NURSING RESOURCES IN MANITOBA
1995
A DESCRIPTION OF THE CURRENT SITUATION AND CONSEQUENT POLICY IMPLICATIONS

54

By

LINDA HUGHES

A Thesis
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF PUBLIC ADMINISTRATION

Department of Political Studies
University of Manitoba

Department of Political Science
University of Winnipeg

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ABSTRACT

The purpose of this study is to describe the nursing resources available in Manitoba as of April, 1995 and to delineate possible policy initiatives based on the collected data. After years of inattention and neglect, the topic of nursing resource planning is now one of the priorities of most health departments across Canada including that of our province of Manitoba. This study represents one of the first attempts to gather and collate, in a consistent format, data on the various categories of nursing personnel within the province. This baseline information is required in order to formulate Human Resource strategies within a health care system which is facing the need for massive change and major reform.

Chapter One will provide an overview of the current literature on this topic and a review of recent initiatives within Manitoba and other provinces related to issues of Nursing resource planning. Chapter Two will present the data collected regarding the current Nursing resources within Manitoba. Chapter Three will outline and discuss related considerations and possible policy implications. Chapter Four will offer conclusions.

The data were collected from a variety of sources including Manitoba Health, the Manitoba Association of Registered Nurses (MARN), the Registered Psychiatric Nurses Association of Manitoba (RPNAM), the Manitoba Association of Licensed Practical Nurses (MALPN), and the Manitoba Nursing Professions Advisory

Council (MNPAC). The difficulties encountered in collecting this data highlight the need for a centralized, coordinated process by which this type of information is compiled and analyzed. This is the first step required in the process of developing a Nursing Resource plan for the Province.

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LIST OF ABBREVIATIONS

B.C.	BRITISH COLUMBIA
CNA	CANADIAN NURSES ASSOCIATION
EFT	EQUIVALENT FULL TIME
GRADS	GRADUATES
HCA	HEALTH CARE AIDE
HMA	HOME CARE ATTENDANT
LPN	LICENSED PRACTICAL NURSE
MALPN	MANITOBA ASSOCIATION OF LICENSED PRACTICAL NURSES
MARN	MANITOBA ASSOCIATION OF REGISTERED NURSES
MB	MANITOBA
MNPAC	MANITOBA NURSING PROFESSIONS ADVISORY COUNCIL
RN	REGISTERED NURSE
RPN	REGISTERED PSYCHIATRIC NURSE
RPNAM	REGISTERED PSYCHIATRIC NURSES ASSOCIATION OF MANITOBA
USA	UNITED STATES OF AMERICA

CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

1. INTRODUCTION

During the past five years, there has been considerable activity within Canadian provinces as governments and professional associations have begun to grapple with the challenge of developing a rational, systematic approach to human resource planning within the field of nursing. After years of inattention and neglect, the topic of nursing resource planning is now one of the priorities of most health departments across Canada including that of the province of Manitoba.

1.1 NATURE OF THE SUBJECT AND SCOPE AND OBJECTIVE OF THE STUDY

The purpose of this study is to describe the current nursing resources in Manitoba and the resource planning models and assumptions which pertain to such resources. Nursing resources within Manitoba include Registered Nurses, Registered Psychiatric Nurses, Licensed Practical Nurses, and Health Care Aides/Attendants. It will be shown that, although rational models related to Health Resource planning have been developed, missing data and the lack of clear policy direction on a number of crucial factors, make the prediction of future demand for nursing resources in Manitoba a

difficult, if not impossible task. A purely rational model based on facts rather than values which ignores the aspirations of those affected by Human Resource decisions and the political decisions inherent in the process, is not applicable in Manitoba. There are many players whose positions must be accommodated through compromise and negotiated consensus and difficult decisions to be made within the nursing professions themselves and with other health care workers including the powerful physician group. This thesis will suggest some policy implications and options and highlight the reasons why Human Resource planning within the health care system in Manitoba will continue to evolve incrementally rather than rationally.

The policy shifts currently taking place in health care reflect a strong concern on the part of government for the system to be more cost-effective and efficient. The forces which are driving these policy shifts across Canada will quite likely culminate in the most profound changes to the health care system since the implementation of universal hospital insurance in 1957 and universal physician insurance in 1968.

The area of human resource planning in the health care field is gaining increasing attention during this period of intense review and analysis. As Lomas and Barer point out, the emergence of more attention to the collective public interest forces us to focus not only on ensuring that adequate quality of care is provided to each individual, but also that resources are used in an efficient manner. "Squandering resources in health care means either deficits from attainable community health status (technical

inefficiency) or fewer resources available for other competing non-health care uses of greater social value (allocative inefficiency)" (Lomas & Barer, 1986, p.246). These authors go on to explain that

> the importance of the collective public interest only emerged as third parties came to have a stake in the resources consumed by the aggregation of these individual encounters, as closer scrutiny of the distribution, roles and incentive structures of the health care system revealed that traditional and accepted work allocations and delivery institutions were far from optimal. Nevertheless, a governance system based on the individual public interest (quality assurance without resource constraints) became a powerful determinant of manpower policies because government had, where self-regulation had been granted, no obvious or painless method of forcing consideration of this new collective public interest (p.247).

