrelations and partial autocorrelations for an activity category (Makridakis et al., 1983; Jeff Sloan, personal communication, January 18, 1994).

Finally, the autoregressive and moving average components can be combined into a mathematical equation known as integration (*I*). Integration incorporates the concept that the data in the time series may not be contained in the actual observed score for every one-half hour, but may be found in the differences between successive hours, or the difference between every second hour, and so on (J. Sloan, personal communication, October 7, 1993). Perhaps attempting to model differences between observations in the raw data of changes over time is more appropriate than modeling the actual level of activity over given periods of time. For example, it may not be possible to say that an individual who spent an one-half

hour of time in a meeting will likely spend one and one-half hours time at the next meeting. But it may be possible to say the individual will spend more or less a set duration of time in a meeting, for example, plus or minus ten minutes for a one hour meeting. Integration allows score differences to be modeled.

Together the three components produce the ARIMA model. The total process of the ARIMA modeling is akin to picking up books off of the shelf by subject matter. We have to decide how many books from each category we need to tell the whole story. Depending upon the data set we may need only AR, MA or I, or a combination of a number of books from all three categories.

For the more mathematically inclined reader, please refer to classic texts (Box & Jenkins, 1976; Makridakis et al., 1983) which contain the details of the mathematics underpinning the model and its implementation.

Conclusions

A literature review revealed no research studies that examined the roles and responsibilities of community hospital CENs in rural Canada. Relevant research findings are frequently limited by methodology and samples used in the studies, most of which are in non-Canadian settings. The use of alternative research strategies is encouraged by most investigators. Given the exploratory and

descriptive nature of the research question under investigation, and the paucity of relevant research findings, a non-experimental methodology was the most appropriate approach to studying the roles and responsibilities of CENs in rural Manitoba. Data triangulation enhanced the richness of data collected.

Chapter Four

Presentation of the Findings

The purpose of this study was to describe the work roles and responsibilities of community hospital Chief Executive Nurses (CENs) in rural Manitoba. The conceptual framework was based on Mintzberg's (1973) theory of the nature of managerial work. Mintzberg's theory suggests that the basic work of managers is similar, regardless of the work setting. The theory outlines work roles and characteristics that are commonly found in managerial work. Among the expected findings of this study was that the work of rural CENs had some commonality with the work of managers as described by Mintzberg or described by studies using Mintzberg's theoretical perspective.

The purpose of this chapter is to present the study results. The chapter is divided into the following sections: a description of the four organizational settings within which the study occurred; an overview of the four informants; organizational written and informant perceived values; a review of the CEN job descriptions; analysis of the non-participant structured observations including activities, participants and behaviors; CEN cyclical work including the ARIMA time series model; and analysis of exit interviews.

Overview of the Study Settings

As discussed in Chapter 2, the basic elements of managerial work are similar in spite of differences in organizational size, philosophy, structure, services delivered and population served. To assist in understanding the work of rural CENs, a description of the respective organizations was required.

The settings for this study included four community hospitals/health centers in rural Manitoba that had a minimum complement of 25 acute care beds, and a combined total of acute and long-term beds of less than 100. "Rural hospitals" in Manitoba refers to those facilities outside the cities of Winnipeg and Brandon proper. Each rural hospital was assigned a reference code number to protect its identity.

Site - A

This organization is comprised of three facilities, each in a separate town/village, jointly administered under four levels of management (*Figure 2*). Shared management includes the District Administrator (CEO), the Assistant Administrator (CEN) and the District Business Manager. The four managerial levels in the organization were: (1) the District Administrator (CEO); (2) the Assistant Administrator (CEN); (3) the Support Service

FIGURE 2: ORGANIZATIONAL CHART
SITE - A

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                          ┌──────────────────┐
                          │ Board of Trustees│
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                                   │
┌──────────────────┐     ┌──────────────────┐     ┌──────────────────┐
│Contracted Services│────│    District      │─────│  Chief of Staff  │
│(Lab & X-ray (V,R),│    │  Administrator   │     └──────────────────┘
│Pharmacy, P.T.,O.T.│    │     (CEO)        │       -Medical Staff
│Laundry (V),       │    │                  │
│Dietitian)         │    │                  │─────┌──────────────────┐
└──────────────────┘     └──────────────────┘     │District Ambulance│
                                   │               └──────────────────┘
                                   │
                                   │               ┌──────────────────┐
                                   └───────────────│District Auxiliary│
                                                   └──────────────────┘
                         ┌──────────────────────┐
                         │Assistant Administrator│
                         │        (CEN)          │
┌──────────────┐         └──────────────────────┘
│Pastoral Care │─┤
└──────────────┘
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Support Service Coordinator (V/E)	Unit Coordinator (V)	District Business Manager
-Laundry (E)	-Nursing	-Bus. Off. (V)
-Dietary (V,E)	-Operating Rm.	-Payroll
-Hskping (V,E)	-C.S.R.	-Purchasing
-Maint. (V,E)		

Facility Coordinator (E)	Facility Coordinator (R)	Staff Dev. Coordinator
-Business Office	-Business Office	
-Nursing	-Nursing	
-Activity	-Maint.	
	-Dietary	
	-Laundry	

Medical Records Technician	Head Nurse (W.V.)
	-Nursing
	-Activity

V = 25 bed acute care facility
R/WV = 17 bed acute care facility juxtaposed with 24 bed
    personal care home
E = 24 bed personal care home

Coordinator, the District Business Manager, the Medical Record Technician and the Facility/Unit/Staff Coordinators; and, (4) the Head Nurse in the juxtaposed personal care home. Seven managers report directly to the CEN. With the exception of the CEO and personnel of contracted services, the CEN is administratively responsible for all nursing and support staff in all three facilities totaling 99.1 equivalent full time (EFTs) positions consisting of 150 personnel.

The twenty-five bed acute care hospital, the seventeen bed acute care facility juxtaposed with a twenty bed personal care home, and the twenty-four bed personal care home, serve a population of approximately 12,000. In addition to emergency, ambulance and long term care services, this organization provides primary care services in medicine, surgery, pediatrics, and obstetrics, with supportive diagnostic services.

Site - B

This seventy-five bed acute care community hospital serves a population of approximately 30,000 and is located in close proximity to an urban center. Under a single administration, this facility has five levels of management (*Figure 3*). The five managerial levels in the CEN's line of command include: (1) the Executive Director (CEO); (2) the Associate Executive Director - Finance/

FIGURE 3: ORGANIZATIONAL CHART
SITE - B

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                    ┌──────────────────┐
                    │ Board of Trustees│── ── ── ── ── ── ──┐
                    └──────────────────┘                    │
                            │                                │
              ┌─────────────────────────┐   ┌──────────────┐│
              │ Executive Director       │   │Chief of Staff├┤
              │        (CEO)             │   └──────────────┘│
              └─────────────────────────┘   -Medical Staff──┘
                            │
                    ┌───────────────────────┐
                    │ Executive Assistant   │
                    └───────────────────────┘
                            │
            ┌────────────────────────────────┐
            │  Associate Exec. Dir.          │
            │  Finance/Human Resources       │
            └────────────────────────────────┘
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Assist. Exec. Dir Information & Support Services		Assist. Exec. Dir. Patient Care Services (CEN)
Directors: -Materiel Management -C.S.S. -Medical Records -Diagnostic Services -Self-Dialysis	**Directors:** -Physical Plant -Dietary -Hskging -Ambulance -Business Office Manager	**Directors:** -*Assist. D.O.N.* *|-4 Unit Coordinators* -*Nursing Supervisors* -*Pharmacy* -*Staff Development* -*Therapy (PT/OT)*

Human Resources; 3) the Assistant Executive Director - Patient Care Services (CEN); (4) the Assistant Director of Nursing, Nursing Supervisors, Directors of Pharmacy and Therapy (Occupational Therapy and Physiotherapy), and the Staff Development Officer; and, (5) four Unit Coordinators. The Nursing Supervisors and four Departmental Managers report directly to the CEN. The facility staffing complement is comprised of 143.25 EFT positions and 241 staff. The departments which report directly to CEN involve 88.0 EFT positions and 107 personnel.

In addition to emergency services, this hospital provides in-patient services in medicine, surgery, obstetrics, gynecology, special/intensive care, with supportive diagnostic and rehabilitation services. Secondary services include pre-hospital emergency care and education, ambulance service, dialysis, dental surgery, and regional chemotherapy. The CEN at this facility indicated that as a hospital they were the largest within the region which demands them to be a 'pacesetter or forerunner' in program specialization.

Site - C

This thirty bed acute care community hospital serves a population of approximately 8,000. Senior administrative staff, with the exception of nursing, are shared with a

local personal care facility. The long-term care facility is physically separate and operates under its own Board of Directors; in essence, a separate legal entity with its own organizational structure. The Executive Director and the Business Manager positions are shared between the two facilities. Each facility has their own CEN. Three levels of management are evident within the acute care facility (*Figure 4*) and include: (1) the Executive Director (CEO): (2) the Director of Patient Care Services (CEN); and, (3) supervisors/coordinators in housekeeping, laundry, dietary, nursing, operating room, inservice, and pharmacy. Administratively the CEN is responsible for thirteen departments although three did not have a designated manager. The facility staffing complement is comprised of 45.5 EFT positions and 69 staff. The departments which report directly to CEN involve 37.5 EFT positions and 61 personnel.

In addition to emergency services and pre-hospital care, this hospital's primary services include medicine, surgery, obstetrics, pediatrics, and ambulatory care with supportive diagnostic services. Secondary services are comprised of orthopedics, gynecology, plastics, ENT, and ophthalmology. The CEN of this facility suggested that her organization was "too big to be small and too small to be big." Speciality programs like orthopedic surgery, obstetrics and cardiac care, however, gave it regional importance similar to Site B and D.

FIGURE 4: ORGANIZATIONAL CHART
SITE - C

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                    ┌─────────────────────┐
                    │  Board of Trustees  │
                    └─────────────────────┘
┌──────────────────┐           │            ┌───────────────┐
│ Health Auxiliary │─ ─ ─ ─┼─ ─ ─│  Medical Staff │
└──────────────────┘           │            └───────────────┘
              ┌─────────────────────────┐
              │   Executive Director    │
              │         (CEO)           │
              └─────────────────────────┘
┌──────────────┐          │         ┌────────────────┐
│  Lab & X-ray │──────────┼─────────│  Maintenance   │
└──────────────┘          │         └────────────────┘
                          │         ┌────────────────────┐
                          │─────────│  Business Office   │
                          │         └────────────────────┘
                          │         ┌────────────────────┐
                          │─────────│  Medical Records   │
                          │         └────────────────────┘
       ┌──────────────────────────────────────────┐
       │  Director of Patient Care Services        │
       │                (CEN)                      │
       └──────────────────────────────────────────┘
          │
          Supervisors/Coordinators/Personnel
             │-Housekeeping
             │-Laundry
             │-Dietary
             │-Purchasing
             │-Nursing Unit Coordinator
             │-Operating Room
             │-Inservice
             │-Pharmacy
             │-Physiotherapy
             │-Respiratory Therapy
```
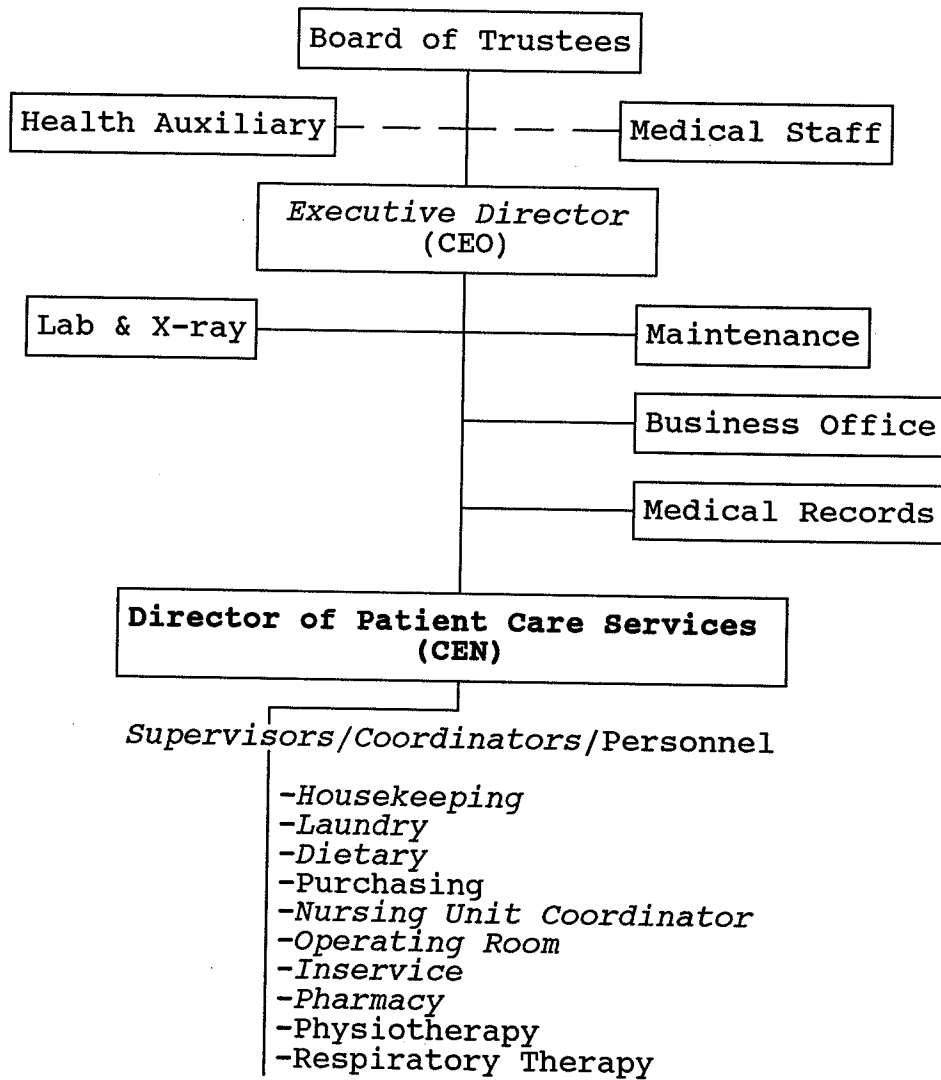
Site - D

This seventy-one bed acute care community hospital serves a population of approximately 20,000. Under a single administration, three levels of management are evident within the organization (*Figure 5*). The three managerial levels in the CEN's line of command were: (1) the Executive Director (CEO); (2) the Director of Patient Care Services (CEN); and, (3) four Nursing Unit Coordinators, Social Work, Palliation, Volunteer Services, Pastoral Care, Respiratory, Infection Control, and Diabetic Education Resource. These departments report directly to the CEN. The CEN is administratively responsible for eleven areas totaling 68.6 EFTs and 119 staff. The facility's staffing complement consists of 122.5 EFT positions and 193 personnel.

In addition to pre-hospital, emergency, and ambulance services, the hospital provides in-patient services in medicine, surgery, obstetrics, intermediary care and extended treatment with supportive diagnostic and rehabilitation services. Regional programs offered were physiotherapy, occupational therapy, speech language pathology, diabetes education, chemotherapy, hemodialysis, and an extended treatment (rehabilitative) unit. Consultant speciality services included urology, neurology, respirology, physiatry, gerontology, internal medicine, and psychiatry.

FIGURE 5: ORGANIZATIONAL CHART
SITE - D