Within this context of ensuring the collective public interest rather than the self interest of various health care workers, human resource planning is an attempt to provide the most appropriate skill set required at the least cost to achieve the best patient outcome. Nursing personnel represent the largest category of health personnel within the Canadian health care system and consequently attempts at developing human resource plan for nursing must be an integral part of national and provincial health policy-making.

Human Resource research is a relatively new field of study and practice. Its subject matter is currently in the developmental stage and it is of a multidisciplinary nature, drawing on such disciplines as economics, statistics, behavioural sciences, management science, and personnel and industrial relations. Health human resource research is in its infancy in Canada with the first National Health Manpower Conference being held

in 1969. This conference was a response to the growing realization that there was more to health manpower planning than simply increasing the number of graduates in health care programs (Hacon, 1974, p.28).

The lack of attention to the collection and analysis of data about the various groups of health care workers by both Provincial and Federal governments is quite likely a result of overriding concerns by both levels of government about physician supply. Health human resource planning policies have been dominated by first, the need to increase the supply of physicians (1950s and 1960s), then, to control expenditures on services generated by this growing supply (1970s), and finally, to slow physician supply growth directly (1980s). This focus has been at the expense of appropriate planning and policies for other health human resources including nursing personnel (Lomas & Barer, 1986, p. 251).

It is not surprising, then, that comprehensive studies of nurse human resource supply and requirements for the specific purpose of long-term and province-wide nurse human resource planning have been lacking in Canada. In fact, reliable and comprehensive time series data on nursing personnel are not readily available. The primary sources for data are the licensing authorities of the various nursing associations but, these data are of course, not available for those categories which have no mandatory licensing requirements. For example, in Manitoba, the occupation of "Health Care Aide" or "Nursing Assistant" does not require licensing and the numbers in this category have

been increasing as the mix of nursing personnel has been manipulated in response to budget constraints.

This study will provide an up-to-date snapshot of the categories and numbers of Manitoba nursing personnel and delineate implications for policy direction. Chapter One will provide an overview of the current literature which will include information about current initiatives in other provinces and within Manitoba. Chapter Two will include data and corresponding discussion about the current Manitoba nursing personnel. Chapter Three will summarize the data and discuss possible policy implications and Chapter Four will conclude with a discussion about the possible approaches to, and difficulties inherent in , policy making related to Health Human Resources.

1.2 METHODOLOGY

The sources of information for this study will be the three licensing bodies of the nursing professions (Manitoba Association of Registered Nurses, Registered Psychiatric Nurses Association of Manitoba, Manitoba Association of Licensed Practical Nurses) and Manitoba Health. Each of the three licensing bodies requires that membership and the right to practice conveyed by such membership be renewed yearly. Information necessary to the determination of right-to-practice is collected from the renewing members each year, along with other items essential to registration renewal. In addition, data are gathered about employment status and conditions, and about

educational preparation.

Manitoba Health has initiated an extensive survey of all health care facilities to ascertain the numbers and types of personnel currently working within the Manitoba health care system. This survey also collected information about the employment status of working health care personnel in terms of fulltime, part-time, or casual status and about the number of vacant positions for which personnel were being recruited. Data from the 1994 survey will be used. Information from the Annual Reports of Manitoba Health will also be included as appropriate.

1.3. LIMITATIONS

Much of the information presented in this study will be drawn from the self-reported data collected in annual membership renewal procedures. Each Nursing regulatory body (MARN, RPNAM, MALPN) collects information according to its own specific format. There is a lack of consistency amongst the bodies in relation to what information is collected. As well, the length of time over which data has been collected varies. This creates difficulties in performing comparisons and analysis over time. In addition, information that is self-reported is not completely consistent from nurse to nurse within an association and between associations. For example, nursing personnel must report their type of employment according to preselected options provided by each association. The options provided have changed over time and are somewhat narrow in scope compared to the types of employment currently available.

Another limitation is caused by the paucity of information available on the Health Care Aide/Attendant group. This group is currently the fastest growing group of nursing personnel but there is no central body which collects and retains information about the group. Total numbers are unknown as is information about individual members such as age categories, gender, and educational background.

2. LITERATURE REVIEW

2.1. OVERVIEW

Clearly within the health care system, a most important topic for policy makers is that of nursing personnel and the need to fully understand all the issues related to supply, distribution, deployment, and utilization. Although research in this area is hampered by the lack of available, reliable data, efforts are currently in progress to develop models sufficiently complex to examine the multi-faceted nature of human resource planning for nursing personnel. Linda O'Brien - Pallas (1992) presents a concise summary of the work of Prescott, an American , and Kazanjian, a Canadian, both of whom have been examining the need for models which could be used to forecast resource needs for nursing personnel. She states that both would concur that such models need to be further developed and that they need to include the following characteristics:

1. While parsimony, costs and simplicity are important considerations, models of sufficient complexity are needed to capture the intricacy of factors which have an impact on the demand for health care providers.
2. Models need to include all sectors of the health care system. Shifts in hospital demand may influence shifts in the demand of the community. Single-segment models are not adequate to detect these shifts.
3. Models of single-occupation groups cannot capture substitution within and across occupational groups and determine the impact of supply changes on one group on the demand for other groups. For example, the current replacement of RNs by RNAs and HCAs will affect forecasting in the future.
4. Finally, nursing and health person power planning does not exist in isolation from the world in which these services are delivered. Future planning models need to explicitly place the health care industry in the general context of the economy and expected growth in the labour force as a whole. These contextual factors place important constraints on the supply of the health care workers and demand for health services. In Canada, work by the Centre for Health Services and Policy Research at the University of British Columbia and by the Ontario Resource Data Centre at Waterloo are teasing out the elements of future models and identifying the data elements required as well as the limitations in our current reporting practices. Many of these concerns have been brought to the National Task Force on Health Information for consideration. Such items as a unique identifier and the need to link national and provincial data sets are beginning solutions to the problems of reliable data elements. (p.21)

Provincial governments only recently have begun to take a more active role in the collection and analysis of human resource data and this task must be addressed in order to initiate any long term nursing human resource plan. The province of British Columbia has begun to address this need through the Health Manpower Research Unit at the University of B.C. This unit now collects and publishes on a yearly basis a status report on health personnel in the province called "Rollcall Update" (University of B.C., 1991) In Manitoba, an initiative to begin collecting data on health care personnel has recently (1993 and 1994) been undertaken by the Provincial Health Care

Labour Adjustment Committee and Manitoba Health. (Manitoba Health, 1994, Nursing Research Study). All health care facilities in Manitoba are being surveyed regarding the types and numbers of personnel currently employed. This endeavour will provide information about those workers currently employed and about any vacant positions but will tend to underestimate the current numbers and types of health care workers available in the province.

In Alberta, the Provincial Nursing Action Plan (PNAP) Steering committee is supporting a proposal for the establishment and funding of a committee on nursing manpower planning. The objectives of the project are:

1. To collect standardized data that are reliable and timely to allow appropriate parties to ensure that there are adequately prepared nursing personnel to meet the future needs for nursing,
2. Develop a manpower model, and
3. Develop an implementation plan for the model. (Province of Alberta, 1991, p.1)

The forward of this proposal notes that

> In Alberta, there is an manpower planning deficiency when it comes to defining whether or not a nursing shortage exists, defining whether there is a problem on the supply and/or demand side, determining the magnitude of the problem, and monitoring how the problem is changing over time. Although some of the necessary data to track and monitor RN, RPN, and LPN employees in Alberta, is collected by the Health and Social Services Workforce Survey on an annual basis, much of the big picture on overall workplace employment patterns can only be pieced together from several existing databases and one shot surveys. The extent to which the data gathered on nursing attachment patterns in Alberta are standardized, analysed, and utilized for human resource management and manpower planning in nursing services is currently unknown. Without such baseline data on RN, RPN, and LPN employment patterns, very few rational or targeted manpower and retention policies are likely to be instituted and properly evaluated in the

various institutions. (p.1)

It is also noted in the introduction to the Alberta proposal that this problem is not unique to Alberta and that at least one nurse researcher, Dr. Shirley Stinson, has been trying during the period from 1981 to 1991 to encourage interest at the national level with the Canadian Nurses Association, Statistics Canada, and the National Health Research Development Program to develop a valid nurse manpower model and to keep comprehensive statistics on patterns of nursing personnel. Dr. Stinson also noted that there is no valid nursing manpower model. (p.2)

Nova Scotia and New Brunswick have recently developed and published plans to address Nursing supply and requirement issues (Province of Nova Scotia, 1993; Province of New Brunswick, 1993). A substantial amount of research on this topic has been undertaken in the province of British Columbia through the auspices of the Centre for Health Services and Policy Research (University of British Columbia, 1993; Kazanjian and Wood, 1993). Here in Manitoba, a very recent initiative has begun under the direction of the Provincial Nursing Advisor and in collaboration with the Manitoba Association of Registered Nurses (MARN), Registered Psychiatric Nurses Association of Manitoba (RPNAM), Manitoba Association of Licensed Practical Nurses (MALPN), and Health Care Aide representatives. These groups have agreed to collaborate on the development of a nursing resource plan for Manitoba and the advisory committee is in the midst of establishing working committees to begin data collection and analysis. The RPNAM has also recently completed a planning

document, "Psychiatric Nursing Education Feasibility Study", which addresses future projected needs for Psychiatric nurses in the province (Registered Psychiatric Nurses Association of Manitoba, 1994).

At the national level, the CNA has been collaborating with three other health professional groups to explore the possibility of developing an Integrated Health Human Resource Plan. The CNA has also recently completed extensive work with Statistics Canada to "clean up" the data collection process on nursing personnel across Canada. The International Council of Nurses has also begun to develop documentation and proposals in the area of human resource planning (International Council of Nurses, 1993).