```
                    ┌──────────────────────┐
                    │  Board of Management │
                    └──────────┬───────────┘
                    ┌──────────┴───────────┐
                    │  Executive Director  │
                    │        (CEO)         │
                    └──────────┬───────────┘
┌────────────────────┐        │        ┌──────────────────┐
│ Hospital Auxiliary │─ ─ ─ ─ ┼ ─ ─ ─ ─│  Medical Staff   │
└────────────────────┘        │        └──────────────────┘
                              │   ┌──────────────────────┐
                              ├───│ Executive Secretary  │
                              │   └──────────────────────┘
                              │   ┌──────────────────────┐
                              └───│ Director of Patient  │
                              │   │ Care Services (CEN)  │
                              │   └──────────────────────┘
         ┌────────────────────┘
```

Managers   **Managers/Personnel**

-Staff Development   -4 Nursing Unit
-Regional Rehabilitation   Coordinators
  Services   -Social Work
-Dietary   -Palliation
-Hskg/Laundry/Linen   -Respiratory
-Physical Plant   -Infection Control
-Admitting   -Volunteers
-Health Records   -Pastoral Services
-Accounting   -Diabetic Education
-Ambulance   Resource
-Purchasing
-Lab & Radiology
-Pharmacy

Similarities and Differences Among the Sites

The community hospitals described above all offer primary care services. Secondary services, which vary extensively among the settings, shape the uniqueness of health services delivered by the facilities. For example, regional services such as the rehabilitation or chemotherapy programs at Sites 'B' and 'D' provide these organizations with the opportunity to share their expertise throughout proximal service regions. Variation in service delivery is dependent on the referral area, geographical location in relation to urban/regional centers, organizational vision, and the ability to secure program funding and professional staff. For example, orthopedic surgical resources enable Site - 'C' to offer a surgical service for a particular catchment area.

Administrative structures vary amongst the facilities because of the diversified institutional, funding and program arrangements. For example, three to five levels of management were identified, with the latter found in the largest acute care facility. Within each setting the nursing division comprises the greatest number of personnel. The CEN's responsibility for staff in EFT positions varies extensively, that is, from 56% to 99% of the entire facility's positions; exclusive of contracted services. An overview of the informants follows.

Overview of the Informants

This section provides a synoptic career description of the four CENs who participated in this study. In an effort to protect their identity, each nurse executive was assigned a code number that corresponded with the respective work site. Data for this section were derived from preliminary data collection involving organizational documents and semi-structured pre-observation interviews (*Appendix E*). The preliminary interview with study informants provided an opportunity for the researcher to explain the purpose and methods of the study and to answer any questions the CENs may have had. There was a general feeling of appreciation among the informants that someone was taking an interest in rural, nursing administrative research. For verification purposes, draft copies of the CEN's personal description were reviewed with each informant via a telephone call.

Informant - One

Educationally prepared in a registered nurse diploma program (1981), Informant - One worked as a general duty nurse (surgical/float) for six years at a semi-urban, regional health center. After completing a post diploma baccalaureate nursing degree (1988), the informant worked two years as a Head Nurse of a Day Hospital in the same

hospital. The informant assumed her current CEN position two years ago in 1990. Informant - One had no formal educational preparation in administration.

This CEN, who has the organizational title of Assistant Administrator, reports directly to the District Administrator. Reporting to this CEN are two Facility Coordinators, a Unit Coordinator, a Staff Development Coordinator, a Support Service Coordinator, a Medical Records Technician, and the District Business Manager (*Figure 2*). Her scope of administrative responsibility is comprised of the following departments: nursing; laundry; dietary; housekeeping; maintenance, business office including purchasing; health records; activity; central supply; pastoral care; infection control/staff health; staff development; pharmacy; and, respiratory.

Informant - Two

Informant - Two initially completed a Bachelor of Science degree (1970). The informant obtained her registered nurse diploma in 1973 and, thereafter, worked as a nurse educator in the same urban, nursing diploma school for seven years. She then held the position of Inservice Coordinator for one and one-half years with her current employer. After being a Day Supervisor for an additional year, the informant began her CEN tenure as Assistant Executive Director - Patient Care Services; a

position that she has held for ten years. During these past ten years the informant has received a Management Certificate [University of Manitoba], has become a Certified Health Executive, and is completing her Master of Nursing degree.

Although the informant directly reports to the Executive Director, organizationally, the CEN position is third-in-command (*Figure 3*). As a member of executive management this CEN views her position as "a step-away" from the clinical area. Reporting to the CEN is an Assistant Director of Nursing (who is responsible for four Unit Coordinators), Nursing Supervisors, a Director of Pharmacy, a Staff Development Officer, and a Director of Therapy. Departmental responsibility of this CEN includes: nursing; volunteer services; infection control/staff health; staff development; therapy; pharmacy; and, respiratory.

Informant - Three

As a registered nurse diploma graduate (1967), this informant initially worked general duty (surgery/rural generalist) for five years prior to serving as a Head Nurse for four years with her current employer. After general duty nursing for an additional four years, she held the position of Inservice Coordinator for six years. This informant has held her CEN position, organizationally

titled as the Director of Patient Care Services, for the last six years. This CEN reports directly to the Executive Director (*Figure 4*).

Through continuing education the CEN earned certificates in both Nursing Unit Administration [Correspondence course from the Canadian Hospital Association (1977)] and Nursing Administration in the Health Care System [University of Manitoba (1988)].

Reporting to this CEN are a Unit Coordinator, and supervisors in housekeeping, laundry, dietary, the operating room, inservice and pharmacy. CEN departmental responsibilities include: nursing; laundry; dietary; housekeeping; volunteer services; infection control/staff health; staff development; physiotherapy; pharmacy; respiratory; diabetic education; and, purchasing. Sharing the CEO and the Business Manager with another facility was considered by the informant to expand her day-to-day responsibilities due to being the most senior administrative person available to deal with issues.

Informant - Four

This informant, entitled Director of Patient Care Services, also reports directly to the Executive Director (*Figure 5*). Informant - Four started her nursing career as a Licensed Practical Nurse (1976) and worked 2 years general duty on a burn unit. Following the completion of

a registered nurse diploma (1979) and an intensive care certificate (1980), she worked as a general duty nurse in Intensive Care for two years. After relocating to a rural area the informant worked as a Continuing Care Resource Coordinator for one year prior to being employed as a general duty nurse on a surgical/obstetrical unit, for an additional six months at another rural facility. The informant then secured a unit coordinator position for a medical/intensive care/emergency unit for her current employer and was in that capacity for a period of five years. During that period the informant completed a Nursing Unit Administration Certificate [Correspondence course from the Canadian Hospital Association (1986)], an Advance Cardiac Life Support Provider Course, and credits toward a Bachelor of Nursing degree. The informant has been in her CEN position for three years.

Reporting to this CEN are four unit coordinators, a social worker, a palliative care coordinator, a volunteer coordinator, pastoral care, a respiratory therapist, an infection control officer, and a diabetic education resource coordinator. Areas of responsibility are: nursing including chemotherapy and dialysis; volunteer services; central supply; pastoral care; infection control/staff health; clinical instruction; respiratory; social work; palliation; and, diabetic education. Informant - Four emphasized that the regional programs like chemotherapy and dialysis are operationally and

administratively intensive.

Similarities and Differences Among the Informants

Amid their uniqueness, the informants had similarities in both their managerial roles and education preparation tracks.

All four CENs administrative responsibility exceeded well beyond the nursing division (*Table 1*) and all four informants were outside of a collective bargaining unit. Each area of CEN responsibility did not necessarily have a reporting manager; often a single support staff member worked in the area. Thus, the CEN was the front-line manager with operational responsibility for the area. For example, at Site C the purchasing department was managed by the CEN who was assisted by a part-time clerk. Besides nursing responsibilities, the CENs were also in charge of infection control, staff development (inservice education, clinical instruction), respiratory therapy, and volunteers. Three of the informants were in charge of central supply and pharmacy. The broadest range of the CENs' scope of work was found at the smaller acute care facilities where, in addition to the above departments, the informants managed laundry, dietary, housekeeping and purchasing. At Sites - A and C the CENs were responsible for fifteen and thirteen functional departments each. At the two larger hospitals, Sites B and D, the CENs had

Table 1 — Informants' Areas of Administrative Responsibility

Area of Responsibility	Site			
	A	B	C	D
Nursing	*	*	*	*
Laundry	*		*	
Dietary	*		*	
Housekeeping	*		*	
Maintenance	*			
Business Office	*			
Health Records	*			
Volunteers including Activity Program	*	*	*	*
Central Supply	*		*	*
Pastoral Care	*			*
Infection Control/ Staff Health	*	*	*	*
Staff Development/ Clinical Instructors (+)	*	*	*	+
Therapy (P.T., etc.)		*	*	
Pharmacy	*	*	*	
Respiratory	*	*	*	*
Social Work	N/A	N/A	N/A	*
Palliation	N/A	N/A	N/A	*
Diabetic Education	N/A	N/A	*	*
Purchasing	*		*	

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*   = CEN area of responsibility
N/A = service not available
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seven and ten reporting areas respectively. Some CENs had departmental jurisdiction over areas which other informants did not. For example, Informant - One was responsible for the business office, health records and maintenance. Informants - Two and Three had therapy responsibilities whereas Informant - Four had social work, palliation and diabetic education responsibilities.

Educationally, the four informants entered the profession via a nursing diploma program. All CENs pursued additional education, although not necessarily in administration, as they moved out of general practice into front-line managerial or educator positions. Three of the informants had held a Head Nurse position and one had been a Day Supervisor, all front-line managerial positions, prior to becoming CENs. Two of the CENs had also served in the capacity as Inservice Educator. Three informants secured managerial certificates via correspondence or an on-campus university program. Two informants had Baccalaureate degrees, with one CEN currently pursuing her Masters degree.

The informants had been in their CEN positions for various lengths: Informant - One two years; Informant - Two ten years; Informant - Three six years; and Informant - Four three years. The average duration of CENs current tenure was 5.25 years.

Department of Nursing Written Philosophies and
Informants' Perceived Organizational Values

Organizational and informant specific philosophies and values may have an impact on managerial roles and responsibilities. The following is a synoptic review of the department of nursings' written philosophies as compared and contrasted against the informants' perceived organizational values. Informants' perceptions concerning organizational values were verified via a telephone call post site-visit.

Site - A

The nursing department's philosophy recognized Virginia Henderson's definition of nursing:

> The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he [sic] would perform unaided if he [sic] had the necessary strength, will, or knowledge. And to do this is such a way as to help him [sic] gain independence as rapidly as possible. In addition, the nurse helps the patient to carry out the therapeutic plan as initiated by the physician.

Nursing was considered part of the interdisciplinary coordinated health care team providing excellence of care, including effective communication, within available resources. As the coordinator of patient care, nursing roles could include prevention, treatment, education and

research dimensions. Staff development was viewed as a joint responsibility of the staff and the facility.

The informant perceived organizational values to be personal care with staff going the extra mile, i.e., by "...doing for rather than doing with" type of care. The CEN suggested that this approach did not necessarily foster patient independence. The work environment was considered "very personal" with the staff "work[ing] together as a team."

Nursing's managerial philosophy for the three facilities, besides that of staff development, was not noted. The CEN indicated, however, that having a lot of decision-making 'rope' facilitated effective and progressive management within the nursing division.

Site - B

The nursing division's philosophical statement identified health as "...a state of an individual's wellbeing..." and a person as "...a holistic being who ha[d] to adapt to constant changes that occur[red] within [themselves] and the environment." Nursing's role was to enhance the adaptation process through individualized patient care with a personal touch, being informed, making decisions about the health care plan, participating in care, and communicating with all members of the health care team. Nurses were assigned total patient care, as

independent decision makers accountable for their own actions, and as patient advocates. They were encouraged to be involved in both continuing education and research, and were part of a participative management team.

The informant perceived the organization to be a friendly, caring, informal, family environment with open communication. Service longevity was also highly valued.

Site - C

Nursing's philosophical statement emphasized providing the best possible care for the total needs of the patient with the patient being recognized as a member of a family or social grouping. Nursing's responsibility was to assist the patient meet his/her needs with restoration toward optimum health. Cooperation and coordination with other allied health disciplines was an expectation. Current practice based on sharing, education and research was encouraged by the CEN. The informant indicated that the organization valued a sound work ethic and prided itself in the work done. The facility's provision of a comprehensive cardiac education program was an example of work they were proud of.

Site - D

Nursing's philosophical statement for Site D

emphasized excellence in nursing care in response to patient needs. Nursing services included supportive nursing interventions that promoted health, prevented illness, provided for palliation, and emphasized the need to restore and maintain individual well being. Managerial functions included direct care, quality management, education, sound fiscal management, information control, human resource management and environmental control. The CEN suggested the organization valued a participative, open team that displayed trust, support, and a relaxed atmosphere in which individual opinions were valued. The hospital's strength was considered to be its staff.

Synchrony of Written Philosophical Statements and Informants' Perception of Organizational Values

A discrepancy became evident while reviewing each nursing division's philosophical statement and informants' perceptions of their respective organization's values.

Written philosophical statements supported patient directed care in conjunction with a multi-disciplinary approach. Values reflected in the organizational documents were patient care, communication or sharing, education, and an openness to research. With the exception of Informant - One, the CENs did not mention patient care when questioned about organizational values. Informants' perception of organizational values were staff

and managerial focused, that is, they valued teamwork or participative management based on sound communication and a strong work ethic. Being a step removed from direct care, CENs perceptions were more reflective of their administrative roles and responsibilities in relation to staff versus patient care.

Comparatively, then, a somewhat different perspective was expressed when the values identified in the written philosophies were examined against informants perception of organizational values. This may be related to informants focusing on personal and administrative values within their current working environment versus the written philosophical statements that attempt to address broader care concepts within the definitions of person, health, nursing, and the environment.

Chief Executive Nurse Job Descriptions - An Overview

Written job descriptions do not always reflect the day-to-day operational functions of the involved managers. The job description qualifiers described below were common to all CENs and appear to have been based on the Manitoba Association of Registered Nurses prototype job description for nurse administrators (M.A.R.N., 1990).

All informants were considered by their hospitals to be executive or senior management, second-in-command to the Executive Director, with the exception of Informant -

Two who was considered to be third-in-command. Job descriptions indicated that the CENs were directly or indirectly responsible for:

(1) delivery of nursing care services:

a) interpreting appropriate Acts and Regulations;

b) developing and maintaining philosophy, objectives and standards of nursing care including policies and procedures;

c) providing an organizational structure and position descriptions for staff use;

d) develop committee structure for staff decision making;

e) utilize delivery of care structure assigned on the basis of client needs and the skill of nursing staff; and,

f) incorporating new advances into the practice of nursing;

(2) human resource management:

a) developing and utilizing criteria for employment, retention, and separation of nursing personnel;

b) providing an orientation and staff development program for nursing employees;

c) planning for over-all staffing requirements;

d) ensuring that resources are appropriately allocated within the structure;

e) conducting annual performance review of staff;

f) implementing an adequate recruitment plan; and,

g) interpreting and applying the provisions of Collective Agreements and Hospital Policies;

(3) fiscal management:

a) participating in the development of the nursing budget with appropriate allocation throughout the department based on the approved budget; and,

b) implementing a system for the purchase and inventory of all nursing supplies;

(4) information control:

a) providing for library and media resources for staff;

b) providing a system for the collection of statistics;

c) maintaining an adequate personnel file;

d) establishing a workload measurement tool;

e) developing and implementing inservices for staff;

f) maintaining clear lines of communication and disseminating appropriate information to staff;

g) ensuring that client and staff confidentiality is maintained;

h) providing an opportunity for staff to discuss personal concerns;

i) representing the Department of Nursing in in-house meetings including the Board of

Directors, and participating in regional,
provincial and national associations; and

j) providing support and intervention for
families of patients, in situations of
conflict or concern regarding care;

(5) environmental control:

a) participating in planning physical changes in
the set-up of the hospital;

b) identifying the needs of staff and developing
a plan for the utilization of that space;

c) collaborating in the safety and accident
prevention program including staff health;

d) providing an incident reporting system; and

e) collaborating in an infection control program.

Job description differences were related to non-
nursing departmental responsibilities, management levels,
or structure. For example, Informants - One and - Three
supervised purchasing programs and the ordering and
dispensing of narcotics and controlled drugs. Informant -
Two, who had an Assistant Director of Nursing,
decentralized some of the functions other CENs maintained
largely by default. That is, staff selection, performance
appraisals, problem solving daily operational issues,
monitoring of the workload measurement system, and initial
staffing budget input were normally the responsibility of
the Assistant Director of Nursing. Hence, Informant -

Two's role was one-step further removed from front-line operations than the other informants, with a greater executive perspective.

Results and Analysis of Chief Executive Nurses' Work - Non-Participant Structured Observations

The work of four CENs is analyzed in this section from data collected during structured non-participant observations with additional perspectives gained from the exit interviews. Each of the four CENs was observed for a duration of three consecutive convenient working days, with the exception of Informant - Four. This informant's illness required the researcher to reschedule the final observation day to the subsequent week. Hence, a one working day break was realized during this observation period. The total number of minutes worked during each three day observational period was used as a basis for calculating averages. Time averages indicate the ways in which each of the four CENs spent their work time.

All four of the CENs worked during the day, Monday through Friday. Starting and ending times varied among and with each informant (Table 2). Starting times ranged from 0700 hours to 0815 hours with the CENs working until 1415 hours to 1735 hours. The CENs described the length of the work days as fairly typical, with the one exception of a CEN leaving work at 1415 hours for personal reasons.

Table 2 — Informants' Work Time Descriptions

Time Variable	Informant				
	1	2	3	4	MEAN
Starting and Ending Times for Observation Days:					
Day One	0800 −1617	0800 −1558	0800 −1618	0800 −1655	N/A
Day Two	0750 −1629	0745 −1609	0750 −1630	0800 −1415	N/A
Day Three	0810 −1640	0700 −1605	0750 −1631	0815 −1735	N/A
Earliest Starting Time (hours)	0750	0700	0750	0800	N/A
Latest Starting Time (hours)	0810	0800	0800	0815	N/A
Earliest Ending Time (hours)	1617	1558	1618	1415	N/A
Latest Ending Time (hours)	1640	1609	1631	1735	N/A
Total Time Worked Over Three Day Observation Period* (Minutes) (Hours)**	1526 25.4	1527 25.5	1539 25.7	1465 24.4	1514 25.2
Average Working Day (Minutes) (Hours)**	509 8.5	509 8.5	513 8.6	488 8.1	504 8.4
Shortest Working Day (Minutes) (Hours)**	497 8.3	478 8.0	498 8.3	375 6.3	N/A
Longest Working Day (Minutes) (Hours)**	519 8.7	545 9.1	521 8.7	560 9.3	N/A

* = Total time worked includes the pre−observation interview.

** = Hours are rounded off.

The starting time on Day 1 at each site visit was at 0800 hours. Observation began after the pre-observation interview, hence the actual observation beginning time on Day 1 varied from 0817 hours to 0905 hours. As shown in *Table 2*, the average working day, for the CENs ranged from 8.1 hours (488 minutes) to 8.6 hours (513 minutes) per working day, with an overall mean value of 8.4 hours (504 minutes). This time represents the total time spent at work and includes the pre-observation interview and all personal time. From the beginning, mealtime and coffee breaks were identified and categorized as 'personal time' to provide consistency throughout the study. However, when the CENs informally worked during personal time as they sat and discussed work related items with their staff or colleagues, their time was coded as an unscheduled meeting.

Total observation time, excluding the pre-observation interview, for the four CENs involved 98.5 hours (5906 minutes) (*Table 3*). A mean of 8.2 hours (492 minutes) was spent observing each informant per day, averaged over twelve observation days; or a mean of 24.6 hours (1476 minutes) per informants' three day observational period.

In addition to the observed working hours, informants identified varying periods of time worked outside their scheduled workday. Informant - One reported 15 to 20 hours per week; Informant - Two a minimum of 6 hours per month related to Board meetings alone, plus additional

Table 3 — Informants' Observational Time Descriptions

Time Variable	Informant				Total *	Mean **
	1	2	3	4		
Observation Time (Minutes)	1481	1510	1505	1410	5906	1476
Observation Time (Hours)	24.7	25.2	25.1	23.5	98.5	24.6

*   = a composite total time for the four informants over twelve observation days.

**   = a mean average total time for the four informants over twelve observation days.

project time; Informant - Three a minimum of eight hours
per week related largely to her ambulance educator role;
and Informant - Four a minimum of five hours per week.
Succinctly stated, these four CENs did not carry out all
of their work demands in the context of their scheduled
workday.

A. Informants' Work Time by Activity Category

This analysis focuses on the CENs' work in relation to
type of activity. Nine pre-established activity
categories (*see Appendix G for definitions*) were used:

1) scheduled meetings;

2) unscheduled meetings;

3) desk work;

4) telephone calls;

5) travel;

6) tours;

7) personal;

8) secretarial; and

9) other.

Each informant's work per activity category over three
observations days is presented below.

i) Scheduled Meetings

Informant - One considered her number of scheduled

meetings (19) to be more than usual while Informants - Two (23) and Four (7) thought their frequency was normal. Informant - Three (7) indicated that the given observation period was a slow time for scheduled meetings (*Table 4*). Although scheduled meetings occurred from 7 to 23 times per informant, or 3 to 10% of the informants' activities (*Figures 6-9*), some scheduled meetings were interrupted by scheduled breaks, unscheduled meetings, and telephone calls. The duration of scheduled meetings varied from 28.8 minutes to 96.0 with a mean meeting time of 51.3 minutes. Scheduled meetings comprised the most time of any activity by consuming 2252 minutes (38%) of the 5906 minutes during which CENs were observed (*Table 5*).

Although the frequency activity percentage for these meetings was relatively low, CENs spent from 356 minutes (5.9 hours or 24%) to 672 minutes (11.2 hours or 48%) of their three day observation period in scheduled meetings (*Table 5; Figures 10-13*). The CEN at Site - A indicated that her 548 minutes in scheduled meetings, largely policy and budgetary review sessions, were not regularly scheduled meetings. Informant - Three indicated that her regular meetings (356 minutes) were less than usual, since this was the slower time of the month for scheduled meetings. CENs of the two smaller acute care facilities had less meeting time scheduled. Informant - Four's 11.2 hours of scheduled meetings was mainly directed to internal and external health reform planning sessions.

Table 4 – Informants' Activity Frequency (n) and Percentage (%) per Category

Activity Type		Informant				TOTAL	MEAN
		1	2	3	4		
Scheduled Meetings	(n) (%)	19 10	23 9	7 3	7 4	56 7	14
Unscheduled Meetings	(n) (%)	51 27	93 38	82 32	77 45	303 35	76
Desk Work	(n) (%)	45 24	44 18	47 18	26 15	162 19	41
Telephone Calls	(n) (%)	23 12	24 10	19 7	19 11	85 10	21
Travel	(n) (%)	16 8	21 9	50 20	29 17	116 13	29
Tours	(n) (%)	5 3	10 4	9 4	1 1	25 3	6
Personal	(n) (%)	18 9	21 9	14 5	9 5	62 7	16
Secretarial	(n) (%)	13 7	4 2	22 9	1 1	40 5	10
Other	(n) (%)	0 0	2 1	6 2	2 1	10 1	3
Activity Total		190	242	256	171	859	215

Note: All percentages are rounded off.

Figure 6: Frequency Percentage per Activity Category: Informant One

- Unsched'ld Mtgs (27%)
- Sched'ld Mtgs (10%)
- Secretarial (7%)
- Personal (9%)
- Tours (3%)
- Travel (8%)
- Telephone (12%)
- Desk Work (24%)
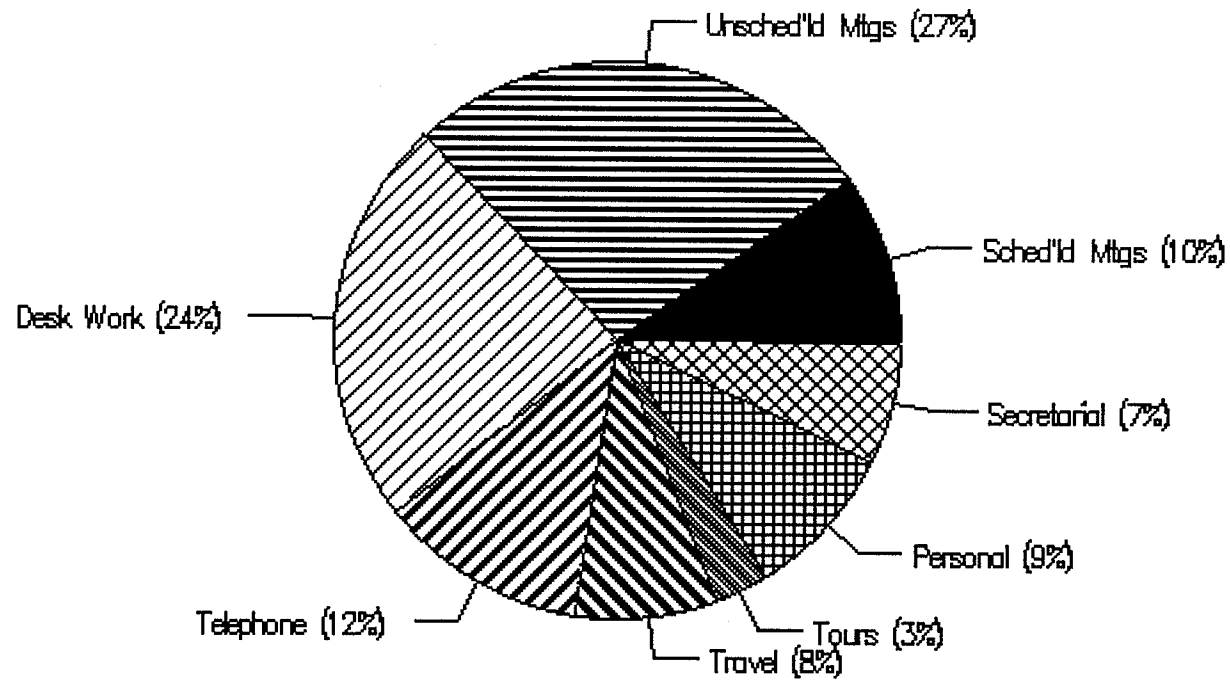
Figure 7: Frequency Percentage per Activity Category: Informant Two

Unsched'ld Mtgs (38%)

Sched'ld Mtgs (9%)

Other (1%)

Secretarial (2%)

Desk Work (18%)

Personal (9%)

Tours (4%)

Telephone (10%)

Travel (9%)
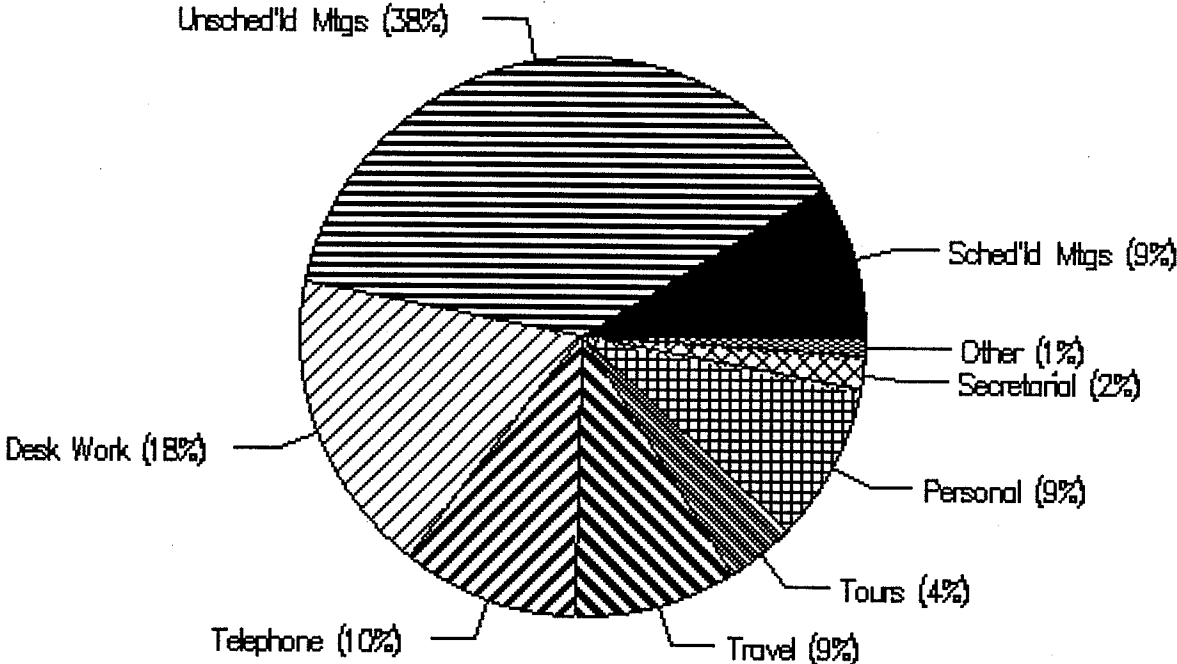
Figure 8: Frequency Percentage per Activity Category: Informant Three

Unsched'ld Mtgs (32%)

Desk Work (18%)

Sched'ld Mtgs (3%)

Other (2%)

Secretarial (9%)

Telephone (7%)

Personal (5%)

Travel (20%)

Tours (4%)
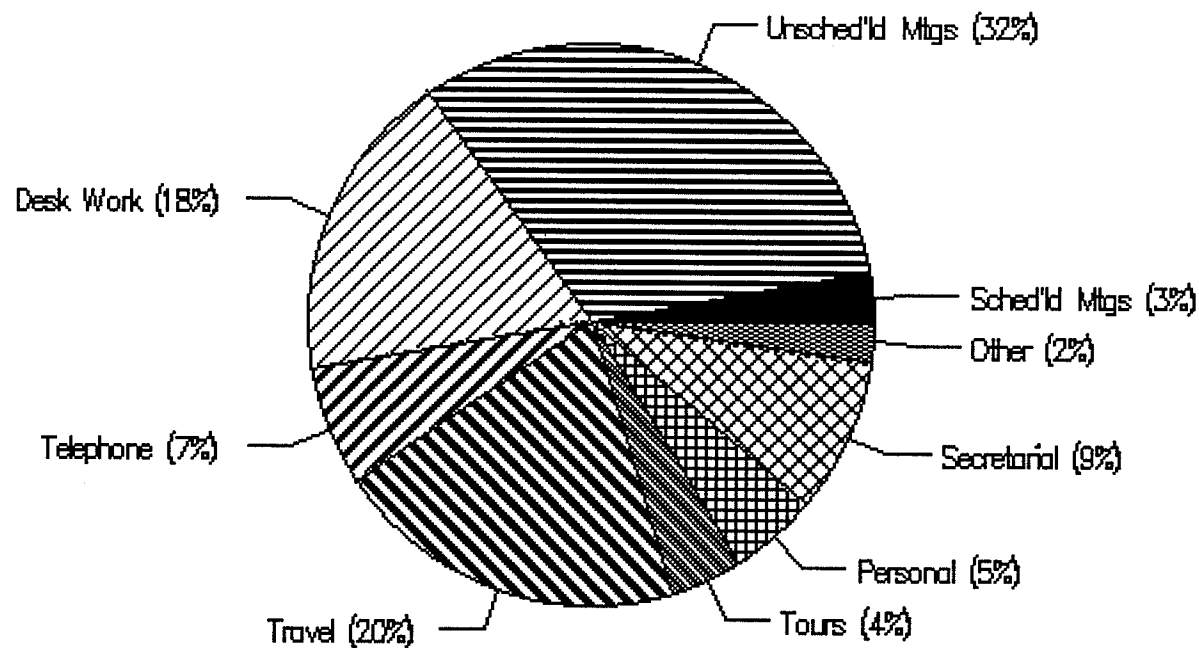
Figure 9: Frequency Percentage per Activity Category: Informant Four

Unsched'ld Mtgs (45%)

Sched'ld Mtgs (4%)

Other (1%)
Secretarial (1%)

Personal (5%)

Desk Work (15%)

Tours (1%)

Travel (17%)

Telephone (11%)
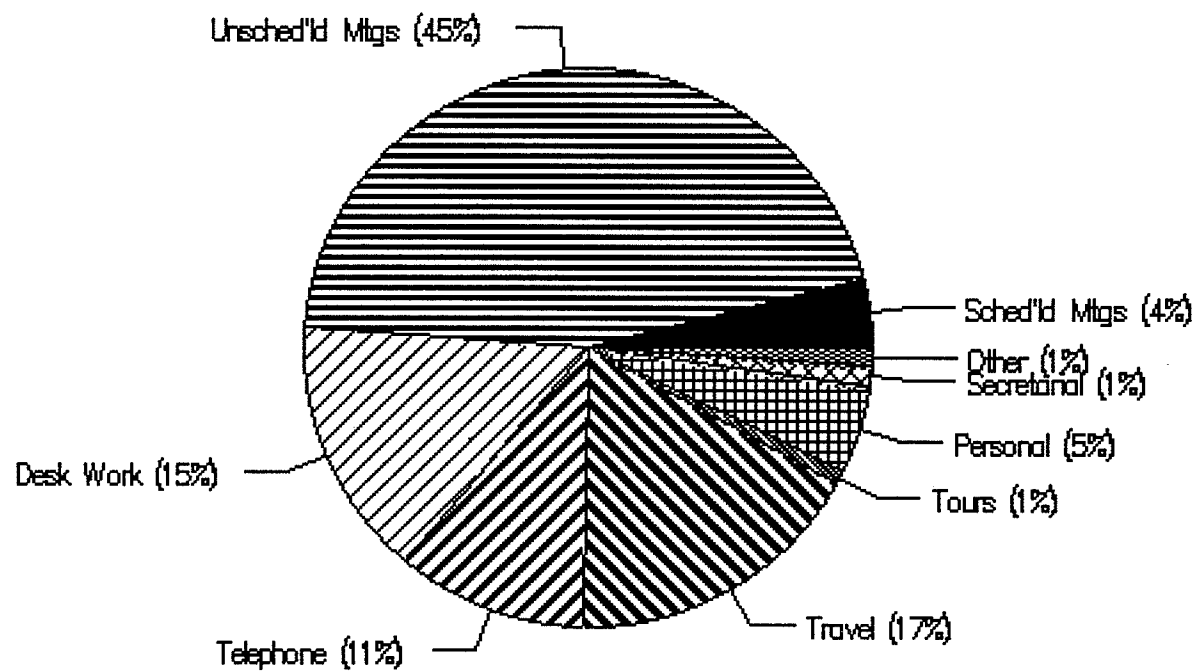
Table 5 — Informants' Time (Minutes/Percentages) Spent per Activity Category

Activity Type		Informant				TOTAL	MEAN
		1	**2**	**3**	**4**		
Scheduled Meetings	(mins) (%)	548 37	676 45	356 24	672 48	2252 38	563
Unscheduled Meetings	(mins) (%)	120 8	309 20	197 13	320 23	946 16	237
Desk Work	(mins) (%)	301 20	161 11	423 28	69 5	954 16	239
Telephone Calls	(mins) (%)	85 6	52 3	42 3	56 4	235 4	59
Travel	(mins) (%)	84 6	30 2	79 5	84 6	277 5	69
Tours	(mins) (%)	17 1	31 2	57 4	4 0	109 2	27
Personal	(mins) (%)	257 17	244 16	266 18	197 14	964 16	241
Secretarial	(mins) (%)	69 5	4 1	31 2	2 0	106 2	27
Other	(mins) (%)	0 0	3 0	54 3	6 0	63 1	16
Total Time		**1481**	**1510**	**1505**	**1410**	**5906**	**1477**

Note: (mins) = minutes; percentages are rounded off.

Figure 10: Time Percentage per Activity Category: Informant One

- Sched'ld Mtgs (37%)
- Unsched'ld Mtgs (8%)
- Desk Work (20%)
- Telephone (6%)
- Travel (6%)
- Tours (1%)
- Personal (17%)
- Secretarial (5%)
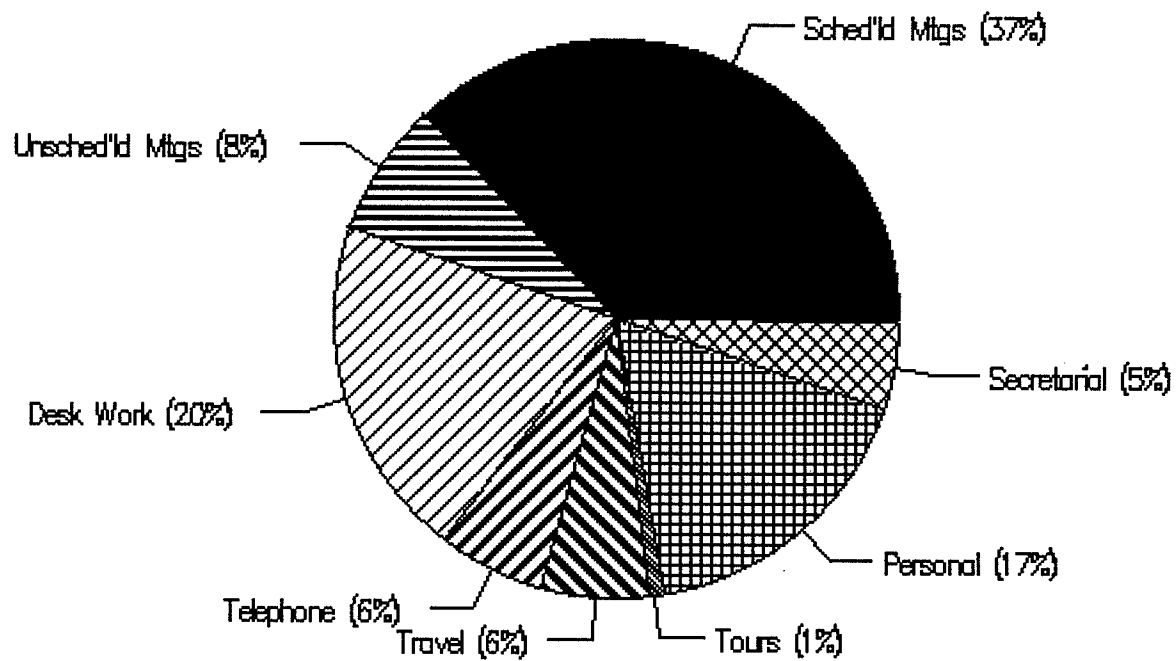
Figure 11: Time Percentage per Activity Category: Informant Two

Sched'ld Mtgs (45%)

Secretarial (1%)

Tours (2%)

Unsched'ld Mtgs (20%)

Personal (16%)

Desk Work (11%)

Travel (2%)

Telephone (3%)
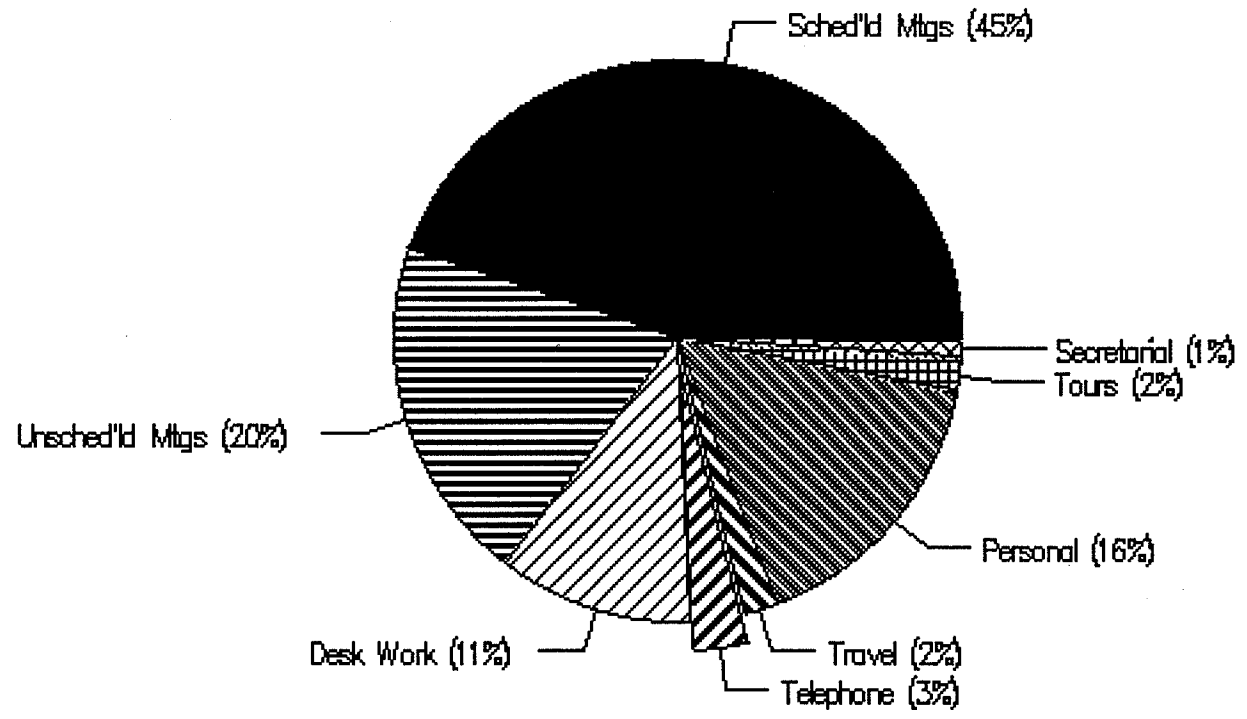
Figure 12: Time Percentage per Activity Category: Informant Three

Unsched'ld Mtgs (13%)

Sched'ld Mtgs (24%)

Desk Work (28%)

Other (3%)

Secretorial (2%)

Tours (4%)

Telephone (3%)

Travel (5%)

Personal (18%)
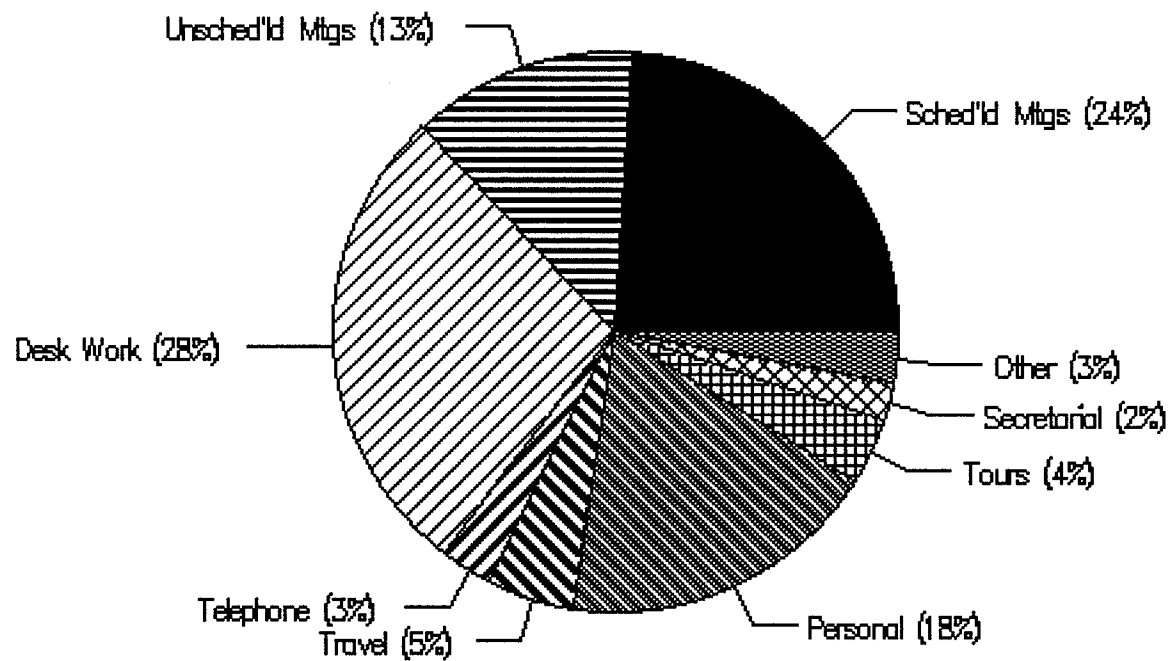
Figure 13: Time Percentage per Activity Category: Informant Four

Sched'ld Mtgs (48%)

Personal (14%)

Unsched'ld Mtgs (23%)

Travel (6%)

Desk Work (5%)

Telephone (4%)
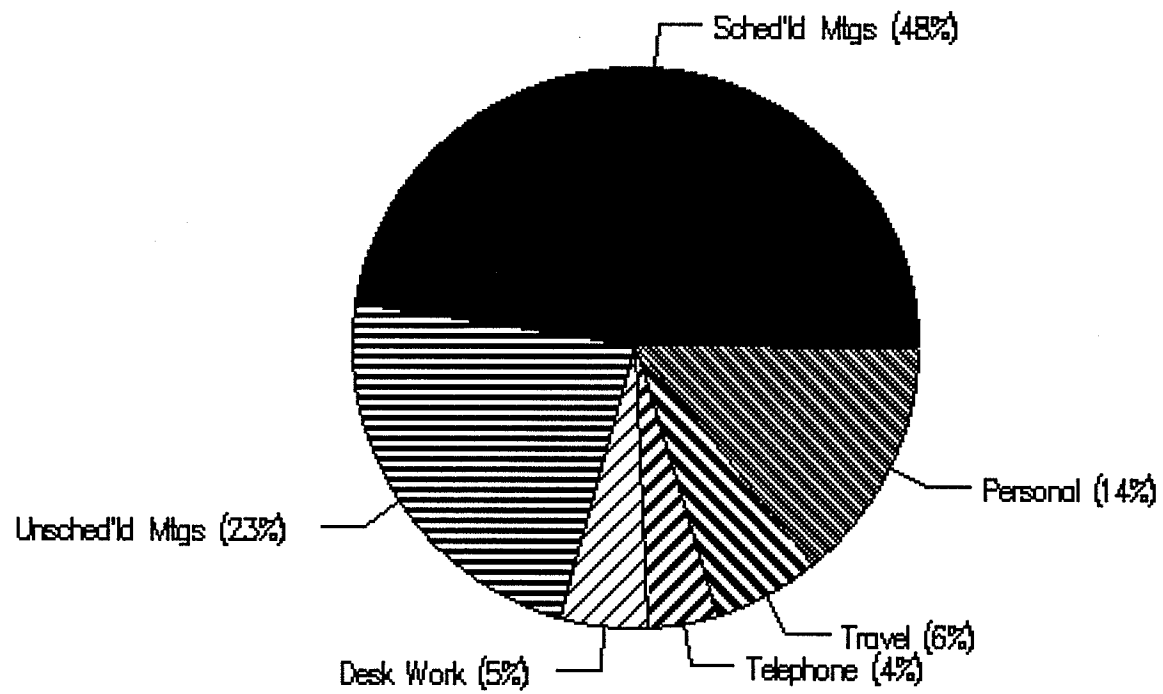
ii) Unscheduled Meetings

The four informants had the greatest activity frequency in brief unscheduled meetings (*Table 4*) which accounted for 35% of CENs' total activity events but only 16% (946 minutes) of activity time. The frequency of unscheduled meetings ranged from 51 to 93 activities per three day observational period, with a mean of 76 unscheduled events (*Table 4; Figures 6-9*). The average duration of unscheduled meetings was 3.1 minutes (*Table 6*). An example of an unscheduled meeting was a CEN meeting with a Nursing Unit Coordinator to discuss staffing for a particular unit.

iii) Desk Work

Desk work includes administrative work and encompasses the following: reviewing reports, processing mail, budget analysis and writing policies. Making up the second greatest portion of activity frequency, desk work ranged from 26 (15%) [Informant - Four] to 47 (18%) [Informant - Three] sessions per observational period, with an overall average of 19% of CENs' activity frequency (*Table 4; Figures 6-9*). However, with an average desk work activity duration of 5.5 minutes (*Table 6*), the overall time given to desk work per CEN ranged from 69 (5%) [Informant - Four] to 423 (28%) [Informant - Three] minutes, with a

Table 6 — Informants' Mean Time (Minutes) Duration
Spent per Activity within each Category

Activity Type	Informant				
	1	2	3	4	MEAN
Scheduled Meetings	28.8	29.4	50.9	96.0	51.3
Unscheduled Meetings	2.4	3.3	2.4	4.2	3.1
Desk Work	6.7	3.7	9.0	2.7	5.5
Telephone Calls	3.7	2.2	2.2	2.9	2.8
Travel	5.3	1.4	1.6	2.9	2.8
Tours	3.4	3.1	6.3	4.0	4.2
Personal	14.3	11.6	19.0	21.9	16.7
Secretarial	5.3	1.0	1.4	2.0	2.4
Other	0.0	1.5	9.0	3.0	3.4

Note: Mean minutes were calculated using frequencies (Table
4) and minutes per activity category (Table 5).

mean of 239 (16%) minutes per observation period (*Table 5;
Figures 10-13*).

Desk work constituted the CENs' third greatest
proportion of time utilized. Informant - Three who had
the most designated desk work time (423 minutes) among the
CENs, spent the least amount of time (356 minutes) in
scheduled meetings. Meanwhile, Informant - Four who was
in scheduled meetings for a larger proportion of her time
(672 minutes), only spent 69 minutes at desk work.
Informants - Two and - Four, who had 309 and 320 minutes
of unscheduled meetings respectively, expended only 161
and 69 minutes respectively at desk work (*Table 5*).

CENs involved in a lot of scheduled meetings spent
proportionately less time at their desks. However,
unscheduled meetings were as frequent in and around
scheduled meetings as during desk sessions. CENs had a
tendency to have informal, unscheduled discussions with
members attending the scheduled meetings, and with
reporting managers and secretarial personnel just prior to
or after the scheduled meetings.

Mail Processing

Cumulatively, desk work was the third largest
proportion of CENs' work time. A significant component of
desk work was the processing of mail including sorting,
reviewing and responding to both internal and external

mail items. Frequency of processing mail ranged from 7 to 30 sessions over 37 to 158 minutes during each informant's three day observational period. The percentage of desk work involving mail processing was between 12.3% to 72.5% (*Table* 7). Informant - One spent considerable time working on policy development during her desk work time but limited time addressing mail. Informants - Two and - Four, who spent the least time in desk work and the most time in scheduled meetings, used up 65.0% and 72.5% of their desk work time processing mail (*Tables* 5 & 7). Informant - Three, who dedicated the most time to desk work, spent only 37.4% of her time handling mail. The average time spent processing mail per each informant's observation period was 87 minutes (*Table* 7), or an average of 29 minutes per day.

iv) Telephone Calls

Telephone calls initiated or received by CENs during each observation period ranged from 19 (7%) to 24 (12%) events (*Table 4; Figures 6-9*), a mean of 7 calls per day, comprising of 3 - 6% of informants working time (*Figures 10-13*). The CENs telephone calls averaged 2.8 minutes in duration. Informant - One was on the telephone the most at 85 minutes with an average of 3.7 minutes per call (*Tables 5 & 6*). The frequency was related to her position as CEN for three geographically separate facilities.

Table 7 —   CENs' Frequency (n) and Time (Minutes) Spent Processing Mail

Variable	Informant				TOTAL	MEAN
	1	**2**	**3**	**4**	**TOTAL**	**MEAN**
Frequency of (n) Processing Mail	7	30	21	12	70	18
Time (Minutes) Processing Mail	37	104	158	50	349	87
Percentage of Total Desk Work Time Spent Processing Mail	12.3	65.0	37.4	72.5	N/A	36.6

Note: Mail refers to paper mail only.

Informant - Three spent only 42 minutes on the telephone but spent considerable more time traveling and touring the facility versus the other three informants (*Tables 4 & 5*).

v) Travel

CENs traveled to various parts of the hospital, hospital complex or other events. Informants traveled from 16 to 50 times (*Table 4*) within and external to the organization which required from 30 to 84 minutes of CEN time (*Table 5*); an average of 2.8 minutes per event. Informant - One had the fewest episodes (16) but required 84 minutes of time (*Tables 4 & 5*). This CEN required additional time to travel to one of the geographically separate facilities under her jurisdiction. The CEN at Site - D was required to also attend meetings external to the facility, thus her 84 minutes of traveling time (*Table 5*). Informants - Two and - Three both remained within their facilities throughout the observation period, although the latter had twice as much traveling; a consequence of individual preference and the operational or 'hands-on' duties required of her.

vi) Tours

Tours involved informants informal strolls through the facility to observe activities without prearrangement.

Informants utilized 1 [Informant - Four] to 10 [Informant - Two] tours (*Table 4*) during their respective observation periods, with Informant - Three using the most at 57 minutes (*Table 5*), averaging 6.3 minutes per event (*Table 6*). This informant spent most of her touring time talking with patients and family on the Unit. A mean of 27 minutes per observation period (*Table 5*), or 9 minutes per day, was used by informants to tour their facilities.

vii) Personal

The personal time category consisted of all forms of personal time including meals and breaks. Consequently, personal time was the second most time consuming portion of the day utilizing 964 minutes or 16.3% of informants' workdays (*Table 5*). This occurred since formal breaks remained relatively consistent for all four CENs as they usually took morning and afternoon coffee breaks, and a lunch period. As previously noted, informants informally worked through their breaks as they discussed work related items and exchanged information with peers, subordinates, or other employees. These were accounted for under unscheduled meetings. For example, Informant - Two discussed patient discharge concerns with a Nursing Unit Coordinator during her lunch break. Therefore, the event was noted as an unscheduled meeting and not personal time.

viii) Secretarial/Other

Activity in the Secretarial and 'Other' categories varied among the CENs dependent on the availability of human resources, job responsibilities and informants' preferences. Secretarial frequencies displayed by the informants ranged from 1 to 22 (*Table 4*), varying from 2 to 69 minutes (*Table 5*) over the observation period. Informant - One spent 69 minutes or 4.7% of her time in secretarial activities such as photocopying policies in preparation for a meeting. Meanwhile, Informant - Three carried out numerous secretarial duties throughout the course of her workday; totaling 31 minutes or 2.1% of her observation period.

Only 10 activities (*Table 4*) involving 63 minutes (*Table 5*), were labeled in the 'Other' category. The most significant 'Other' activity involved Informant - Three spending most of her 54 minutes on an ambulance trip. Other CEN activities consisted of functions that would normally involve other departments such as materiels management, ambulance, pharmacy, maintenance, housekeeping and dietary. For example, CENs received and distributed supplies such as neck collars, arterial blood gas supplies, CPR dolls, and pharmaceutical supplies. An overhead bulb replacement was considered as a maintenance function while removing garbage was seen as a housekeeping activity. Setting up and cleaning up coffee amenities was

viewed as a dietary activity.

Informants' Activity Summary

The CENs' work can be examined both in terms of activity frequency with an overall time allotment and average duration per event (*Table 8*). The average duration of events ranged from 5.9 minutes (Informant - Three) to 8.2 minutes (Informant - Four). Meanwhile, the average total number of events in which the informants were involved during the course of each day ranged from 57 (Informant - Four) to 85 (Informant - Three). With an average of 72 activities per day over a mean of 492 minutes (8.2 hours), informants changed work activities about every 6.8 minutes. Seventy-seven percent (a range of 67 to 81%) of CENs' activities were events of less than five minutes in duration. Over the twelve observation days less than 5%, or only 41 of 859 CEN events, lasted longer than 31 minutes in duration (*Table 9*).

The above data demonstrates that CENs work day is extremely fragmented with a diverse set of activities. To further understand the work of CENs, the informants' activities involving others requires closer examination.

B. Chief Executive Nurses' Activities with Others

In this section the CENs' work activities were

Table 8 — CENs' Composite Activity Profile

Variable	Informant				TOTAL	MEAN
	1	**2**	**3**	**4**		
Total Activity (n)	190	242	256	171	859	215
Total Time (Minutes)	1481	1510	1505	1410	5906	1477
Mean Time per Activity (Minutes)	7.8	6.2	5.9	8.2	6.8	6.8

Table 9 −Informants' Average Frequency (n) and
Percentage (%) per Time Designations

Time Designation	Informant				TOTAL
	1	**2**	**3**	**4**	
0−5 Minutes: (n)	128	190	202	139	659
(%)	67	79	79	81	77
6−10 Minutes: (n)	26	24	24	11	85
(%)	14	10	9	6.5	10
11−30 Minutes: (n)	26	18	19	11	74
(%)	14	7	7	6.5	9
31−60 Minutes: (n)	8	5	9	5	27
(%)	4	2	4	3	3
61+ Minutes: (n)	2	5	2	5	14
(%)	1	2	1	3	1
Total Activities (n)	190	242	256	171	859

examined in terms of their participation with others. The work of the informants was divided into two groupings: 1) solitary activities, in which the CEN worked alone such as desk work; and, 2) joint activities involving superiors, subordinates (managers and general staff), peers, other professionals, patients and families, and 'others.' Participation of others could involve scheduled or unscheduled meetings during in-person or telephone events.

i) Frequency and Time Allocation of Informants' with Participants

The activity of each CEN, whether in solitary or jointly with others, is illustrated in *Table 10a*. Informants' percentage of solitary activities ranged from 33.3% to 52.3% of overall activity frequency, with an overall mean activity frequency of 42.3%. CENs activities with others ranged from 47.7% to 66.7%, with an overall mean activity frequency of 57.7%.

As per *Table 10b* and *Figure 14*, percentages of activities may be illustrated in more than one way, since the informants frequently interacted with more than one participant designation. Informants only spent on average 6.0% of their overall activities with superiors such as CEOs and board members. Most interactions with superiors occurred during scheduled meetings. Outside of scheduled meetings, the CENs interaction with superiors consisted of

Table 10a — Summary of CENs' Activity with Others

Activity Participants	Informant				
	1	2	3	4	TOTAL
Solitary Activities(n)	89	83	134	57	363
(%)	46.8	34.3	52.3	33.3	42.3
Joint Activities (n)	101	159	122	114	496
(%)	53.2	65.7	47.7	66.7	57.7

Table 10b — Breakdown of CENs' Activity with Others

Activity Participants**		Informant				
		1	2	3	4	TOTAL
Solitary Activities(n)		89	83	134	57	363
(%)		45.6	28.0	48.2	31.0	38.0
Joint Activities						
—w/superiors	(n)	16	15	9	16	56
	(%)	8.2	5.1	3.2	8.7	6.0
—w/subordinates —reporting managers	(n)	51	81	24	25	181
	(%)	26.2	27.4	8.6	13.6	19.0
—general staff	(n)	23	62	60	45	190
	(%)	11.8	20.9	21.6	24.5	20.0
—w/peers	(n)	3	16	2	14	35
	(%)	1.5	5.4	0.7	7.6	4.0
—w/other professionals	(n)	2	31	29	24	86
	(%)	1.0	10.5	10.4	13.0	9.0
—w/patients	(n)	2	2	9	0	13
	(%)	1.0	0.7	3.2	0.0	1.0
—Others	(n)	9	6	11	3	29
	(%)	4.6	2.0	4.0	1.6	3.0
Total Activities	(n)	195	296	278	184	953

** Informants frequently interacted simultaneously with more than one participant designation, thus, overall changes in percentages for solitary and joint activities.

Figure 14: Informants' Time Percentage in Participant Categories

Solitary (38%)

Superiors (6%)