These recent efforts have brought to the forefront the need for reliable, consistent data on nursing personnel and highlighted the lack of a relevant model which can be used to reliably forecast supply/demand projections of nursing personnel. As Kazanjian and Stark (1985) note,

> Health economists argue, and the evidence suggests, that the health manpower market is markedly different from other labour markets, the traditional push/pull factors that affect supply/demand in the general labour market do not apply as readily to health manpower. In addition, there is considerable evidence to indicate that the market for nurse manpower is appreciably different from that for the other health occupations. To be useful then, a study of nurse supply and requirements must have well-defined objectives: it must be clear whether it addresses specific or comprehensive planning issues; short or long-term forecasts; and ideal or practical scenarios. Data, or lack of data from

> unfocused studies yield an unreliable collection of statistics and opinions which are confusing and may even be misleading for planners and policy-makers. (p.36)

In addition to the obstacles of lack of reliable, consistent data and the absence of an appropriate model, the lack of clear definitions of the functions and scope of practice for the numerous categories of personnel within nursing further clouds the issue. The roles of Registered Nurses, Registered Psychiatric Nurses, and Licensed Practical Nurses all overlap. Recent decisions by the National and Provincial Registered Nurses' Associations to make a Bachelor of Nursing degree a requirement to practice as a registered nurse by the year 2000 have added another dimension to the question of competencies. Some provinces do not have Registered Psychiatric Nurses, others do not have Licensed Practical Nurses or they are called something different and have slightly different roles. The proliferation of health care workers who assist or support nursing care delivery presents another complication. The growth of these unlicensed workers originated in Canada during times of nursing shortage and the numbers have grown substantially in response to the current fiscal pressures being placed on health care institutions. There are currently no guidelines in place to assist in developing the most effective and efficient mix of nursing personnel to meet the health needs of specific populations. The CNA is attempting to initiate a collaborative venture between the provincial associations of the various categories in order to develop a mutually agreed upon statement of competencies. This, however, is an enormous undertaking, fraught with political challenges and territorial issues. Clear definition of competencies and of who is "assistive" and who is "in charge" in relation to the provision of nursing

care will be difficult because disagreements between RNs and LPNs over these issues have been longstanding.

If the nursing associations can reach agreement on competencies and scope of practice, it remains to be seen if these decisions achieve the extent of task delegation that is deemed by government to be the most efficient and effective. The province of Quebec has been experimenting with medical and nursing task regulations since 1980 and in a recent article on the topic the point is made that

> for the government as for physicians in private practice, the use of nursing assistants has certain economic advantages as long as the latter enjoy a measure of autonomy - that is, as long as their practice does not require that they be too narrowly supervised by nurses. Moreover, the entire medical profession stand to gain from supporting nursing assistants; such support reduces the control nurses have over the particular field of treating the sick and maintains their subordinate position (Contandriopoulos, Laurier, & Trottier, 1986, p.311).

Contrast this notion to the 1991 position statement of the CNA which states, in part,

> Registered Nurses are responsible for the quality of nursing services provided to the client. The worker should be under direct professional nursing supervision in situations where nursing services are provided.

It is evident that the issues of staff mix, competencies, and scope of practice within the nursing categories will be difficult to address and are an integral part of the equation when predicting future requirements of nursing personnel. The bottom-line realities of governments and health care administrators and the struggles for territory amongst health care workers are key factors which are influencing decisions about "how many" and "what kind" of nursing personnel are required to provide adequate care.

2.2. ESTIMATION OF SUPPLY

The estimation of the supply of nursing personnel includes considerably more than simply counting the numbers of personnel currently available - although that is a good place to start and easier said than done. For example, data on the numbers of Health Care Aides available for work in Manitoba are not currently accessible.

As well as information about the current numbers of each category of nursing personnel available, specific data about each person in each category are required in order to be able to predict the professional life expectancy of those currently available. The data required include: age and a retroactive history of the membership status of each person. Kazanjian and her co-workers have done extensive work in the area of modelling the life-cycle activity patterns of Registered Nurses in B.C. using these data (Kazanjian, Brothers, & Wong, 1986; Kazanjian, 1989).

Within the area of supply, data on employment status (full/part-time/casual, active/inactive/retired) and those working part-time and casual who are looking for more hours of work are also required. Geographic location, type of work, job titles, work setting, and educational qualifications are all data required to ascertain if the right personnel with the right qualifications are available to meet regional and specialty needs.

Attrition data are another important part of the equation. Out-migration, retirement, leave of absence, career change, turnover statistics, and non-registered nursing personnel are all required supply data. As well as data on the current nursing personnel available, information is required about the annual additions to the workforce. Data are required about in-migration from other provinces and other countries as well as the projected annual production of personnel from educational facilities and reentry programs.

A dimension of the supply question which is more qualitative in nature but which affects the whole question is that of the image of nursing and the ability of the profession to attract new personnel into the field and retain those who are already qualified to practice. Demographic information about those entering the nursing professions is important in this context and these data need to be compared to the working population of the province to ascertain if the supply of potential recruits is stable, falling, or increasing.