Others (3%)

Clients (1%)

Other Prof'ls (9%)

Subordinates (39%)

Peers (4%)
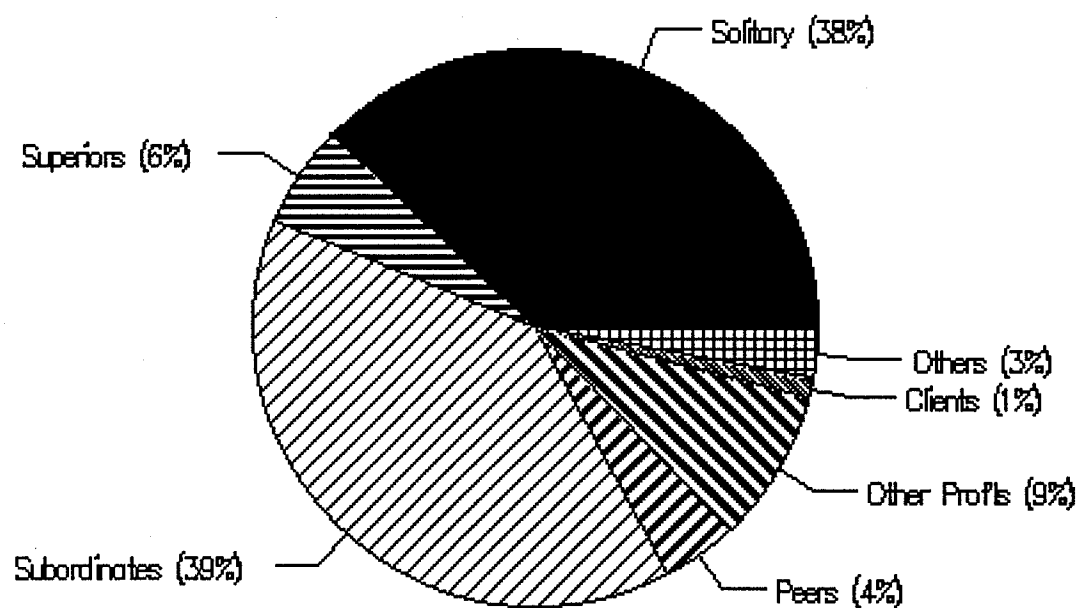
brief, informational exchanges. CENs most frequently interacted with subordinates such as reporting managers (19.0%) and general staff within their divisions (20.0%). CENs spent only 1.0% of their workday interacting with patients and their families (*Table 10b & Figure 14*).

Of the 6757 minutes spent with other participants, informants spent the most time with subordinates. This involved 1875 minutes with reporting managers and 1403 minutes with general staff, consisting of 38.8% of their overall working time. Solitary activities consumed 1708 minutes or 20.2% of CEN time during the twelve observation days. Less than 1% of CENs' time involved patients or their family members (*Table 11*).

CEN time allocation with specific participants requires further exploration. Informant - Four spent a considerable amount of time in health reform and construction/merger meetings, thereby accumulating significant amounts of time with her superiors and with peers (external, senior executives). Informants - One and Two had extended internal policy meetings with their reporting managers. The time spent by Informant - Two with other professionals was largely related to a meeting with the outreach regional chemotherapy team. An ambulance attendant event for Informant - Three required 44 minutes of her time.

The proportion of time that is related to CEN secretarial support ranged from 16 [Informant - One] to

Table 11 — Summary of CENs' Total Time Duration (Minutes) with Activity Participants

	Informant					
Activity Participants	**1**	**2**	**3**	**4**	**TOTAL**	**%**
Solitary Activities	663	324	582	139	1708	20
Joint Activities —w/superiors	256	246	149	588	1239	15

—w/subordinates
  —reporting managers
  —general staff
  (secretarial) *
	
	524
	46
	16
		
		823
		534
		275
			
			339
			535
			47
				
				189
				288
				55
					
					1875
					1403
					393
						
						22
						17

—w/peers	19	264	4	746	1033	12
—w/other professionals	4	378	270	187	839	10
—w/patients	7	2	56	0	65	1
—w/others	15	75	206	7	303	3

Note: percentages are rounded off.
* = secretarial time is a break—out of general staff time and is, therefore, not included in the joint activity total time.

275 minutes [Informant - Two), or 8.8% to 51.5% of general staff time allocation (*Table 11*). Overall, secretarial support made up 393 minutes or 28% of general staff time allocation. Secretarial presence of 275 minutes for Informant - Two was largely accrued during scheduled meetings at which the secretary recorded minutes. This level of secretarial support for CENs was not seen at the other facilities, although it is recognized that a full complement of regular meetings at each site was also not observed.

CEN's solitary activities lasted only 4.5 minutes per event. Joint activities involving superiors, usually at scheduled meetings, ranged from 16.0 to 36.8 minutes in duration, with an overall group mean of 21.5 minutes. Average duration of events with reporting managers was longer than with other subordinates because of scheduled meetings. Many CENs' meetings with subordinates were one or two minutes in duration (*Table 12*).

In their executive role, CENs' joint events consist of meeting with general staff and reporting managers; and meeting least frequently with patients and 'others'.

ii) Chief Executive Nurses' Activity Initiation with Participants

Nearly all of the informants solitary activities were self-initiated, although the researcher recognizes that

Table 12 — Summary of CENs' Average Time Duration
(Minutes) with Activity Participants

Activity Participants	Informant				
	1	2	3	4	MEAN
Solitary Activities	7.4	3.9	4.3	2.4	4.5
Joint Activities —w/superiors	16.0	16.4	16.6	36.8	21.5

—w/subordinates
  —reporting managers
  —general staff
	10.3
	2.0
		11.5
		8.6
			14.1
			8.9
				7.8
				6.4
					10.9
					6.5

—w/peers	6.3	16.5	2.0	53.3	19.5
—w/other professionals	2.0	12.2	9.3	7.8	7.8
—w/patients	3.5	1.0	6.2	—	2.7
—w/others	1.7	12.5	18.7	2.3	8.8

non-participant observation may not fully capture this activity. For example, who initiated the activity before the CEN addressed a memo? In a few instances during the twelve observation days, another participant would directly request action on an activity or issues to which the CEN would respond. It was in these instances that the CEN's subsequent solitary activity, such as desk work, was noted as being initiated by another.

At all four sites joint activities with superiors were initiated more frequently by superiors than by the CEN themselves. At Sites A, B, and D the respective informants most frequently initiated activities with reporting managers. This may be due to the pattern of scheduled meetings with reporting managers at these sites, as well as having a larger number of managerial positions. At the general staff level, Informants – Two and Four, CENs of the two larger facilities, initiated activities with subordinates more frequently, although a large proportion of this activity was realized in conjunction with their secretarial support (*Table 13*). Distinct nursing administrative secretarial support was not evident in the other facilities.

Summary of Chief Executive Nurses' Activities with other Participants

The above data present the CEN as meeting frequently

Table 13 — Summary of CENs' Activity Initiation with Other Participants

Activity Participants	Informant				
	1	2	3	4	MEAN
Solitary Activities					
Self	87	81	129	54	87.8
Others	2	2	5	3	3.0
Mutual	N/A	N/A	N/A	N/A	N/A
Joint Activities					
—w/superiors					
Self	3	5	2	3	3.3
Others	12	8	4	8	8.0
Mutual	1	2	3	5	2.8
—w/subordinates					
—reporting managers					
Self	31	26	6	16	19.8
Others	18	37	12	5	18.0
Mutual	2	18	6	4	7.5
—general staff					
Self	12	29	25	25	22.8
Others	11	22	26	12	17.8
Mutual	0	11	9	8	7.0
—w/peers					
Self	0	4	1	4	2.3
Others	3	8	1	3	3.8
Mutual	0	4	0	7	2.8
—w/other professionals					
Self	1	9	13	9	8.0
Others	1	16	10	11	9.5
Mutual	0	6	6	5	4.3
—w/patients					
Self	1	1	8	0	2.5
Others	1	0	1	0	0.5
Mutual	0	1	0	0	0.3
—w/others					
Self	2	2	3	2	2.3
Others	7	4	6	1	4.5
Mutual	0	0	2	0	0.5

and for long periods of time with superiors and/or reporting managers. General staff are usually involved in either scheduled union/management meetings or unscheduled one-to-one meetings with the CEN. Outside of scheduled meetings, CEN activities are filled with frequent brief interactions, primarily with reporting managers and general staff. Much of the general staff time allocation involves secretarial support.

C. Activity Behaviors of Chief Executive Nurses'

In this component of data analysis an attempt was made to interpret the purpose of each observed activity engaged in by the informants. The CENs' behaviors were analyzed according to the activities observed in conjunction with the ongoing information shared by the informant. The researcher's own interpretation is used in cases where the CEN could not, or chose not to share explicitly the purpose of the activities being observed.

The behavioral categories used to identify the CENs' various behaviors are based on Mintzberg's (1973) ten managerial work roles as described earlier (*Chapter 1, pp. 5-13*). Additional behavioral categories emerged as there were CEN activities enacted that did not relate to any of Mintzberg's given categories. This group of behaviors was referred to as **supportive behaviors** and included the roles of: 1) *clinical support*; and 2) *counseling*.

The *clinical support* role referred to any activity in which the informant assisted in the direct delivery of patient care. All CENs were a bed-side nurse and/or a clinical instructor prior to securing their administrative position. Clinical support included assisting subordinates in patient related decisions, technical skills, or serving as an ambulance attendant.

The *counseling* role included behaviors whereby staff, patients and families sought advice from the CEN on an array of professional and personal decisions. For example, only one facility had an established employee assistance program. For the most part CENs identified the counseling role as largely 'a listening ear.'

i) Behavioral Activity Time Designations

The data supported four behavioral categories, namely: 1) interpersonal, 2) informational, 3) decisional, and, 4) supportive. Each categorical cluster is specifically delineated below.

In terms of the proportion of time spent in each of the roles, Informants - One and - Three, in contrast to Informants - Two and - Four, spent more time in interpersonal versus decisional behaviors. Informant - One spent 22.7% of her time in leader activities, directing the review of policies and procedures with a core of reporting nurse managers. Although Informant -

Three engaged in similar activities, more time was given to the liaison role. Informant - Three also appeared to be operationally oriented in her managerial practice. Few scheduled meetings were held during the latter's observation period.

The informational roles, comprised of monitor, disseminator and spokesperson behaviors, occupied 39.1% (ranged from 32.2% - 51.5%) of the informants' activities (*Table 14*). Informant - Three, the CEN of the smallest facility with a broad scope of responsibility, spent 51.5% of her time in informational activities. Within the informational category the roles of monitor (15.9%) and disseminator (17.3%) predominated for the CENs with the exception of Informant - Four. Informant - Four spent additional time outside the facility in health reform meetings requiring more time designated to spokesperson activities. Cumulatively, the informational category predominated and suggests that CENs' work is largely focused on attaining, appraising and sharing information with others. This was often observed when reporting managers or other subordinates provided the CEN with an update of departmental activities. Significant organizational changes had or were to occur within each facility. The CEN, therefore, shared information on practice standards, health reform, facility policy or changes thereof.

Informants - Two and Four, CENs of the larger acute

**Table 14 — Percentage of Time Occupied by CENs'
in Each Behavioral Category**

Behavior Category	Informant				
	1	**2**	**3**	**4**	**MEAN**
Interpersonal	28.6%	21.8%	25.9%	22.2%	24.6%
Figurehead	1.0%	2.8%	1.4%	5.1%	2.6%
Leader	22.7%	15.2%	15.9%	10.6%	16.1%
Liaison	4.9%	3.8%	8.6%	6.5%	6.0%
Informational	34.3%	38.3%	51.5%	32.2%	39.1%
Monitor	10.5%	19.1%	20.2%	13.9%	15.9%
Disseminator	23.0%	16.7%	22.4%	6.9%	17.3%
Spokesperson	0.8%	2.5%	8.9%	11.4%	5.9%
Decisional	21.5%	31.5%	9.2%	30.4%	23.2%
Entrepreneur	10.0%	16.6%	0.0%	21.9%	12.1%
Disturbance Handler	4.6%	3.6%	2.0%	2.4%	3.2%
Resource Allocator	6.9%	11.3%	7.2%	6.1%	7.9%
Negotiator	14.4%	8.4%	10.3%	15.2%	12.1%
Supportive	1.2%	0.0%	3.0%	0.0%	1.1%
Clinical Support	0.7%	0.0%	2.8%	0.0%	0.9%
Counseling	0.5%	0.0%	0.2%	0.0%	0.2%

care facilities, respectively spent 31.5% and 30.4% of their time in the decisional activities (*Table 14*). Entrepreneurial activities made up 16.6% of Informant - Two's time, which involved meetings to establish a regional chemotherapy unit and an in-house products standardization process. Informant - Four was extensively involved in regional health reform issues, and a building and merger process with a neighboring facility. Therefore, a 15.2% allocation to negotiating activities beyond the 21.9% related to entrepreneurship. In spite of extensive health reform issues and change process, including staff and work restructuring within the facilities, an overall mean for all informants of only 3.2% of time was realized in disturbance handling.

Although only 1.1% of time given to supportive behaviors was observed, clinical support and counseling were core components of each CENs role-set; as became evident during the exit interviews. Each informant suggested that the supportive functions where significant components of their role-set, although not necessarily significant in the amount of time dedicated to these roles. The supportive functions may exist largely as a substitute or 'filler' function due to skeleton human resources available within the organizational structures. Additionally, the 'caring' element could be related to the ethos of the profession or discipline-specific learned behavior carried out within the CENs' administrative role.

Administrative, education and research functions appeared to be captured under Mintzberg's (1973) existing categories and, therefore, were not identified under separate entities.

In summary, the work of CENs in rural health care facilities has been identified in this section. The data suggest that almost 40% of CENs' work is focused on the receiving and dissemination of information. The culture within each organization determines to a large degree what behavior the CEN will display. Facilities initiating new programs, for example, will find the CEN in more decisional roles including entrepreneurship, resource allocation and negotiating, involving both interpersonal and leadership behaviors.

D. The Cyclical Nature of Chief Executive Nurses' Work

During the twelve days of observation, CENs appeared to display cyclical patterns in the work they performed. In the exit interview the informants suggested cyclical patterns as well. The ARIMA time series model, however, demonstrated that for the most part, little support existed for CEN cyclical work.

i) Cyclical Work - Qualitative Data

The informants suggested during the exit interviews that various cyclical aspects to their job existed. For example, each facility had a cyclical nature to their standing committees, although it is recognized that numerous ad hoc committees were established throughout the year as well. Some of these ad hoc committees interfered with the dates for the standing committees. For example, regional health reform planning committees displaced regular scheduled meetings to alternate dates. Committee meetings were held on a monthly (for example - Board Meetings), quarterly, or less frequent basis.

Informant - Two, for example, indicated that during certain weeks of the month there was "an influx of meetings." Not all cyclical patterns were internal to the organization. At Site - B the CEN was also involved in local health district health care provider meetings, regional CEN meetings, and the professional nursing organization. A cyclical element was noted with respect to the annual budget preparation. Seasonal variation also existed. For example, Informant - Two had more involvement in operational issues during high vacation periods.

Although Informant - Three had the least amount of scheduled meetings during the observation period, she did suggest that there were periods during the month when

more meetings occurred. Cyclical work existed beyond committee work. Informant - Three, for example, was involved with annual vacation scheduling.

Informant - Four indicated that she normally was involved with at least three scheduled meetings per day, suggesting a cyclical nature to her work. Daily work activities generally involved patient rounds and informal discussions with the secretary. Weekly functions included verifying time-cards, employee status changes, and scheduling items. Monthly meetings included discussions with reporting managers in various forums, some one-to-one, while with others at a broader committee level. Reports on chemotherapy and dialysis programs were annual activities. The facility accreditation process appears to be even a longer period of time; usually a three year process.

During the summer many standing committees do not meet. During this time the CENs indicated they performed "catch up" or project work. During this time they also dealt with operational issues in the absence of other managers. Project work included a wide range of activities such as standards work, policies and procedures, and educational programming. Construction work was realized during the year and often replaced regular work. Thus, CENs' were frequently required to work beyond their normal working hours.

From the above data there appears to be a cyclical

nature to the informants work, although unique to each setting. Daily, weekly, monthly, annual, and even less frequent cycles were voiced by the informants. *Figure 15* illustrates cyclical work that considers fluidity of contextual elements.

ii) Cyclical Work - The ARIMA Time Series Model

The ARIMA time series model (*see Chapter 3, pp. 79-82*) was utilized to determine if cyclical work signals described above could be supported statistically for the four CENs collectively over twelve observation days. The dependent variable was the time the informants' spent in an activity whereas the independent variable was time.

To strengthen activity forecasting, only the three most frequently observed activities (scheduled and unscheduled meetings, and desk work) with the most dedicated CEN time were utilized. These activities made up 58% of CENs' activity frequency consuming 70% of work time (*Tables 4 & 5*). Although CENs personal time made up an additional 7% of activity frequency and consumed 16% of the CENs work day, the researcher felt that the time series analysis of personal time per se did not specifically address CENs' work content on which the study was based. The raw data for the remaining activity categories showed sparse frequencies with considerably less time designated to each and limited variability;

Figure 15 – CENs' Cyclical Work
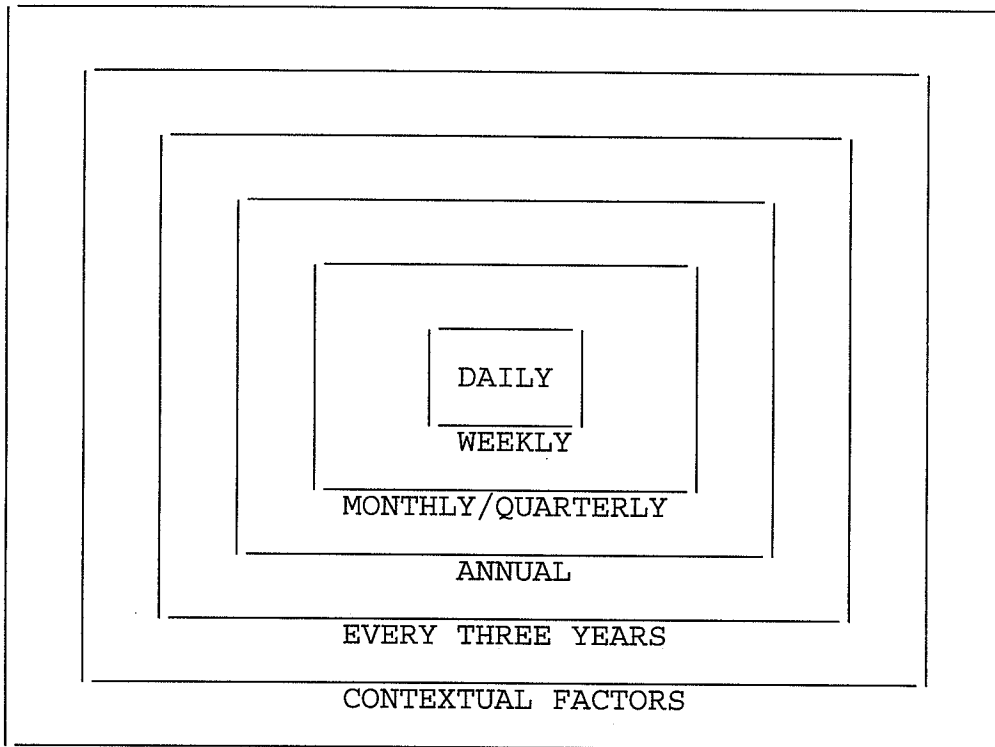
automatically resulting in poor forecasting of patterns within the activity categories (J. Sloan, personal communication, January 18, 1994). Therefore, an attempt to only model scheduled and unscheduled meetings, and desk work, was undertaken.

Autocorrelations are used to determine whether there are any patterns to CENs' activity data set. The autocorrelation coefficients for one-half hour time lags from one period to twenty periods (i.e., one-half hour to ten hours) were utilized to determine if any of them were significantly different from zero, that is, a correlation of greater than 0.20 (Makridakis et al., 1983).

The data were correlated by time lags. Time lags were designated at one-half hour time frames (*Tables 15 - 17*) and do not demonstrate a beginning or a end of a day per se. Predetermined time lags allow demonstration of the correlations that exist between given time periods only. For example, in this study a lag of 1 is one-half hour; a lag of 2 equals one hour; and so on. So the correlation between lagged times of two periods would demonstrate the relationship between an activity occurring now and one hour later. A correlation between time lagged times of 16 periods would demonstrate the relationship of an activity occurring now and eight hours later, irrespective of time of day.

The ARIMA time series model was applied to scheduled meetings, unscheduled meetings and desk work. Each is

Table 15 — ARIMA Analysis for Scheduled Meetings

Autocorrelations

Lag	Covariance	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9	Std
0	1847.672	1.000	|****************	0.000
1	1099.389	0.595	|***********	0.070
2	440.581	0.238	|*****	0.091
3	130.138	0.070	|*	0.094
4	5.170	0.003	|	0.094
5	−41.944	−0.023	|	0.094
6	−23.931	−0.013	|	0.094
7	−166.122	−0.090	**|	0.094
8	−190.531	−0.103	**|	0.095
9	−82.863	−0.045	*|	0.095
10	−24.059	−0.013	|	0.095
11	12.764	0.007	|	0.095
12	31.423	0.017	|	0.095
13	−38.132	−0.021	|	0.095
14	−197.969	−0.107	**|	0.095
15	−253.738	−0.137	***|	0.096
16	−83.691	−0.045	*|	0.097
17	114.016	0.062	|*	0.097
18	167.582	0.091	|**	0.097
19	126.323	0.068	|*	0.098
20	53.374	0.029	|*	0.098

Partial Autocorrelations

Lag	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9	
1	0.595	|***********	
2	−0.179	****|	
3	0.015	|	
4	−0.017	|	
5	−0.012	|	
6	0.018	|	
7	−0.143	***|	
8	0.031	|*	
9	0.038	|*	
10	−0.022	|	
11	0.020	|	
12	−0.006	|	
13	−0.045	*|	
14	−0.119	**|	
15	−0.028	*|	
16	0.115	|**	
17	0.060	|*	
18	−0.006	|	
19	0.000	|	
20	−0.009	|	

Table 16 — ARIMA Analysis for Unscheduled Meetings

Autocorrelations

Lag	Covariance	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9	Std
0	590.542	1.000	. |******************	0
1	181.279	0.307	. |******	0.070
2	54.662	0.093	. |** .	0.076
3	120.195	0.204	. |****	0.077
4	27.125	0.046	. |* .	0.079
5	−22.241	−0.038	. *| .	0.079
6	−22.606	−0.038	. *| .	0.079
7	−12.087	−0.020	. | .	0.079
8	−41.894	−0.071	. *| .	0.079
9	4.304	0.007	. | .	0.080
10	46.111	0.078	. |** .	0.080
11	3.396	0.006	. | .	0.080
12	5.400	0.009	. | .	0.080
13	66.742	0.113	. |** .	0.080
14	10.945	0.019	. | .	0.081
15	−12.299	−0.021	. | .	0.081
16	32.463	0.055	. |* .	0.081
17	2.963	0.005	. | .	0.081
18	−13.715	−0.023	. | .	0.081
19	81.553	0.138	. |***.	0.081
20	39.442	0.067	. |* .	0.082

Partial Autocorrelations

Lag	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9
1	0.307	. |******
2	−0.002	. | .
3	0.193	. |****
4	−0.081	. **| .
5	−0.040	. *| .
6	−0.057	. *| .
7	0.015	. | .
8	−0.057	. *| .
9	0.073	. |* .
10	0.063	. |* .
11	−0.019	. | .
12	−0.005	. | .
13	0.090	. |** .
14	−0.050	. *| .
15	−0.005	. | .
16	0.033	. | .
17	−0.013	. | .
18	0.001	. | .
19	0.157	. |***.
20	−0.032	. *| .

Table 17 — ARIMA Analysis for Desk Work Sessions

Autocorrelations

Lag	Covariance	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9	Std
0	716.029	1.000	| ****************	0
1	345.936	0.483	| *********	0.070
2	181.034	0.253	| *****	0.084
3	104.968	0.147	| ***	0.088
4	158.690	0.222	| ****	0.089
5	160.949	0.225	| ****	0.092
6	163.322	0.228	| *****	0.094
7	70.463	0.098	| **	0.097
8	−20.631	−0.029	* |	0.098
9	−11.316	−0.016	|	0.098
10	−30.977	−0.043	|	0.098
11	38.586	0.054	| *	0.098
12	44.250	0.062	| *	0.098
13	34.307	0.048	| *	0.098
14	22.553	0.032	| *	0.098
15	33.046	0.046	| *	0.098
16	66.613	0.093	| **	0.098
17	81.412	0.114	| **	0.099
18	59.091	0.083	| **	0.099
19	60.027	0.084	| **	0.100
20	20.129	0.028	| *	0.100

Partial Autocorrelations

Lag	Correlation	−9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9
1	0.483	| *********
2	0.025	| *
3	0.020	|
4	0.182	| ****
5	0.065	| *
6	0.084	| **
7	−0.083	** |
8	−0.125	*** |
9	0.018	|
10	−0.099	** |
11	0.109	| **
12	0.035	| *
13	0.023	|
14	0.067	| *
15	0.009	|
16	0.069	| *
17	0.014	|
18	−0.047	* |
19	0.058	| *
20	−0.090	** |

detailed below.

Scheduled Meetings

When the activities involving scheduled meetings were tested using the ARIMA model for the four informants over the duration of 12 observation days, some data consistency was evident indicating the presence of both AR and MA components in the data.

The autocorrelations for scheduled meetings from the study's data were only greater than 0.20 for time lags 1 and 2 (*Table 15*). These correlations suggest that a CEN who was in a scheduled meeting during a given one-half hour period was likely also involved in a scheduled meeting over the ensuing two time lags or an hour time period, with the prior one-half hour having a higher probability as evidenced by a more significant correlation (0.60).

There was no other significant autoregressive effect present as evidenced by the correlations of time lags 3 through 20. Investigation for a half-day effect can be accomplished by looking at the correlations at lag 8. The same principle holds true for events occurring the next day which would mean time lags 16 to 20, or eight to ten hours later. The correlations for scheduled meetings beginning at time lag 3 and through 20 remained below 0.20. However, at some time lags, for example 8 and 15,

there is very weak evidence of an autoregressive effect, although statistically, non-significant.

The ARIMA model does not consider the content or purpose of the meetings which could influence upcoming meetings. This study limitation could be addressed in future research by identifying and then analyzing meetings by content category.

In review of the autocorrelations and partial correlations, scheduled meetings was found to have a true AR1-MA1 effect as supported by T-ratios greater than 1.96. The AR1 T-Ratio was 4.13 while the MA1 T-ratio was -2.65. An AR1 was also evident in the autocorrelations (Table 15). A further AR effect was noted by a significant independent graphical spike a time lag 2 in the partial correlations (J. Sloan, personal communication, January 18, 1994).

The presence of the MA effect was also evidenced by the autocorrelations and the partial autocorrelations. A MA process was present as noted in the graphical spikes at time lag 2 and 3 in the autocorrelations (Table 15). The number of spikes indicates the likely number of MA parameters one should have in the model. Some degree of exponential decay was seen on the partial autocorrelations which supports the MA effect (Table 15).

Since there were perhaps AR and MA effects beyond a single time lag, the investigator examined cyclical effect by utilizing AR2MA1 and AR1MA2 approaches. T-ratios did

not support these effects, suggesting the most concrete modeling via AR1MA1 parameters.

In the ARIMA model, integration is only required when a need for differencing is indicated by significant autocorrelations at time lags beyond the initial exponential decay (J. Sloan, personal communication, January 18, 1994). Since there was no significant CEN work related to scheduled meetings identified beyond the first one and one-half hours, the integration approach was deemed unnecessary.

Overall, a degree of modeling was evident for scheduled meetings, although it remains a poor forecasting tool; noted by the random fluctuation beyond the initial core activity of the first one and one-half hours. Beyond the initial activity, "noise" overwhelmed the scheduled meeting signals. No seasonality of CEN work was found (J. Sloan, personal communication, January 18, 1994).

Unscheduled Meetings

When the activities involving unscheduled meetings were tested using the ARIMA model for the four CENs collectively over the study period, it was found not to be amenable to being modeled (*Table 16*). An AR exponential decay was absent while minimal evidence of a MA effect was noted.

The exponential decay for unscheduled meetings, as

noted with the autocorrelations, was only evident for one time lag or for one-half hour time period. This correlation suggests that a CEN who participated in an unscheduled meeting during a given one-half hour period had some tendency to be involved in an unscheduled meeting over the ensuing time lag. The unscheduled meeting autoregressive effect was supported by an autocorrelation of 0.30 for time lag 1 (*Table 16*). This differs significantly from scheduled meetings at time lag 1 which had a autocorrelation of 0.60 (*Table 15*).

No other significant autoregressive effects were present as evidenced by the correlations of time lags 2 through 20. Non-significant autocorrelations suggest that there was no relation of unscheduled meetings after the initial one-half hour. There was very weak evidence of autoregression at different time lags (for example, at time lags 4 and 20) although with a statistically, non-significant effect.

The data involving unscheduled meetings had no AR component as evident by a non-significant T-ratio. The lack of an AR effect was evident by a lack of exponential decay in the autocorrelations with no significant graphical spikes in the partial correlations (*Table 16*).

The presence of a MA effect was supported by a T-ratio of -4.81; the MA1 effect lasting a maximum of one-half hour in duration. A MA process was present as noted in the graphical spikes at time lag 1 (*Table 16*). Only the

MA1 equation was used as the number of spikes indicates the number of parameters to be considered (J. Sloan, personal communication, January 18, 1994). Furthermore, no consistent exponential decay was noted in the partial correlations (*Table 16*). The integration component of the model was not used as there was no significant unscheduled meeting activity beyond the first one-half hours.

The investigator attempted to model the pattern of unscheduled meetings but found that the timing of these meetings were extremely unpredictable. Overall, forecasting of unscheduled meetings in CENs' work would be extremely poor as the "noise" factor was even greater than that noted with scheduled meetings (J. Sloan, personal communication, January 18, 1994). No seasonality of unscheduled meeting existed. At best, the activity surrounding unscheduled meetings could only be approximated.

Desk Work

When the activities involving desk work were tested using the ARIMA model for the four CENs collectively over the duration of 12 observation days, it was found somewhat amenable to modeling (*Table 17*). Although a MA component was absent, the data supported an AR effect.

The autocorrelations for desk work were greater than 0.20 for time lags 0 through 6, with a slight aberration

at time lag 3 with an autocorrelation of 0.15. The autocorrelations suggest that a CEN who was conducting desk work during a given one-half hour period would generally be involved with desk work over a three-hour period. Time lag 1 for desk work had an autocorrelation of 0.48 with weaker correlations found after the first hour of desk work. There was also a fairly consistent, statistically non-significant autoregressive effect present through time lags 7 through 20, suggesting a very weak evidence of desk work throughout the informants' work days.

The data involving desk work sessions had an AR effect supported by a T-ratio of 7.03. An exponential decay was readily noted by the autocorrelations. Additionally, an AR effect was noted by a significant graphical spike at time lag one in the partial correlations (*Table 17*).

The absence of the MA effect was also indicated by the inspection of the autocorrelations and the partial correlations. No significant independent graphical spikes were noted in the autocorrelations after time lag 6. No consistent exponential decay was noted on the partial autocorrelations as well. The integration component of the model was not used as there was no significant work content beyond the first three hours of desk work.

In light of the information in *Table 17*, desk work appears to come in blocks of three hours suggesting that the informants block off specific periods of time for desk

work. According to *Table 18*, CENs desk work sessions also involved considerable elements of telephone calls (Spearman Correlation Coefficient of 0.39) and unscheduled meetings (Spearman Correlation Coefficient of 0.31). Overall, the forecasting power remains extremely limited based on this study's data set. Again, a considerable amount of "noise" beyond three hours of desk work clouds the signals of other desk work sessions.

Time Series Model - A Summary

In summary, the ARIMA time series model suggested that modeling for scheduled meetings and desk work was evident over short periods of CEN work time. Statistically there appeared to be no relation between CENs work over the involved data collection days, that is, each working day was unique. Furthermore, there were also no "mini-days" within days themselves. Predicting the work of CENs over short periods of work time via the above modeling process, as based on the described observation days, remains extremely limited.

E. Correlations Among Activity Categories

Spearman correlation coefficients between activity categories were conducted to gain an additional perspective on the relationship of activities with each

Table 18 — Spearman Correlation Coefficients Among Activity Categories

Activity	1	2	3	4	5	6	7	8	9
1) Scheduled Meetings	1.00	−0.50	−0.54	−0.36	−0.28	−0.18	−0.30	−0.25	−0.07
2) Unscheduled Meetings	−0.50	1.00	0.31	0.27	0.36	0.23	−0.14	0.13	0.05
3) Desk Work	−0.54	0.31	1.00	0.39	0.21	−0.01	−0.07	0.24	0.04
4) Telephone Calls	−0.36	0.26	0.39	1.00	0.19	−0.02	−0.03	0.22	−0.07
5) Travel	−0.28	0.36	0.21	0.19	1.00	0.18	0.09	0.24	0.00
6) Tours	−0.18	0.23	−0.01	−0.02	0.18	1.00	−0.05	−0.05	0.24
7) Personal	−0.30	−0.14	−0.07	−0.03	0.09	−0.05	1.00	−0.05	−0.11
8) Secretarial	−0.07	0.13	0.24	0.22	0.24	−0.05	−0.05	1.00	−0.10
9) Other	−0.07	0.05	0.04	−0.07	0.00	0.24	−0.11	−0.10	1.00

other.

As reported in *Table 18*, unscheduled meetings were moderately correlated with travel (0.36), desk work (0.31), telephone calls (0.26), and tours (0.23). These correlations suggest that unscheduled meetings most frequently occur when the CEN meets people during her travels within the facility. During data collection it appeared to the researcher that just prior to, or upon finishing scheduled meetings, unscheduled meetings also occurred. The unscheduled meetings that occurred when the CENs were attempting to conduct desk work were also evident. The researcher perceived that other staff viewed the CEN as being accessible when the informant was performing desk work which resulted in unscheduled meetings. A correlation of 0.39 between telephone calls and desk work appears quite logical as CENs make calls while at their desk. CENs' secretarial activities such as photocopying, distributing supplies, and answering calls were positively correlated with desk work (0.24), travel (0.24) and telephone calls (0.22).

The most significant negative correlations existed between scheduled meetings and desk work (-0.54), unscheduled meetings (-0.50), and telephone calls (-0.36). The latter activities were generally not observed during a scheduled meeting.

F. The Exit Interview

Exit interviews with the four CENs were conducted at the end of each informant's observation period. The exiting interviews provided an opportunity for the researcher to discuss the "representativeness" of the observation period, and to determine the effect of the observer upon the informant's behavior and work activities. Additionally, a series of open ended questions were used during the exit interview in an attempt to capture the concluding thoughts of the CEN. *Appendix H* provides a copy of the interview guide.

i) Representativeness of Data Collection

Informants - Two and - Three reported that the three day observation period provided a representative sample of their "typical" work activity. Informant - One indicated that the first of the three observation days, a day filled with desk work activity, was more typical than the latter two days. The subsequent two days, which involved extensive scheduled meetings, were considered out of the ordinary. Informant - Four felt that her schedule was somewhat "abnormal" due to her being away ill just prior to the observation period. This informant suggested that she normally was involved with three internal scheduled meetings per day; an activity she did not realize during

the observation period.

Each of the four informants identified unusual activities that occurred during the observation period that may have influenced the study results. Unusual activities were related to health care reform, meetings to establish new itinerant surgical programs, final meetings before the CEN was leaving her position [Informant - One], an informant's superior return from collective agreement negotiations, an ambulance call, and an informant's illness. All four informants indicated that scheduled meetings appeared to occur on a cyclical basis; only one CEN indicated she was in the "quiet" part of her scheduled meeting rotation. "Quiet" days were still filled with desk work and unscheduled meetings.

When the CENs were asked about the length of time that would be required to obtain a "good picture" of what their work entailed, two of the four informants indicated that three days of observation was adequate. One informant thought a full week would be more reflective while the other thought a month of observation was required. Cyclical dimensions to their work and the scope of their duties were reasons given for extended observation periods. For example, not one informant was observed on a Monday. According to at least one informant, this would have resulted in the observation of different functions due to payroll and review of the weekend's patient care issues.

The effect of seasonal variation, including project work, upon the CEN workload was also mentioned as a variable influencing the study results. Factors that were identified as influencing the type of work at different times of the year involved staffing during peak vacation times, facility construction projects, the fiscal calendar upon budget reports, capital equipment acquisitions, educational programs, and the accreditation process. The CENs were observed during a four month winter period; namely December to March. Conducting the observation periods at different times of the year would possibly have provided a more representative data base.

During the exit interviews informants identified work activities they perform which did not occur during the observation period. *Table 19* contains those activities the CEN was not observed doing but which the informant indicated was part of her roles and responsibilities. Many of the CENs activities relate to personnel (staffing and scheduling, performance appraisals, counseling. hiring and labor relations), education (staff development, volunteer education, and presentations to external groups), and project work (proposals, construction projects, and accreditation) and to a lesser degree patient care (ambulance attendant, and during union work stoppages and other crises).

Review of the study findings reveals similarities in the work activities of all CENs in the study, suggesting a

Table 19 — CENs' Perceptions of Additional Work Activities not Observed During the Study

Activity \ Informant	1	2	3	4
Staffing/Scheduling	M	I	M	M
Staff Development	M	I	M	I
Performance Appraisals	M	I	M	I
Counseling	M	M	M	M
Hiring	M	I	M	M
Labor Relations Including Disciplining	I	I	I	I
Project Work Including Strategic Planning, Proposals, and so on	M	M	M	M
Presentations to External Groups	I	I	I	I
Direct Patient Care	I	I	I	I
Volunteer Education	—	—	M	I

Note: "M" (a moderately frequent activity);
"I" (an infrequent activity);
" — " (information unknown).

fairly adequate period of time and a reasonable sample of informants. Utilizing different data collection methods allowed the investigator to get a representative view of the "typical" work activities for the study informants under investigation for a three day period at a particular time of year.

ii) Overtime Hours

When asked about time spent in work related activities outside the regular work week, all CENs reported an overtime component. Attending to paperwork was the most significant component of the overtime hours. For example, Informant - One stated that most of her overtime work involved "...paperwork, policy, procedure, [and] proposals. Projects that you need time...quiet time to sit and think without interruptions. Projects that require deep concentration."

Many of the extended hours were related to project work that took precedent over the day-to-day desk work, or where the day-to-day operations did not allow the CEN to get to the project work. For example, Informant - Two found herself completing Board reports and Accreditation material at home.

Volunteer education and meetings of the Board of Directors were two additional items that CENs were involved with outside of normal working hours. For

example, Informant - Three instructed volunteer ambulance attendants in the evenings. CENs were required to attend Board meetings outside of their normal working hours to report on their departmental responsibilities.

Regular overtime was a reality for all the informants. The informants reported that they worked from a minimum of 5 hours up to 20 hours per week beyond their regularly scheduled hours. The latter was largely related to Informant - One who had been involved in two separate construction projects, that is, the construction of two health centers, over the last two years. The construction processes left her day-to-day work for evenings.

The CENs did not complete their work within regularly scheduled hours. A considerable amount of desk work (whether project or day-to-day work), board meeting attendance or volunteer education occurred outside of normal working hours.

iii) Effect of the Observer

The effect of the observer upon the informants' workday was perceived as minimal by all the CENs. The informants indicated that they were initially more aware of the researcher's presence, but began to forget about it as they proceeded with their normal work activities. One informant suggested an occasional awareness of someone perhaps making judgments "...when we were brainstorming on

something." She wondered what suggestions the researcher may have had, since he too is a nurse executive.

In terms of the investigator having an effect upon staff, the CENs thought that initially individuals would hesitate prior to engaging in an joint activity such as an unscheduled meeting. There may have been less informal meetings initially, especially in the first couple of hours. However, the CENs did not view the researcher's presence as a significant factor in altering the work activities of others or themselves.

Analysis of the structured observation data revealed the number and pace of work activities experienced by the CENs; an average of 72 activities per day with a mean of 6.8 minutes in duration, left little time for CENs to be distracted by the researcher. Given also that 34% of these activities were unscheduled and 42% of joint activities were initiated by others, any effort on the part of the informants to control their workday would have been difficult to attain.

The researcher did withdraw from situations when so requested so that the informants and their staff were not further threatened by the observer's presence. The researcher withdrew from three labor relations issues during the twelve days of observation. No job interviews or performance appraisals were conducted during the observation period. Respect for the privacy and confidentiality of the study informants and other staff

members was an important issue for the investigator in this study.

Exit Interview - Summary

In summary, the exit interview provided valuable qualitative data about the study design and captured the concluding thoughts of the informants' roles and responsibilities. The informants gave the impression that the data collection period provided a representative data-set.

G. Conclusions

In this chapter the work of CENs in rural, community hospitals in Manitoba was presented and discussed as derived from organizational static data, pre-observation interviews, non-participant structured observations and exit interviews. The first section provided an overview of the organizations and the four CENs involved in the study. The results of the observations of the CENs were then discussed in relation to types of administrative activities, participants, and behaviors. Finally, data related to cyclical work and the exit interviews were presented.

From these results a composite picture of the work of CENs begins to emerge. The data reveal that CENs in

rural, community hospitals have similar core work characteristics as that describe by other managerial research studies such as Mintzberg (1973). Additional work elements, such as a supportive behavioral dimension, emerged from the data.

Chapter 5

Discussion and Implications

Four Chief Executive Nurses (CENs) participated in this study and contributed to the current knowledge concerning their roles and responsibilities in community hospitals in rural Manitoba, Canada. To facilitate an understanding of the CENs' roles and responsibilities, informants' work was observed and described in terms of activities and behaviors. Analysis of the data revealed significant findings about rural CENs work content.

The final chapter includes: a summary of the study; a discussion of the findings as they relate to the research questions, the conceptual framework and the literature; recommendations for nursing practice, education and research; strengths and limitations of the study, and conclusions from the study.

Summary of the Study

The purpose of this study was to describe the work activities and behaviors of community hospital CENs in rural Manitoba. Four questions guided the study:

1) What are the roles and responsibilities of a select sample of community hospital CENs in rural Manitoba?

2) What proportion of the working day do rural CENs spend in various activities and roles?

3) How are the work characteristics of rural CENs similar or different from the characteristics of managerial work described by Mintzberg (1973)?; and,

4) To what extent do Mintzberg's working roles describe the work of community hospital CENs in rural Manitoba?