Two examples of the data elements required when examining the supply of nursing personnel are depicted in Figures 1.1 and 1.2. Figure 1.1 was developed by the Centre for Health Services and Policy Research at the University of British Columbia (UBC, 1993, p.17). Figure 1.2 was used by the task force which studied Nursing in Nova Scotia (Province of Nova Scotia, 1992, p.95). Figure 1.1 identifies those factors which have a relationship with the supply of nursing personnel and divides the factors according to whether they have a proportional, causal, or balance relationship. Factors

shown to have a proportional relationship include nurses who are returning back to school, retirement rate, and the death rate. Causal relationships are deemed to exist between those nurses hired or laid off and demand for nursing personnel and between child care, demand for nursing personnel, and the Provincial Unemployment rate and nurses seeking or not seeking employment. Factors such as nurses employed, non-practising nurses, nurses with expired licenses, new graduates, net nurse migration, nurses not seeking employment, nurses seeking employment, and nurses employed are shown to be in a balance relationship with supply of nursing personnel.

Figure 1.2 presents a description of the comprehensive "ideal" model of nursing supply used by the Nova Scotia Task Force on Health Human Resources. It identifies and includes the current nursing workforce, annual production of graduates, net migration, attrition levels, and work life issues. Ideally, all of the data on the supply side will be available retrospectively so that trends over the past years can be examined.

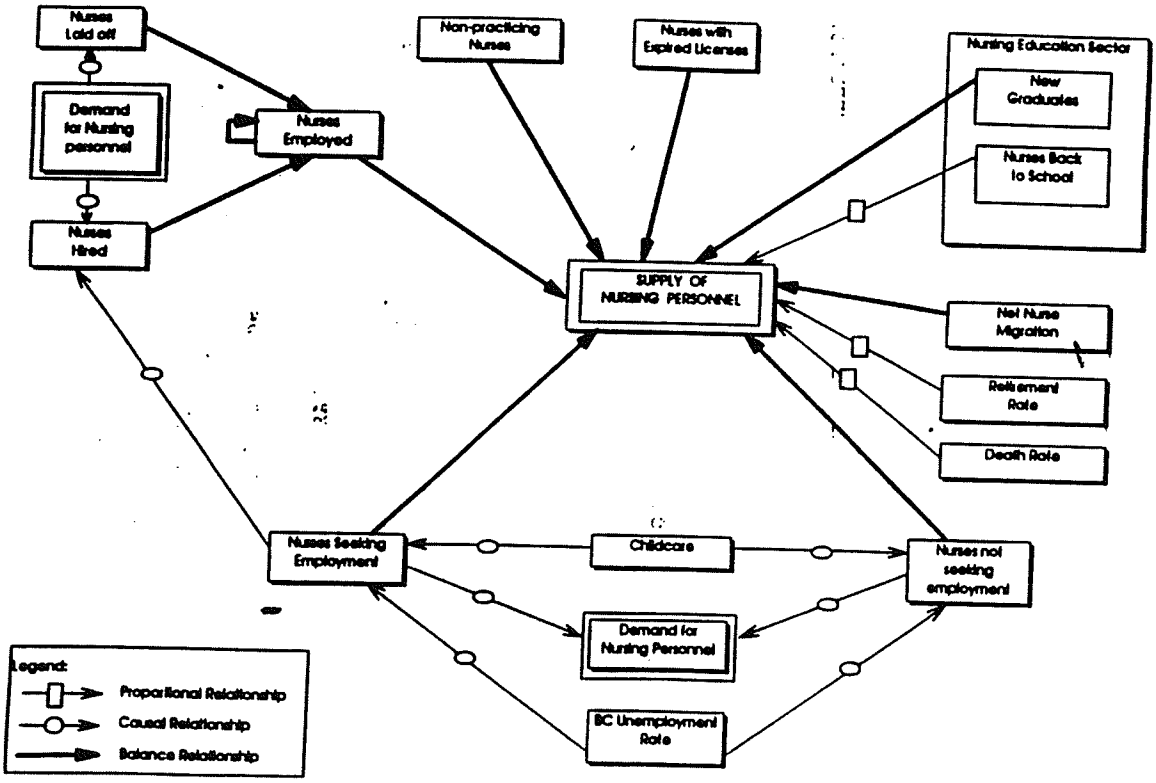

Figure 1.1 Nursing Supply Sector Source: Health Human Resource Unit University of B.C., 1993, p.17