A review of the nursing literature revealed a paucity of information concerning the work of rural and/or small community hospital CENs and none in a Canadian setting (Chapman, 1968; Henry & Moody, 1986; Jensen, 1960; Keith, 1958; McMillan, 1983). The conceptual framework for the study was based on Mintzberg's (1967; 1973) study, which identified six distinguishing work characteristics and ten roles of managerial work (see *Chapter 1, pp. 5-13*). Mintzberg's theoretical position was derived from his own study of five senior male executives in various industries, in conjunction with an extensive review and incorporation of previous managerial research. Mintzberg's work has received extensive review and has been supported in its basic tenets by nursing research (Baxter, 1993; Dunn, 1990; Jones & Jones, 1979; Morrison, 1983; Raber, 1988).

Non-experimental research methods and designs are used when: 1) an investigation needs to be conducted under natural conditions; 2) the investigation deals with a study question about which very little is known; 3) field data concepts need further clarification; and, 4) where

the intent of the study is to gain insight about a particular group of people (Abdellah & Levine, 1986; Polit & Hungler, 1991; Wilson, 1985). Since the purpose of this study was to describe the activities and behaviors of CENs in community hospitals in rural Manitoba, a qualitative design was used.

For this study a convenience sample of four informants, plus two alternates, were selected from community hospitals in rural Manitoba. Manitoba Health was contacted for a master list of all CENs that were currently employed in 25-100 bed, rural community hospitals. The sample recruited to the study included: informants from both smaller and intermediate sized hospitals; single and multi-physical and geographically separate facilities; single and shared administration concepts; accredited and non-accredited organizations; and facilities distal and proximal to urban centers.

This exploratory and descriptive study employed triangulated data collection methods. Preliminary data collected at the beginning of the first day of the on-site observation period provided an occasion for the investigator to secure static organizational documents and conduct a pre-observation interview with each informant. This was followed by continuous non-participant structured observations on specific CEN activities and behaviors over a convenient three day period. At the end of the third day of observation, the researcher met with each informant

to conduct a semi-structured exit interview. The purpose of the study, the researcher's experience in nursing administration and the literature review directed both the pre-observation and exit interview questions.

Content analysis provided a systematic process for analyzing the qualitative data obtained during the collection period. The methodology corresponded most closely to the methodology used by Mintzberg (1973), Raber (1988) and Dunn (1990). This study did not set out to accept or reject specific hypotheses. In the following sections the findings of this study are summarized and discussed.

Discussion of the Findings

The purpose of this study was to describe the work activities and behaviors of community hospital CENs in rural Manitoba. In this section, findings are discussed as they relate to each of the identified research questions, the conceptual framework and the literature.

A. The Research Questions Addressed: Study Findings Compared and Contrasted with the Conceptual Framework and the Literature

i) Roles and Responsibilities

One aspect of the study was to determine the roles and responsibilities of a select sample of community hospital CENs in rural Manitoba. As second or third-in-command and a member of executive management, all CENs were responsible for a significant proportion, 56-99%, of the facility's funded staffing complement exclusive of contracted services.

CENs also had a broad and diversified span of departmental control as their portfolio extended well beyond the nursing division (*see Table 1, p. 101*). The informants' administrative responsibility involved up to 15 departments; a breadth of managerial scope that is commonly found in rural and smaller community hospitals (Chapman, 1968; Erickson, 1980; Jensen, 1960; McMillan, 1983), in acute care hospitals of varying size (Henry et al., 1991; Poulin, 1984b; Scalzi, 1988), and for executives in smaller organizations in general (Choran, 1969; Mintzberg, 1973; Simon, 1976). Non-nursing departmental responsibility included support services and regionally focused programs. In a few instances CENs also performed work as front-line managers for a sole support worker within a department, for example, purchasing. Consequently, informants dealt with additional front-line operational issues.

The Manitoba Association of Registered Nurses' (1990)

prototype job description for executives responsible for the nursing division conceptually described the administrative work of all informants in the study, including: 1) delivery of nursing care services; 2) human resource management; 3) fiscal management; 4) information control; and, 5) environmental control. These managerial job dimensions, although not identified beyond the nursing division, were also found applicable for the numerous ancillary departments for which CENs were responsible. The prototype job description, however, did not address non-administrative roles such as clinical care that CENs are at times expected to perform.

ii) Chief Executive Nurses' Work Time by Activity

The intent of this study was to also determine the proportion of the working day that rural CENs spent in various activities and roles. The research data provided valuable information as to the CEN's work day. CENs' work events based on the 98.5 hours of non-participant structured observation were categorized according to pre-set activity types (*Appendix G*).

Scheduled Meetings

The amount of time dedicated to scheduled meetings was an expected finding since the CEN participates as a member

of the executive management team which determines the priorities for the organization (CNA, 1988). Findings showed that scheduled meetings varied from 3 - 10% of informants activities consisting of 24 - 48% of their time; the most of any activity category in the study. The informants' executive planning responsibility was reflected in the scheduled meetings which dealt with health reform initiatives and other long-term projects (programs, merger and building considerations) (Allan, 1981; Poulin, 1984b; Simms et al., 1985; Snyder & Glueck, 1980).

Unscheduled Meetings

Unscheduled meetings had the greatest activity frequency, that is, 35% of CENs' work, but only 16% of the total activity time. These meetings averaged 3.1 minutes in duration. This action-oriented activity kept the CEN informed of many operational components from multiple departments and personnel. However, unscheduled meetings impeded CENs ability to attend to desk work for any extended period of time. The operationally focused practice of CENs in smaller organizations was an expected finding (Choran, 1969; Mintzberg, 1973).

Desk Work

Desk work made up the third greatest proportion of CENs' work time (16%). Informants with fewer scheduled meetings increased their desk work sessions while CENs involved extensively in scheduled meetings were required to attend to their desk work later. Informants indicated that desk work was frequently completed before or after their normal working day, at home, or during slower seasonal periods when other managers or staff were away. Attending to desk work beyond the normal work day was expected because much of the informants' work, such as meetings, was initiated by others. For example, a considerable amount of CEN time was dedicated to planning sessions. Those CENs who spent considerable time in scheduled meetings during their normal work day made attempts to peruse their mail each day to determine the urgency of items demanding attention.

Other Activities

CENs, as other executives (Choran, 1969; Mintzberg, 1973; Raber, 1988) use travel and touring activities to further the administrative elements of receiving and sharing of information throughout the organization. This activity supports the informants' preference for

action-oriented, operationally focused work (Mintzberg, 1973).

Secretarial and 'Other' supportive functions that CENs performed likely resulted from minimal human resources. Administrative intensity, the number of supportive and administrative personnel within the facilities (Ford & Slocum, 1977), was minimal; a phenomenon common in small organizations (Henry & Moody, 1986; Martinko & Gardner, 1990). The investigator found it noteworthy that although these nurse executives had an extremely broad range of roles and responsibilities, not all informants had designated secretarial support for their position. Thus, the CENs were required to perform secretarial and on occasion other supportive functions for housekeeping, dietary, plant operations and ambulance service. Furthermore, the CENs did not have access to current technological supports such as computers. This practice begs the following questions: 1) When is dedicated secretarial support required?; 2) How well are nurse executives' skills used in rural, community hospitals?; and, 3) How effective and efficient are today's organizational structures within rural community hospitals, when one considers that CENs work up to 80 hours per month beyond their normal work hours?

Additional Dimensions of Chief Executive Nurses'
Work Activities

The rural CENs' hybrid nursing and management activities involve conglomerate middle and senior management roles, that occasionally include front-line activities (CNA, 1988; Griffin, 1984; Henry & Moody, 1986; Stewart, 1967; Stoner, 1982). Nurse executive work is extremely fragmented, although less so than that of first-line managers (Guest, 1956; Raber, 1988). Similarly to Guest's (1956) findings, CENs are sometimes required to abdicate their supervisory role when operational issues develop. For example, one CEN was required to attend to ambulance duties during her workday. Rural CENs must retain professional and technical skills so that they can provide clinical support when required (Katz, 1974). Clinical support was not identified in any of the informant's job description. The varied and fragmented work of the informants may also be reflective of the significant amount of change currently occurring in the health care environment (Kurke & Aldrich, 1983; Mintzberg, 1973; Stewart, 1967).

iii) Chief Executive Nurses' Work Characteristics
Compared with Mintzberg's Study

Mintzberg's theoretical framework, chosen for this study, was demonstrated to be useful in understanding the work of managers in other studies (Baxter, 1993; Choran, 1969; Duignan, 1979; Dunn, 1990; Hannah, 1981; Jones & Jones, 1979; Kurke & Aldrich, 1983; Martinko & Gardner, 1990; Morrison, 1983; Raber, 1988; Snyder & Glueck, 1980). Mintzberg's theory postulates that the work of all managers is characteristically similar. These common characteristics deal with the pace and quantity of work, the types and patterns of activity, the manager's work relationship with others and the interplay between duties and choices.

An intent of this study was to determine if the work characteristics of rural CENs were similar or different from the characteristics of managerial work described by Mintzberg (1973) and that of other managers. Throughout this study many work characteristics surfaced that were found to be common among the CENs and similar to other research findings. CEN work characteristics were found to be largely determined by the nature of the work rather than the nurse executive themselves. This was supported by the fact that many activities were initiated by other individuals on an impromptu basis. In this section the study results are compared to the results of three

managerial research studies (Choran, 1969; Mintzberg, 1973; Raber, 1988) which utilized structured observation.

The work among the four types of managers is compared to with respect to work activities, activity participants, and purpose of the activities. Comparisons can only be entertained in those categories which are detailed in all four studies.

Work Activities

Work activity comparisons for the four managerial groups are illustrated in *Table 20* and *Figure 16*. In terms of the number of daily activities, the CENs in this study carried out greater than threefold the numbers of activities as the Chief Executive Officers (CEOs) in Mintzberg's (1973) study, but were similar to managers in small companies. First-line nursing managers who interact with many care providers, patients and visitors, have a threefold greater change in activities than CENs do (Raber, 1988).

The CENs' frequent change in activities is related to informants working within small, operationally oriented organizations. The nurse executives' breadth of responsibility for a diversified group of managers contributed to the fragmentation of the informants' workday. However, the amount of time dedicated by CENs to scheduled meetings decreases the accessibility of the

Table 20 — Selected Comparisons of Activities Among Different Types of Managers

CATEGORY OF COMPARISONS	Chief Executives Officers (Mintzberg)	Chief Executives Nurses (Driedger)	Small Company Managers (Choran)	First—Line Nursing Managers (Raber)
Activities/Day	22	72	79	218
Average Duration/Act.	22 mins.	7 mins.	5 mins.	5 mins.
% of Activities Lasting				
< 10 minutes	49%	87%	90%	93%
% of Activities Lasting				
> 60 minutes	10%	2%	0.02%	0%
SCHEDULED MEETINGS				
Average Number	4	5	3	4
Proportion of Time	59%	38%	22%	17%
Average Duration	68 mins.	51 mins.	27 mins.	20 mins.
UNSCHEDULED MEETINGS				
Average Number	4	25	19	101
Proportion of Time	10%	16%	15%	29%
Average Duration	12 mins.	3 mins.	3 mins.	1 min.
DESK WORK SESSIONS				
Average Number	7	14	21	48
Proportion of Time	22%	16%	34%	14%
Average Duration	15 mins.	6 mins.	6 mins.	2 mins.
TELEPHONE CALLS				
Average Number	5	7	29	28
Proportion of Time	6%	4%	17%	7%
Average Duration	6 mins.	3 mins.	2 mins.	1 min.
TOURS				
Average Number	1	2	5	8
Proportion of Time	3%	2%	12%	4%
Average Duration	11 mins.	4 mins.	8 mins.	2 mins.

Sources: Choran, 1969 (pp. 64, 138); Mintzberg (1973, pp. 242—243); and Raber, 1988 (p. 97).

Figure 16: Selected Comparisons of Activity Among Different Managers
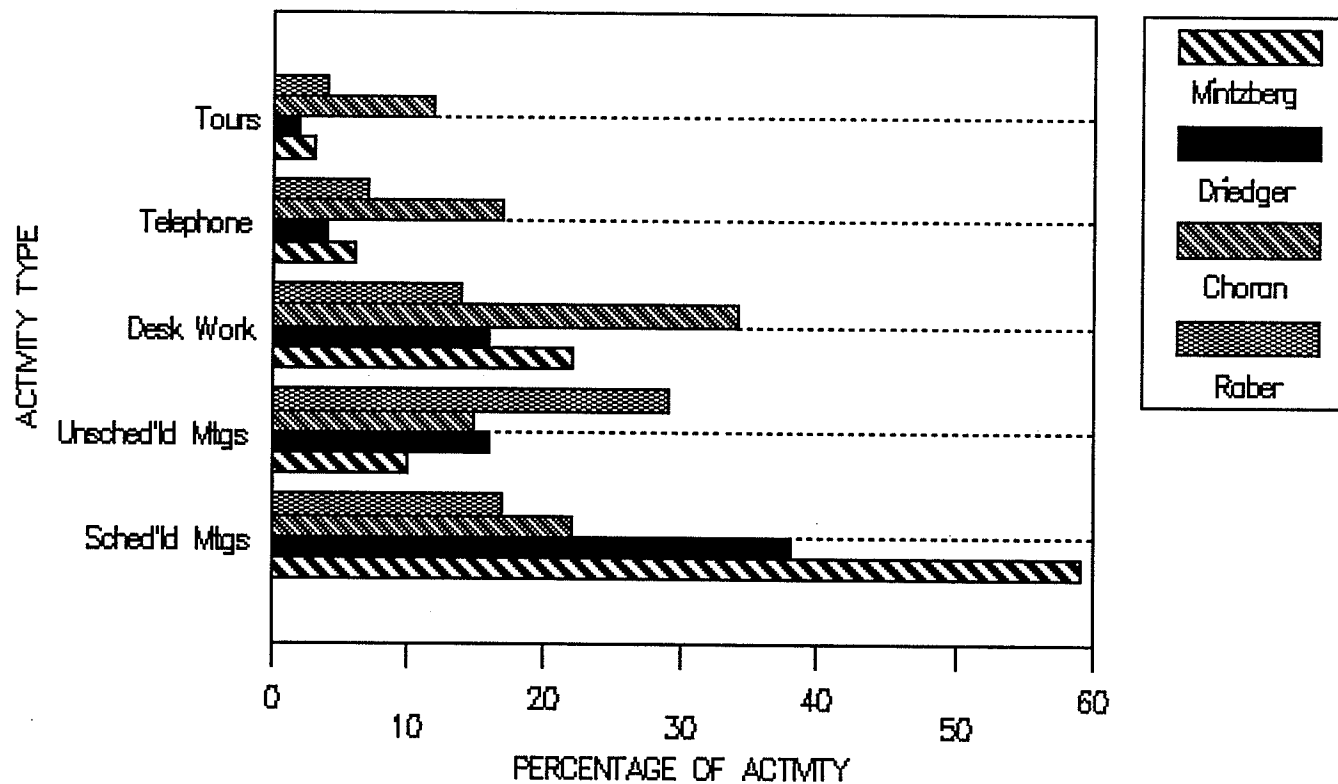
nurse executive, decreasing the number of activity changes.

All CENs spent much shorter periods in each activity than the CEOs, with the greatest proportion of time spent in activities less than 10 minutes in duration compared to the first-line nursing and small company managers (*Table 20*). The informants involved in this study perceived that their work responsibilities and operational orientation required them to be informed and responding to many requests at any given time. Choran (1969) and Raber's (1988) studies also found that managers perceive a need to attend to the immediate needs of others. Hasenfeld's (1983) argues that differing goals and multiple groups, inherent in a rural CEN's job portfolio, causes some difficulty in prioritizing the manager's attention to the needs of others. Executive activities are changed frequently based on the perceived need by the CEN or those demanding to receive attention. Managerial emphases on activity types also varies among different administrators.

Selected Comparisons of Activity Types Among Managers

Scheduled meetings events among the four managerial groups are similar yet there exists considerable difference in time allocation to this activity (*Table 20*). Although CENs dedicated 38% of their work day to scheduled meetings, the demands of the small organization require

them to pay greater attention to day-to-day operations
than perhaps would be required of a CEO. The informants
perceived scheduled meetings as a necessity for sound
planning for a broad range of items including health
reform initiatives. However, they also viewed these
meetings as impeding desk work sessions where they did
"real" work.

In terms of desk work sessions, the CENs were involved
in twice as many events (14) as the CEOs (7) but
significantly less than realized for the first-line
nursing managers (48). First-line nursing managers attend
to a lot of physician and other professional care
providers work via desk sessions and unscheduled meetings
on the patient units.

Table 20 demonstrates the centrality of unscheduled
meetings to the work of the CENs studied, that is, an
average of 25 events per day. While unscheduled meetings
averaged 3 minutes in duration they comprised 16% of the
CENs' daily activity. The frequency and proportion of
time for unscheduled meetings was most comparable between
CENs and small company managers. Each managerial group
works with minimal human resource supports in a broad
scope of practice. The informants' involvement with
unscheduled meetings appears to be primarily related to
the need for quick exchanges of information in order for
the CEN to remain "on top" of simultaneous agendas.

Telephone calls did not make up a significant

proportion of CENs and CEOs time. For the small company and first line managers the increased focus on operations, such as a restaurant setting or patient units, resulted in a greater proportion of time to being dedicated to telephone calls. Managers in all four studies dedicated minimal time to tours as their roles and responsibilities did not give them much opportunity for direct provider and client interactions (*Table 20*).

When comparing activities overall, the CENs in this study most closely resembled the manager's in Choran's (1969) study of small companies. While differences exist, especially in scheduled meetings and desk work time proportions, both groups had a moderate amount of activities overall which were relatively short in duration. Small company managers spend more time at desk work and less time at scheduled meetings due to the smallness of their organizations. Increased desk work time and less scheduled meeting time, was also realized for CENs in the smaller facilities of this study (*Table 5*).

Activity Participants

The CENs' joint activities have greater similarity with front line nursing managers (80%) (Raber, 1988) and CEOs (78%) (Mintzberg, 1973). Comparisons of activity participants among four managerial groups are illustrated

in *Table 21* and *Figure 17*. The data demonstrates that the proportion of time spent in joint activities is lower for small company managers (59%) (Choran, 1969).

The four identified managerial groups spent proportionally more time with reporting managers and general staff, than with any other participant. The managers of the comparison studies had much more involvement with peers, other professionals, clients or patients, than did the CENs in this study. Limited availability of human resources within the rural facility lends itself to this pattern. According to this study's CENs, the three day observation period did not capture all the interactions with general duty staff and clients, including the CENs' supportive behavioral role described below.

Overall, there seems to be a significant proportion of time left for CENs to engage in solitary activities. The CENs of the two smaller organizations spent more time in solitary activities which may be related to the intensity of human resources available--for example, the CEO, secretarial support, and other professionals (Ford & Slocum, 1977). Of interest was the 1% of time CENs allocated to clients or patients; the least of any managerial group. CENs' activities within the twelve observations days did not lend themselves to frequent or extended periods of time for client or patient interactions; events which the informants' suggested

Table 21 — Selected Comparisons of Activity Participants Among Different Types of Managers by Proportions of Time

CATEGORY OF COMPARISONS	Chief Executives Officers (Mintzberg)	Chief Executives Nurses (Driedger)	Small Company Managers (Choran)	First—Line Nursing Managers (Raber)
Joint Activities*	78%	80%**	59%	80%
Superiors	7%	15%	0%	3%
Subordinates (Managers and General Staff)	48%	39%	56%	38%
Peers	16%	12%	4%	18%
Other Professionals	28%	10%	31%	30%
Clients or Patients	3%	1%	9%	11%
Others	8%	3%	0%	0%

* Percentages of individual categories is the percentage that each category makes up of joint activities only.

** Informants frequently interacted simultaneously with more than one participant designation.

Sources: Choran, 1969 (p. 149); Mintzberg (1973, pp. 250—251); and Raber, (1988 p. 101).

Figure 17: Comparisons of Activity Participants Among Different Managers
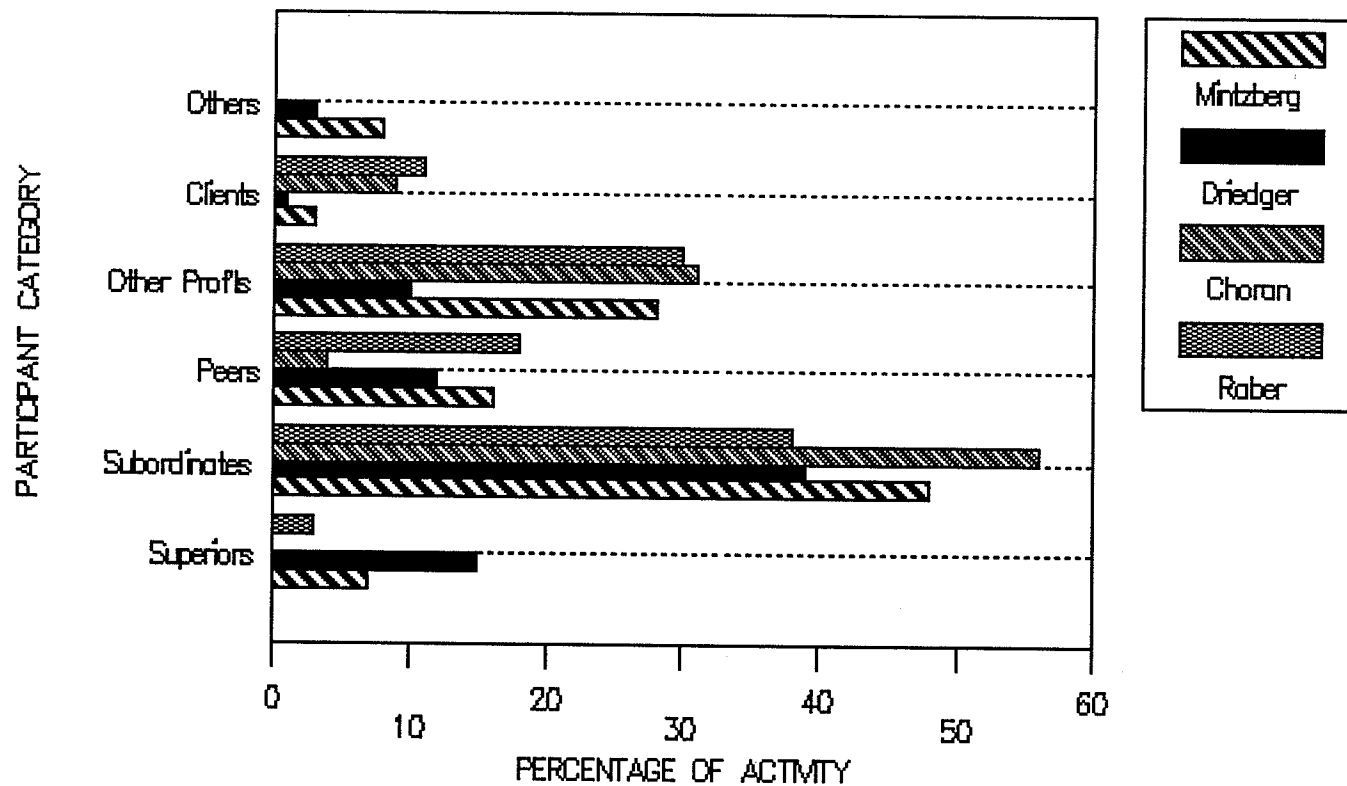
required supportive behavioral activities.

Activity Behaviors

Mintzberg (1973) theorizes that all manager's work can be analyzed from the perspective of ten managerial roles. The study questioned the extent to which Mintzberg's working roles would describe the work of community hospital CENs in rural Manitoba. The findings suggest that Mintzberg's ten identifiable roles do not fully capture CEN role components. The work of CENs is unique in that it requires the application of both professional nursing knowledge and administrative expertise (CNA, 1988; Leatt, 1981).

The work activities of the informants were systematically recorded during the twelve observation days. Data analysis supported the interpersonal, informational and decisional behavioral categories identified by Mintzberg (1973). However, the data supported an additional behavioral category with two sub-categories unaccounted for by Mintzberg's (*pp. 7-11*) role definitions. Although only 1.1% of observation time was dedicated to the cluster **supportive** behaviors, the exit interviews strongly suggested that these behaviors receive due attention.

Twelve behavioral categories arranged in four clusters evolved from the data in this study. Mintzberg's terms

and definitions (1973, pp. 58-94) were used for the three clusters of ten categories. As the structured observation data demonstrated (*Table 22*) the interpersonal, informational and decisional categories had strong support. CENs interpersonal role was well supported by their live-action job orientation, a common finding in other managerial studies (Chapman, 1968; Henry & Moody, 1986; Henry et al., 1991; Mintzberg, 1973). The CEN's informational behaviors scored high as supported by access to a broad range of information from diversified departments and meetings internally, and, via external contacts through regional planning and interest groups. Decisional aspects were supported by choices, such as resource allocation, made by the CEN throughout the observation period.