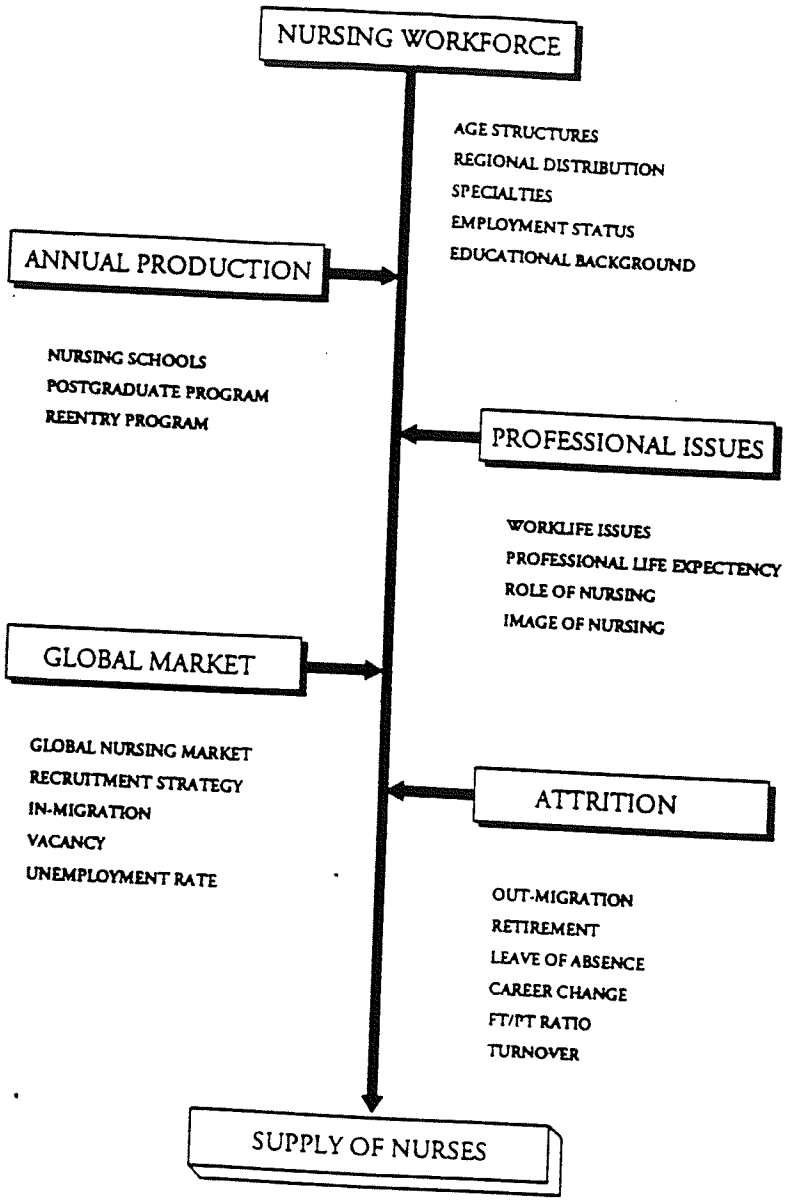

Figure 1.2 Nursing Supply Model Source: Province of Nova Scotia, 1993, p.95

A recent report from the province of Nova Scotia provides an example of how this type of data may be used to forecast future supply of nursing personnel. The Task Force on Nursing in Nova Scotia gathered the data and then divided the present nursing population into two subcategories: those nurses trained in Nova Scotia and those who were not. Their model then applied various assumptions and projected rates of growth for the components (e.g., full time/part time, regular/casual) within each subcategory. Their approach is depicted in Figure 1.3.

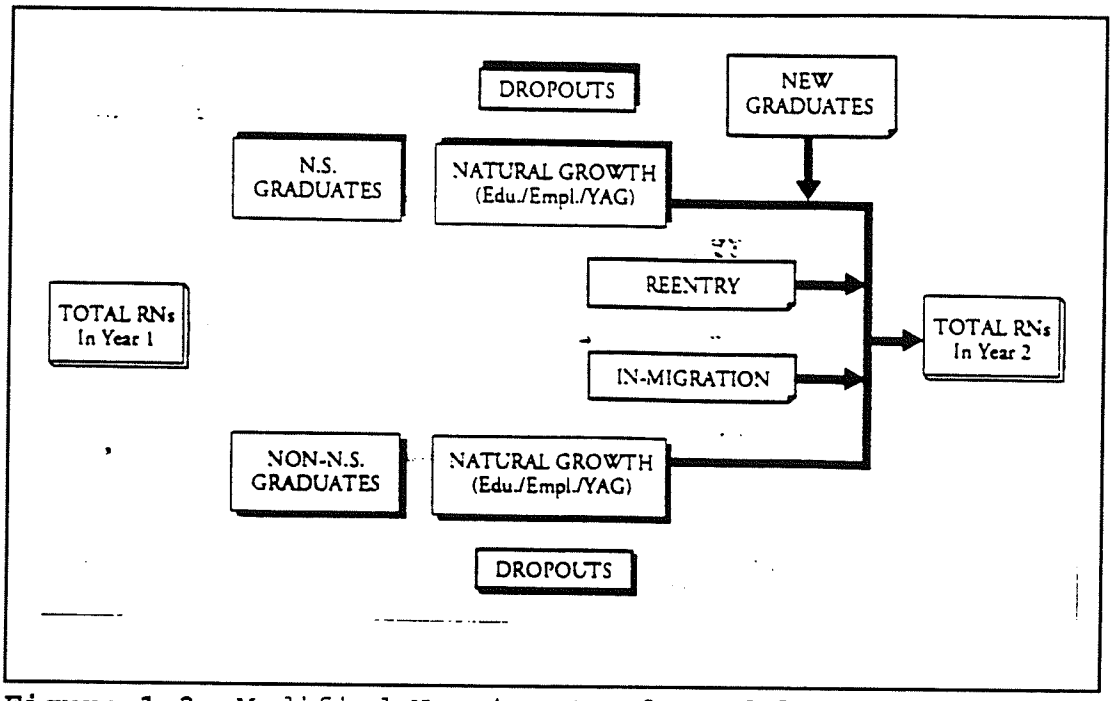

Figure 1.3 Modified Nursing Supply Model
Source: Province of Nova Scotia, 1993, p.96

For each group the probability of a change in their registration (or employment) status was based on several assumptions:

a) changes in registration status were based on an individual's level of nursing education, current employment status, and number of years since

graduation. Actual registration changes over the past 10 years were used;

b) the number of RNs who reactivated their registration after a period of absence would be similar to the previous decade's average, and would remain constant over the planning period;

c) the average profile of new graduates and reentry nurses, in terms of the number of years after their graduation, their employment status, and their highest level of nursing education, would be similar to the average over the previous decade.