The informational and decisional components of CENs' work most closely resembled managers in Mintzberg's (1973) and Choran's (1969) studies. The strength for decisional behaviors is likely related to CENs senior administration role. Conversely, first-line managers focused more on information behaviors as they relate to health care delivery from multiple care providers (Raber, 1988).

Each manager incorporates and adapts those behavioral processes that best fulfill their work roles and responsibilities (Kazanjian & Pagliccia, 1993). Although rural hospital CENs approximate Mintzberg's (1973) working roles, the study data supported a fourth behavioral

Table 22 — Selected Comparisons of Major Categories of Behaviors
Among Different Types of Managers by Proportions of Time

CATEGORY OF COMPARISONS	Chief Executives Officers (Mintzberg)	Chief Executives Nurses (Driedger)	Small Company Managers (Choran)	First—Line Nursing Managers (Raber)
Interpersonal	— — —	25%	— — —	14%
Informational	40%	39%	36%	55%
Decisional	21%	23%	27%	8%
Secondary	21%	— — —	21%	— — —
Requests	18%	— — —	9%	— — —
Supportive	— — —	1%	— — —	— — —
Expert	— — —	— — —	— — —	23%

Sources: Choran, (1969, p. 150); Mintzberg (1973, p. 251); and Raber, (1988 p. 105).

Note: The reported time for Choran and Mintzberg is reflective of behaviors for joint activities only. The reported time for this study and Raber's include behaviors for all activities.

cluster. The *supportive* cluster contained two sub-categories which were labeled as: 1) *clinical support*, and 2) *counseling*.

The clinical support role is similar to the combination of Choran's (1969) substitute operator and specialist role, as the professional nurse executive can address both the expertise and minimal human resource dimensions in a combined role. Raber's (1988) clinical cluster of expert, substitute nurse, coordinator and education recipient dimensions would comparatively support the CENs' clinical behaviors as well.

The counseling dimension has not been specifically supported by other research studies, except that CENs of smaller hospitals have been noted for serving as mediators in interpersonal relationships between staff, as well as clients (Simms et al., 1985). The counseling dimension requires additional research.

The supportive behaviors reflect the complexities found in coupling the professions of nursing and administration in the context of complex health care organizations. The addition of contextual or discipline-specific roles is not uncommon in the literature (Choran, 1969; Hannah, 1981; Morrison, 1983; Raber, 1988).

Summary of the Work Characteristics of Rural
Chief Executive Nurses'

The work of rural CENs is diversified and highly complex. Although considerable time is given to scheduled meetings, CEN work is primarily filled with a variety of activities of short duration. These activities are fragmented and are characterized by frequent interruptions over which the CEN appears to have little control. The CEN's work is frequently interrupted, especially during desk work sessions, whereby the nurse executive is often required to engage in new activities prior to completing the previous activity. Although the data demonstrated that the CEN's work day is extremely fragmented with a diverse set of activities, it is not as fragmented as that of front-line managers such as nursing unit coordinators (Raber, 1988).

A significant amount of the rural CEN's time is spent in joint activities, where interactions are primarily realized with reporting managers and general duty staff within their divisions. These interactions generally occur in the form of brief, unscheduled meetings. Live action - verbal communication appears to be the preferred method of communication for all CENs. This serves the purpose of sharing and gathering information, supporting the roles of monitoring and leadership. Much of the rural

CEN's time was spent on informational behaviors necessary for the receipt and dissemination of information.

Beyond day-to-day, front-line operations, CENs' attend to executive, long-term functions such as strategic planning. Similar to other executives, rural CENs are extensively involved with planning, policy, programming, and coordination activities with fiscal, hiring, firing and spokesperson functions (Allan, 1981; Carey et al., 1988; Chapman, 1968; Henry & Moody, 1986; Jensen, 1960; Keith, 1958; McMillan, 1983).

Nurse executives function as the go-between their own divisions and other departments within the facility, the CEO, and the Board of Directors. The 'go-between' dimension, or the effective execution of upward, downward and lateral relationships, suggests a role descriptor commonly used for middle managers (Horne & Lupton, 1965; Uyterhoeven, 1972). The Canadian rural CEN's role, similar to those described by Hagen and Wolff (1961) and Henry and Moody (1986), are required to relate: 1) upward to corporate management and the boards; 2) outward to colleagues, other professionals, to the community and consumers; and, 3) downward to nursing and ancillary personnel within the hospital setting.

The investigator found similarity among the work patterns of the four study informants. Some differences, however, were observed in the amount of time spent in various work activities and behaviors. Experience,

individual management style, educational background, type of patients served, number of staff, and areas of responsibility did contribute to varying emphasis on specific CEN activities and behaviors (Ford & Slocum, 1977). With the small sample size it cannot be concluded from these findings that the number, duration, pace and type of CEN activities would remain the same over time.

Although routine work was an aspect of all CENs work, projects of various sorts tended to draw them away from routine activities. Hence, many of their duties were being completed by engaging in longer working days or during slower seasonal times.

The nature of cyclical work was explored in this study as the qualitative data strongly suggested daily, weekly, monthly and less frequent time cycles in the CENs' work. The ARIMA time series family of models (*See Chapter 3, pp. 79-82*) was utilized to determine whether the data supported cyclical work. The time series model marginally supported cyclical work for scheduled and unscheduled meetings, and desk work, over time periods of one-half hour (unscheduled meetings) to three hours (desk work). The study's data base did not support other predictive, forecasting elements of CENs' work. Although the time series model was weak as a forecasting tool, the qualitative data elements regarding cyclical work suggest that further research would be appropriate.

The work of the CEN in this study was consistent with

many of the work characteristics as described in Mintzberg's (1973) theory. Most similar is Mintzberg's description of the work quantity, pace, fragmentation, brevity, variety, and preference for verbal live action. Mintzberg describes the executive manager as maintaining a complex network of contacts with those outside the organization and notes that for lower- and middle-level managers the network of contacts tends to be with other services and departments within the same organization.

Findings in this study indicate that rural CENs interface extensively with others both internal and external to the organization. Again, this is related to informants having an executive role involving regional planning, standards (professional associations and interest groups), being the only nurse-out-scope, and, responsible for up to fifteen distinct departments. The organizational structure may limit the freedoms allowed for the CEN, but overall the investigator observed that the CEN had a fair degree of latitude of managerial "rights and duties" (Mintzberg, 1973, pp. 48-51).

B. Recommendations for Practice, Education and Research

Recommendations from this study are based upon the research findings and the review of the literature. Findings from this exploratory and descriptive research study further the limited understanding of the work

activities and behaviors of CENs. Recommendations are presented in the areas of nursing practice, education and research.

i) Nursing Practice

The administrative implications of this study are numerous. This study of CENs in rural, community hospitals suggests that our current understanding of the CEN roles and responsibilities is limited. At the time of the study, no previous research had been formally conducted in Canada for CENs in rural, community hospitals. Perhaps the most obvious implication of this study might be for practicing CENs themselves. Several key issues identified by the research process included orientation, job descriptions, and the need for support and recognition of CENs as executive management.

CENs throughout the research study indicated that they generally did not take the time to objectively examine what they were doing and how they were spending their time. In addition, they indicated that even if they decided to undertake such a task, there would be no data with which to compare it; an option that is now available to them.

This study's description of CEN's may provide practicing nurse executives with insight into their roles and responsibilities. The individual and composite

profiles of the CEN's work presented could assist executives with fresh insights into the way rural CENs spend their time. Some CENs may feel that they are misallocating their time and efforts. Comparing their activities with findings from this study may reveal that their allocation of time to activities is similar to that of other rural CENs.

Findings in this study indicate that the CEN's work is generally discontinuous and subject to frequent interruptions. That rural CENs may feel they spend most of their time in crises management is perhaps more a reflection of the nature of the work than attributes of the individual occupying the position (Duignan, 1979). Of interest is the finding that the number of years of experience and organizational setting do not alter the demands placed upon the CENs, nor the visible degree of control over events in their workday (Dunn & Schilder, 1993).

The findings of this study also have implications for those persons contemplating a nurse executive position in a rural, community hospital. The investigator suggests that individuals who prefer well organized and routine types of jobs might be ill advised to consider seeking a CEN position. Additionally, a strong nursing clinical background still favors the individual for assuming a management position within a rural, community hospital. Clinical support from nurse executives, although

infrequent, was still evident in this study.

The whole issue of orientation for an incoming CEN must be addressed. Not only must the individual have a comprehensive review of the position roles and responsibilities, but the orientation program must also address the nature of the job and identify the priorities of the job. This could involve reviewing the findings of this study plus spending dedicated time with the outgoing director, if possible. Beyond job expectations and the nature of the work being explicitly defined, CENs should receive frequent performance feedback from the CEO, and early opportunities for peer support internal and external to the organization.

Only CENs can truly define their professional and corporate role for rural, community hospitals. Results from this study indicate that the categories in the literature to describe the broad and diversified role of CENs are not all inclusive, given that an additional behavioral category was supported. The investigator strongly recommends that the CEN's job description cannot automatically be developed from any prototype, but must be developed within the context of the organizational philosophy and structure, programs delivered, resources available, and so on. For example, CENs' role delineation becomes even more critical during health reform as more facilities fall under the jurisdiction of a single Executive Director.

By streamlining the number of executive personnel throughout rural health care facilities, the CENs' role is extended. If the CEN remains as the sole executive director on-site, what additional human, fiscal, technological and educational supports are required so that these individuals can fulfill the duties of their position? CEN involvement in this review process is strongly recommended since awareness of current work patterns and behaviors will assist executives in accomplishing organizational goals.

Results from the study indicate that the categories used in the literature to describe the role of the CEN are not all inclusive. For example, the supportive behaviors of the CEN were not recognized in Mintzberg's (1973) conceptual framework. A review of the nurse executive's current job description should address the supportive functions of the role. Providing an accurate and realistic picture of what the CEN position entails would be helpful to incoming CENs who struggle with the issues of role clarity and conflicting job expectations. Job descriptions should also provide the basis for selection criteria and evaluating performance standards. If these documents do not accurately reflect the role of the CEN, then current selection and evaluation practices can be questioned. For these reasons, an ongoing review of the CEN job description is strongly recommended.

This study identified that CEN's spend time in "other"

types of activities. For example, CENs were prone to perform secretarial duties, especially in those facilities where they did not have dedicated secretarial support. It is essential for nurse executives to identify and review what non-executive functions they perform. Evaluation of whether certain functions could be completed by other personnel should be reviewed so that CENs may attend to priority executive functions. Clerical activities such as photocopying, filing and sorting mail are examples of activities that could be performed by secretarial personnel.

The need for allocation of resources to assist CENs with the demands of their position was identified during the course of this study. Clerical support, current technology, and continuing education concerning this technology, would assist CENs to better fulfill their role as nurse executive. Professional support from superiors and other nurse executive needs to be fostered and encouraged on an ongoing basis.

The amount of overtime reported by the CENs deserves due attention. Attending to paperwork, be it project or daily desk work, budget reports, staff scheduling and so forth, accounted for the majority of overtime hours. Limited administrative support for the evolving 'executive' component of the job was a factor identified by the CENs which is adding to their current job dimensions and resulting in additional overtime. Results

from this study suggest that organizations need to reassess resources available to the nurse executive, and provide those supports that would focus the workload of CENs and allow them to concentrate on the administrative aspects of their position.

The need for feedback on day-to-day operations and strategic planning was identified by the informants. Support from the CEO and nurse executive peers was recognized as an important component by all the informants. They perceived this support as particularly valuable during periods of significant change, such as health care reform. Regularly scheduled meetings with the CEO, regional nurse executive interest groups, and the professional association were recommended as a method of ensuring feedback about multiple issues such as practice standards. Opportunities to share ideas, experiences and frustrations with peers through the regional CEN interest groups was held in high regard. The regional groups allow each member to attend to their own agenda items such as giving opportunity for sharing ideas and recognition of each others achievements. The support groups were particularly relevant to this group as nurse administrators were often the only nurses out-of-scope within their own hospital.

Involvement of CENs in the planning and direction of the facility, and especially the divisions they were responsible for, was identified as an important issue.

There was a sense that a great deal of information was passed down from others such as government about the numerous changes occurring for hospital services. The CENs in this study wanted to be more involved in the planning of change, whether internal or external to the organization.

The CEN role must not be underestimated. A greater understanding of the role will facilitate skilled performance at this key level of nursing administration. The CENs work within Canada's health care system has undergone significant change over the last fifty years and is currently facing formidable change (Taylor, 1987). Health care organizations are faced with multiple health care reform issues. How will the rural CENs role change within regional health care concepts? How will the merger of hospitals and regional health care provider concepts effect the role of CENs?

ii) Nursing Education

The findings from this study demonstrate that rural CENs have roles and responsibilities comparable to other managers by sharing the broad basic functions of administration, education, business and industry (CNA, 1988; Chapman, 1968). The educational needs and management preparation of CENs in general is a common theme in the literature (Fralic, 1987; Grant, 1993; Gray

et al., 1988; Mark et al., 1990; Poulin, 1984b; Reynolds, 1987; Simms, 1991; Thomlinson, 1991). Yet, the lack of nurse managerial educational preparation, both formal and informal, has been considered to be one of the weakest links in the health system (Danielson, 1978; Fine, 1983; Leatt, 1985). Preparing nurses for rural, nursing administration in an era of significant health care reform has tremendous implications for health care delivery. The findings from this study reinforce the importance of establishing educational programs which address the executive complexities of CEN work.

Managerial education would assist the nurse executive to integrate the professional and management disciplines. This study's findings, along with other research findings (Poulin, 1984b; Simms et al., 1985), support Leatt's (1981) premise that the professional CEN functions at a corporate level. The professional-corporate roles and responsibilities are supported by the development and utilization of numerous managerial skills. Emphasis of skills is dependent on contextual and personal elements such as organizational structure or resources and individual preferences or education. Rural CENs frequently extend their interactions beyond the nursing discipline, so that effective change process and decision making can ensue.

Informants in this study suggested that the knowledge they had about the CEN role was largely learned and/or

acquired on the job (Pfoutz et al., 1987). It is evident that certain skills and work behaviors are developed over time with experience, but there must be certain interventions that educational institutions and organizations could implement to facilitate a smoother transition from other nursing practice roles such as front-line nursing management.

Inclusion of introductory management courses in generic baccalaureate programs would provide an opportunity for nurses to acquire a basic theoretical knowledge of management principles. If already in practice, the CENs participation in certificate management courses assists them for or in their administrative role as they deal with current issues. The opportunity to reflect upon past experiences and apply management theories and principles to specific situations is considered the most valuable aspect of these type of programs.

Leatt (1985) found that two-thirds of CENs in small facilities did not hold a baccalaureate degree. A goal of the nursing profession should be prepare nurse executives at a graduate level. Graduate level educational preparation is essential as the rural CENs role expands to include more corporate responsibilities over diversified departments and multi-facility arrangements (Simms et al., 1985). Incumbent CENs, too, must be supported through distance educational approaches. Reynolds (1987) argues

that more extensive education and experience will assist CENs to cope more successfully with administrative issues.

Nurse educators must recognize that significant changes in the health system require a greater number of skilled nurse managers in a variety of roles and functions. To meet the transition relevant course content is essential. Rural CENs indicate that they desire education programs that are practical, rural and nurse-oriented, versus theoretical, urban and other disciplined focused (Anderson & Kimber, 1991).

What then are the educational needs of rural CENs? The findings of this study and the literature suggest that their needs are extremely diverse. Educational requirements that have been identified include: the history and culture of rural communities; networking and negotiation as it relates to professionals and consumers; financial and resource management of small hospitals; labor relations; critical thinking and change process; nursing informatics; professional and community linguistics; hospital-community initiatives (primary health care and regionalization); organizational politics; public policy; public relations; marketing, research; and care evaluation (Baumgart & Larsen, 1992; Fruend, 1985; Henry & Moody, 1986; Lemieux-Charles & Wiley, 1992; Reynolds, 1987; Smith, 1992).

To truly meet the educational needs of the rural CENs, a concerted effort for rural nursing administrative

research needs to be supported by rural hospitals including CENs themselves, professional associations, nursing academia, and governmental health portfolios. CENs must be educationally and preferably experientially prepared to fulfill the evolving roles and responsibilities of their pivotal professional and corporate position (CNA, 1988). The findings of this study concur with many others that preparation is critical prior to an individual accepting a CEN position (Bushy, 1992; Gray et al., 1988; Fruend, 1985; Henry & Moody, 1986; Kirk, 1987; Simms et al., 1987; Stevens, 1978; Thomlinson, 1991; Waters, 1980).

iii) Nursing Research

A review of the literature revealed a paucity of research studies that describe the role of the CEN. No studies could be found that specifically addressed the work activities of CENs in rural, community hospitals in Canada. The findings and conclusions derived from this study in many instances complement the findings documented in the literature. Results from this study have several implications for future research in the area.

Many of the propositions relating to the nature of the CEN's administrative behavior proposed in this study may be regarded as a series of working hypotheses which could be used as a focus for further research. The aspect of

CEN supportive behaviors and CEN cyclical work are two such examples.

The small sample used in this study precludes transferability of the study findings to the population of CENs in rural, community hospitals in Manitoba. It is suggested, therefore, that there is utility in replicating the study within other samples, or within other populations of CENs, to determine whether the results of this study are transferable.

The results of this study are two-fold: 1) they largely support previous studies about executive personnel; and, 2) they also identify managerial dimensions not previously documented. Because research in this area is limited, more in-depth studies are required to increase our understanding of this complex and evolving executive role (CNA, 1988; Henry et al., 1991). Few studies have examined the specific observable activities and behaviors of rural CENs (Hagen & Wolff, 1961; Henry & Moody, 1986). The rural studies that were conducted have only limited transferability because of the diversity of CEN roles and responsibilities found in various geographical settings, health care delivery systems, and distinct organizational cultures (Rotkovitch, 1983).

Previous research has revealed that there are differences in the work activities of novice versus expert nurses (Benner, 1984; Dunn, 1990). Novice managers tend to be task oriented, rely on rules to guide their behavior

and have difficulty seeing beyond the present demands. Experts, meanwhile, are more skilled at viewing situations as a whole and are involved with strategic planning (Dunn & Schilder, 1993). It would be of interest to determine if novice CENs in rural, community hospitals were more operationally and tasked oriented compared to expert CENs. Findings from such studies would help organizations to develop orientation programs and implement other supportive approaches that would assist incoming CENs to more adequately assume their roles and responsibilities.

For the most part the results from this study concur with Mintzberg's (1973) work concepts. More in-depth, longitudinal research is encouraged, as previous rural, community hospital CENs studies in this area could not be found. Additionally, the supportive behavior concepts need to be operationally defined. Research over longer periods of time would determine whether these are distinct roles and whether saturation of role categories has occurred. Longitudinal studies might also reveal an evolving CEN role and facilitate the review of cyclical work that was evident in the qualitative data.

Consistent with Mintzberg's (1973) findings, this study demonstrated that managerial work is characterized by brevity, variety and fragmentation at an unrelenting pace. These factors appear to be intensified in smaller organizations such as rural hospitals as found for CENs in this study. How is it that CENs survive in this

environment over time, and what factors are put into place that result in some degree of predictability and control over daily work activities? The turnover rate for rural CENs is unknown.

Replication of this study is recommended in another context with different informants to determine whether similar patterns of behavior and work activities are evident among other CENs.

The preparation of CENs and ongoing educational needs require further study through the research process. Results of this study indicate that educational needs vary with experience and organizational functions. The timing of management programs for CENs may be important as well.

Management preparation courses that have a theoretical focus with limited opportunities for experiential learning may not be the best way to prepare nurse executives. Research in this area would be valuable to determine the most effective way of educating nurses for managerial positions in rural hospitals. Preparing staff nurses for future CEN positions would be an interesting research area. For example, what interventions could organizations put in place to develop staff nurses with skills essential for the CEN role?

A review of the strength and limitations of this study have methodological implications for future research. Informant responses to certain questions and comments made during the pre-observation and exit interviews revealed

the need for further revisions to improve the instrument. Replication of the questionnaire is recommended in different study settings to improve the research quality of the tool.

Reliance upon survey methods alone to collect data about the work activities and behaviors about CENs may not produce accurate findings. The results that the investigator questioned was the amount of overtime estimated by each of the informants. Discrepancies between the estimated time and the actual observed time spent in various work activities has been documented for nurse managers (Dunn, 1990).

The richness of the data collected during this qualitative study demonstrates the value of these methods for nursing research. Given the limited number of nursing administration studies, this type of data collection is seen as an important vehicle for generating knowledge about the practice of a nurse executive. Triangulating data collection methods in this study proved to be a definite strength in the research design. Future studies with this type of methodology are encouraged.

The content of the work of Canadian CENs' is changing as the health care system evolves, requiring nurse executives to function in diversified and corporate roles (CNA, 1993). Ongoing and extensive research is required as a greater understanding of CENs' roles and responsibilities will contribute to the development and

refinement of concepts and theory in administration in general, and nursing administration in particular. The extent and diversity of issues in rural health care delivery bid a focused plan for developing an empirical body of knowledge on the work content of rural CENs (Bushy, 1992; Weinert & Long, 1991).

C. Study Strengths and Limitations

There is no research design that fully captures reality in its entirety. Recognition of methodological limitations must be given due consideration. The study was limited by resources and the time consuming nature of observational data collection, thereby restricting the sample size to four CENs. The use of a convenience sample of informants had certain strengths and limitations. Access to four informants within different organizational structures in various rural regions of the Province provided a diversified data base. The four study informants provided a broad range of experience and practice, and organizational variability.

i) Interviews, Static Data, and Observations

The interviews, the static data, and the observations generated a broad spectrum of data which enriched the study. CENs' activities could be reasonably observed and

recorded since the informants were observed under natural conditions. The twelve observation days with the informants provided the opportunity to capture natural occurrences.

The pre-observation and exit interviews allowed experiences occurring under natural conditions to be more fully voiced by the informants and observed by the investigator. The pre- and post-observation interviews proved to be well suited to the descriptive nature of the investigation. The building of one data set upon another allowed the researcher to further pursue variables from the first interview and the observation period, that may not yet have been fully addressed.

In-person interviews with each informant provided the investigator the opportunity to clarify, probe and obtain accurate and more complete information. The interviews fostered an opportunity to establish the credibility of the information provided, through assessment of congruency between the informants' verbal responses and actual observed events. Inclusion of a semi-structured interview guide in this study provided an opportunity for the informants to disclose additional information as they desired; further enhancing the data. The exit interview contributed to the data noted in the pre-observation interview and the observation period.

An additional strength of this study was the 98.5 hours of structured observation over twelve working days;

observation that allowed natural occurrences to be captured in the data set. Additionally, many similarities of CENs' observed work were verified by comments during the observation period and the exit interviews. Having the informants share during the observation periods the 'what and why' of their activities and behaviors decreased the element of subjectivity which assisted the analysis of structured observations (Snyder & Glueck, 1980). Additionally, interpretations of events were periodically checked with the informants.

Observer bias needs to be considered an element of the design that potentially affected the study results. The researcher's familiarity with the CEN position, and previous professional association with the study informants, may have influenced the collection and analysis of data. Conversely, rather than limit the results of the study, these factors may have facilitated each informant's 'comfort' during the study. The researcher's nursing administration experience placed the investigator into a 'shared culture' with the informants, enhancing data collection and analysis. For example, the researcher understood the administrative lingo.

The data demonstrated that, on average, the CENs participated in 71.7 events per work day which lasted 6.8 minutes in duration. The time duration per event did not leave much time for the informants to control their work activities, nor the investigator to subjectively

manipulate the recorded events. Mintzberg (1973) argues that managerial work content likely does not change as most work is dictated by other. Social settings are also known to have a tendency to be stable over time, therefore observer presence is less of a threat to data credibility than generally recognized (Choran, 1969; Lincoln & Guba, 1985). The structured nature of the observation tool also help control for observer bias.

The small sample size and qualitative nature of the data limit the generalizations of the study. However, the in-depth nature of the data from observations, interviews and composite descriptions provide thorough insight into the work of community hospital CENs in rural settings.

D. Study Conclusions

CENs will continue to have pivotal roles in the maintenance of cost-effective and quality nursing practice throughout the Canadian health care system. Rural nurse executive roles and responsibilities, however, will continue to be redefined in the context of discipline specific trends, general management evolution, and health care reform occurring both at the organizational and system levels (Lemieux-Charles & Wiley, 1992). Health care reform will continue with altered funding bases, rapidly changing technology, growing consumer involvement, and the shift of care from institutions to the community

(CNA, 1993). Ongoing nursing administration research in rural Canada will be required to best assist this process.

A review of the literature revealed a limited number of research studies that examined the role of the rural CEN. Despite research design limitations, conclusions and recommendations from this study enhance our limited knowledge in this area. An awareness of the growing complexity and significance of the rural CEN role leads to a greater understanding of the position. Ongoing nursing administrative research will facilitate effective management practices and delivery of quality patient care.

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APPENDIX A

Letter of Initial Contact

Dear

I am a Master's of Nursing student at the University of Manitoba interested in rural, nursing administration. I am completing the required course and thesis work for the Master's program. Professor David Gregory (telephone number) is the chairperson of my thesis committee. I am writing to request your participation in a research study of the roles and responsibilities of community hospital Chief Executive Nurses (CENs) in rural Manitoba. This project has been approved by the Ethical Review Committee of the Faculty of Nursing at the University of Manitoba.

To obtain the data necessary for this study, four to six CENs in rural Manitoba who have been in their current position for at least one year, are being asked to provide preliminary organizational data, be observed at work, and participate in both a pre-observation and exit interview. Your participation in this study will mean that I will be your 'shadow' and record your activities, as they occur, over a consecutive three day period. The observation will be as unobtrusive as possible, and ideally not effect the normal course of your work. Collection of data will take place sometime during the months of November, 1992 through April, 1993.

In requesting your participation, I realize that there may be situations in which you or your co-workers prefer my absence (e.g. during a performance appraisal), in which case I will withdraw from observation upon your request.

The written and tape-recorded information will only be used for the purpose of my thesis. I would like to assure you that your identity and the hospital's name or locale, will not be discussed or revealed to anyone, or reported in my thesis or future publications. The data collected during my observations will be descriptive in nature (e.g. meetings, desk work, etc.). The information will NOT include detailed descriptions of your managerial style, nor an evaluation of your work performance.

If you are willing to participate, please return your response via the enclosed enveloped, to David Driedger, Box 172, Winkler, Manitoba, R6W 4A4, by November 6, 1992. A Letter of Confirmation will follow your indication of participation.

If you have any concerns or questions, please do not hesitate to contact me ([H] 325-8460 or [W] 325-4354). I thank you for your consideration of this matter.

Sincerely,

David Driedger R.N., B.Sc.N.

APPENDIX B

Letter of Confirmation

Dear

Thank you for agreeing to participate in my research study on the roles and responsibilities of rural Chief Executive Nurses.

As was discussed in an earlier letter, I am writing to confirm that the dates for observation are (Date/Month/Year). I will plan to meet you at the hospital at 0800 hours on the first day. I would like to remind you that a copy of the hospital's mission statement and organizational structure, nursing philosophy and your job description would be most appreciated at the beginning of the observation period.

I want to thank you again for your willingness to participate in this study. If you have any questions or concerns prior to our meeting, please feel free to contact me at (H) 325-8460 or (W) 325-4354. I look forward to seeing you on (Date/Month/Year).

Sincerely,

David Driedger R.N., B.Sc.N.
Masters of Nursing Student
University of Manitoba

The University of Manitoba

FACULTY OF NURSING
ETHICAL REVIEW COMMITTEE

APPROVAL FORM

Proposal Number N#92/31

Proposal Title: "THE ROLES AND RESPONSIBILITIES OF COMMUNITY HOSPITAL CHIEF EXECUTIVE NURSES IN RURAL MANITOBA: A DESCRIPTIVE STUDY."

Name and Title of
Researcher(s):

David Driedger, R.N.,B.Sc.N.

Master of Nursing Graduate Student

Faculty of Nursing University of Manitoba

Date of Review: October 05, 1992.

APPROVED BY THE COMMITTEE: OCTOBER 05, 1992.

Comments:

Date: _Oct. 13/92_

Linda J. Kristjanson, PhD, RN   Chairperson
Associate Professor
University of Manitoba Faculty of Nursing

Position

NOTE:
Any significant changes in the proposal should be reported to the Chairperson for the Ethical Review Committee's consideration, in advance of implementation of such changes.

Revised: 92/05/08/se

Disclaimer

Research Study:
Roles and Responsibilities of Rural Chief Executive Nurses

You are being asked to voluntarily participate in the study of the roles and responsibilities of community hospital Chief Executive Nurses in rural Manitoba, conducted by David Driedger, a graduate student in the Faculty of Nursing at the University of Manitoba. You are being invited to participate because you are currently a Chief Executive Nurse in a 25-100 bed community hospital in rural Manitoba and have been in this position for a minimum of one year.

As an informant in the study, you will be asked to provide preliminary hospital and demographic information during a pre-observation interview (approximately thirty minutes in duration) on the first day of the observation period. Your work activities will then be observed by the researcher for a projected time period of three consecutive days. At the completion of the observation experience, you will be asked to participate in a tape-recorded exit interview (approximately thirty to sixty minutes in duration) to determine the "representativeness" of the observation experience to your normal work situation, plus additional managerial work considerations.

You understand that you or your co-workers have the right to request that the researcher withdraw from observing certain situations, and that you can withdraw from the study at any time without penalty of any kind. There are no known risks.

If you have any questions or concerns about the research study, you are free to contact the researcher or his advisors at the following numbers:

Researcher: David Driedger (H) 325-8460; (W) 325-4354
Thesis Chair: Prof. David Gregory - telephone number
Thesis Advisor: Prof. Sue Coke - telephone number
Thesis Advisor: Dr. Roger Hall - telephone number

Pre-Observation Interview Guide

The investigator will first review the disclaimer with the informant. The purpose and methods of the study, including the researcher's and informant's roles, will be explained to the CEN prior to using the following questions.

1. Do you have any questions or concerns regarding the purpose of this research study?

2. Do you have any questions or concerns regarding the methods used to collect data in this study?

3. What can you tell me about the hospital you work in (size, organizational structure, values, acute/long-term, old/new)?

4. Is there anything about your hospital that distinguishes it from other rural hospitals?

5. Is there anything about your hospital that makes your position as a Chief Executive Nurse (or equivalent title) different from other Chief Executive Nurses in rural Manitoba?

6. Could you describe to me your nursing education?

7. Could you describe to me your nursing experience?

APPENDIX F

Observation Record

Manager Code_____
Date_____

Time	Duration (mins)	Activity	Activity Type	Scheduled Yes/No	Partic ipants	Initi- ator Self/ Others	Comments /Code

Dunn (1990)

APPENDIX G

Activity Type - Definition of Terms

1) **Scheduled Meetings** - prearranged meetings between the Chief Executive Nurse (CEN) and others that are scheduled at least thirty minutes prior to the occurrence.

2) **Unscheduled Meetings** - any verbal interaction between the CEN and others that take place by chance, on the spur of the moment, or occur with less than thirty minutes notice.

3) **Desk Work** - time spent in the CENs' office or desk processing mail, writing letters or reports, schedules, and reflecting on events.

4) **Telephone Calls** - incoming and outgoing telephone calls.

5) **Travel** - this includes travel by the CEN to various parts of the hospital, hospital complex, or community events.

6) **Tours** - informal stroll through the facility to observe activity without prearrangement.

7) **Personal** - this consists of miscellaneous personally focused activities, including meal and break-times.

8) **Secretarial** - this refers to any activities that could have been carried out be a CEN's secretary.

9) **Other** - any activity that does not readily "fit" into one of the other eight defined categories.

Adapted from Dunn (1990), Mintzberg (1973) and Raber (1988).

APPENDIX H

Exit Interview Guide

1. To what extent do you think this three day period has been typical of your usual activities? Has anything unusual occurred?

2. Were there any activities that I did not observe, that you are normally involved in in your role as Chief Executive Nurse (CEN)?

3. As you know, I will be observing CENs in other facilities. Can you think of any unique features specific to your hospital that might effect your work as a CEN?

4. Do you find that there is seasonal variation to your workload, or the type of work you do as a CEN?

5. Do you spend time doing work related activities outside of normal working hours? (If Yes) What are these activities? How much time do you spend on work related activities outside of normal working hours?

6. How disruptive did you find my presence as an observer in terms of your ability to accomplish your regular work? How long was it before you felt reasonably comfortable or settled with my presence?

7. How do you think my presence has affected the work of others in your hospital? (e.g. head nurses, staff nurses, department heads, other health care workers, patients)

8. How many days do you think I would have to observe to have a good picture of the work of a CEN?

9. Is there anything you would like to add about your role as a CEN, that you do no feel the study has asked, or captured in the observation period?

10. If I think of other questions I would like to ask you about the observation experience, is it okay to telephone you at a later date?

11. If you have any further questions, concerns or comments please contact me at [H] 325-8460 or [W] 325-4354.

Adapted from Dunn (1990) and Raber (1988).