Nova Scotia also used past trends to estimate the number of nurses who will not renew their registration. New graduates and reentry nurses were then added to the existing supply to give an estimate of the total supply of Nova Scotian trained nurses at the end of each period. A separate projection model was used for non-Nova Scotia trained nurses based on their differing historical employment and registration patterns, and this information was added to the previous projected supply. Growth figures were then generated by linear regression projections based on the past five and eleven year trends.

This model demonstrated a growth in supply that the task force felt was incongruent with expected demand. Three further scenarios were then developed which were based on modifying the number of graduates from Nova Scotian School. The outcome of

each scenario is outlined in Figure 1.4.

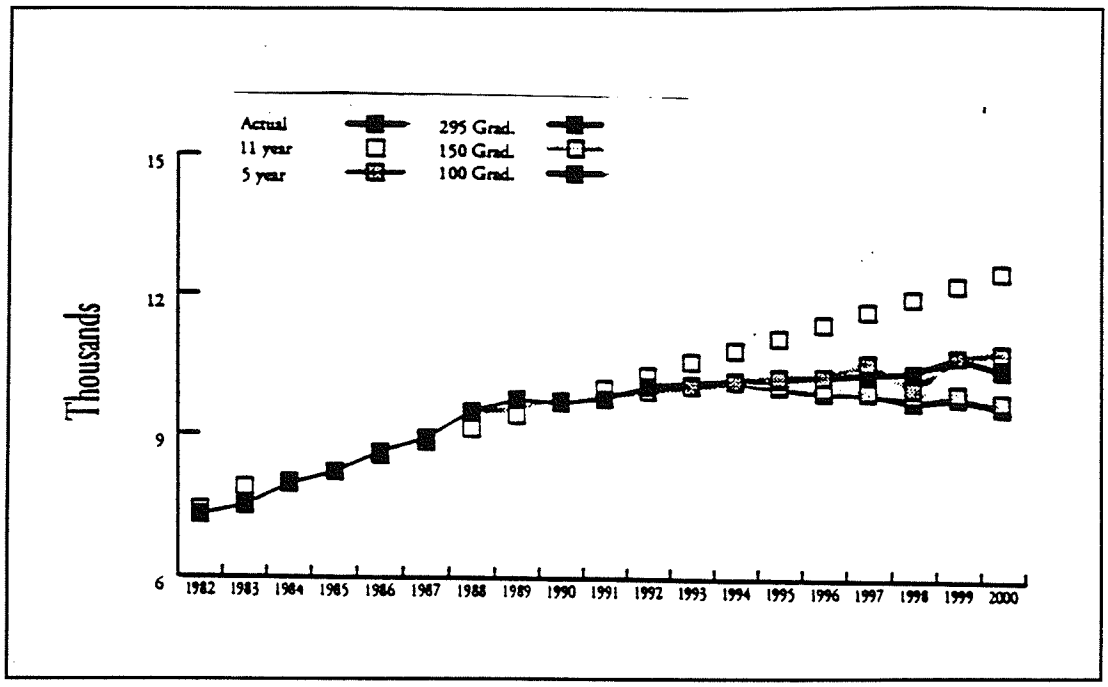

Figure 1.4 Projection of Nursing Supply 1982 - 2000
Source: Province of Nova Scotia, 1993, p.97

Scenario 1 refers to maintaining the status quo of graduating 295 new R.N. graduates per year, scenario 2 depicts the result if enrolments were halved to 150 new R.N. graduates per year beginning in 1996, and scenario 3 suggests enrolment be reduced to 100 new RN graduates per year beginning in 1996. Based on these projections the task force recommended that the number of new RN graduates be decreased to 150 beginning in 1996.

This approach, while it is one of the best methods currently available to researchers and policy makers, is an additive model which will underestimate each term which

interacts with another. It also relies very heavily on past trends to predict future needs. The problem with the linear regression analysis is that historical data does not necessarily reflect today's or tomorrow's realities. A similar task force in the province of New Brunswick based its resource projections on the status quo of the health care system as of 1993/94 and states very clearly that "trends from the past are not necessarily applicable to the system of the future" (Province of New Brunswick, 1993, p.54). This same report clearly enunciates the proviso that caution must be exercised in utilizing the guidelines recommended in the report because they have not been based on scientific predictor models which could better account for critical variables such as client acuity, changing population health needs, and complexity of programs.

2.3 ESTIMATION OF REQUIREMENTS

In reality, supply and requirements affect one another in a dynamic process. They are not static entities and therefore need to be addressed together in an integrated and coordinated planning process. It is interesting to note that current data about each are often maintained by different groups. For example, educational institutions continue to supply graduates within the various nursing categories with little concrete data concerning the demand for these graduates' services. Those with the relevant information about the required mix of personnel required for the future have not shared this pertinent data with the "suppliers". For example, in Manitoba, three different departments of government have a stake in this topic and each has access to some, but

not all, of the data required to develop a coordinated resource plan. This problem was highlighted at the workshop on Priorities in Health Human Resources Research in Canada in 1989 where one of the study groups noted that "there is a lack of cooperation between the government and institutions of higher education to produce optimal numbers of occupational groups" (Kazanjian & Friesen, 1990, p.18). This group thought that within educational institutions, there existed a deficiency in long term planning based on demographic epidemiologic evidence.

One of the first issues which needs to be clarified when discussing the requirements for nursing personnel is to develop a clear understanding and consensus on the meaning of the word "requirement". Does the term refer to a demand for personnel which is, to a great extent, a political decision based on the ability of the employer to finance nursing positions or does it refer to the need for nursing interventions based on a professional estimate of what a given population should have in order to achieve a maximal state of health? Current approaches to this issue suggest that the most appropriate approach is to first assess the health needs of the population through the examination of demographic analyses, epidemiological surveys, and effectiveness research. Programs and services provided by the most efficient mix of health care workers would then be developed to meet the identified health needs. This approach clearly requires that nursing be able to define what each category of personnel within the nursing group do and then what relationship exists between what they do and what other health care workers do.

The requirement for Registered Nurses is, and will be more so, affected by decisions related to the scope of practice of other nursing personnel such as Registered Psychiatric Nurses, Licensed Practical Nurses, and Health Care Aides. The requirement for RNs is also affected by the role and function of other health care workers such as physiotherapists, occupational therapists, and social workers. The scope of practice and future role of physicians has the potential to greatly affect the requirement for Registered Nurses. An increased demand for government to protect the collective public interest has finally resulted in a receptivity to the idea that nurses can perform many services that are currently in the physician's domain and that they can do this just as effectively for less cost.

Nursing requirements are also affected by financial factors such as funding decisions, economic growth, and compensation packages reached through collective bargaining. Workplace issues and staffing patterns also affect the requirement for nursing personnel. A high turnover and many part-time workers increases the number of actual nurses required to provide a given service. For example, a recent study has demonstrated that optimal deployment of nursing staff (smallest number of nurses required to provide a given quantity of nursing services) is a management skill which needs to be enhanced and that the impact of optimal staffing and scheduling on net nurse requirements cannot be underestimated (Kazanjian, Pulcins, Kerluke, 1992).

The results of another study whereby a regression model was used to analyse nurse

requirements as a function of bed stock, supply of physicians, relative supply of other nurse categories, relative wages of nurses, health expenditures and patient variables, were that, physician supply and bed stock jointly accounted for almost 80 percent of the variation in nursing paid hours. The general conclusion drawn from this study was that, during that era of health care, the most important factors needed to estimate RN requirements were neither patient nor budget-related but rather were related to physician and bed supply (Kazanjian & Chan, 1984). Even with today's movement from hospital-based to community-based care, the facilities available and supply of physicians are factors which quite likely affect the requirement for nursing personnel.

Technological advances also have an impact on the requirement for human resources in health care. Technology demands specialized knowledge. The results have been increasing specialization and subspecialization within medicine and nursing as well as the creation of new specialty areas within the allied health categories with accompanying concerns about certification and professionalization. A specific example of the type of impact which technology could have on nurses is cited in a report prepared by the Canadian Hospital Association.

> The pace of technological change has important ramifications for the supply of nurse human resources. The nurse labour force is characterized by intermittent periods of labour market attachment on the part of the individual practitioners. Voluntary periods of short-term labour market absence may become permanent where the changing demands of nursing employment leave the non-practising nurse ill-equipped to resume practice (Canadian Hospital Association, 1990, p.45).

Technological advances have also hastened the move from inpatient to outpatient

services with the resulting closure of hospital beds and reduction in nursing staff.

Two graphic presentations of the factors affecting the requirement for nurses provide an overall perspective on the topic. Figure 1.5 was developed by the Nova Scotia task force which examined the nursing resource issue in that province. Figure 1.6 was developed by the Centre for Health Services and Policy Research at the University of B.C. Figure 1.5 is a representation of the demand for nursing services which identifies factors under eight broad categories and includes: those related to population needs such as demography, illness patterns; the organization of the health care system such as health policy service delivery, and technology. There are also factors related to practice issues such as minimum qualifications, scope of practice, and the number of other allied health professionals. Finally, factors related to the global economy (funding policies, compensation, financial status, and economic growth) are identified.

Figure 1.6 identifies factors which have a proportional, causal or balance relationship with the demand for nursing personnel. Those factors which have a proportional relationship include the need for care and facilities available. Causal relationships are shown in this model to be population demanding care, nursing personnel mix/roles, health care budget, collective bargaining, supply of physicians, and the supply of nurses. Balance relationships are shown between demographic characteristics and the population demanding care, and positions difficult to fill and demand for nursing personnel.

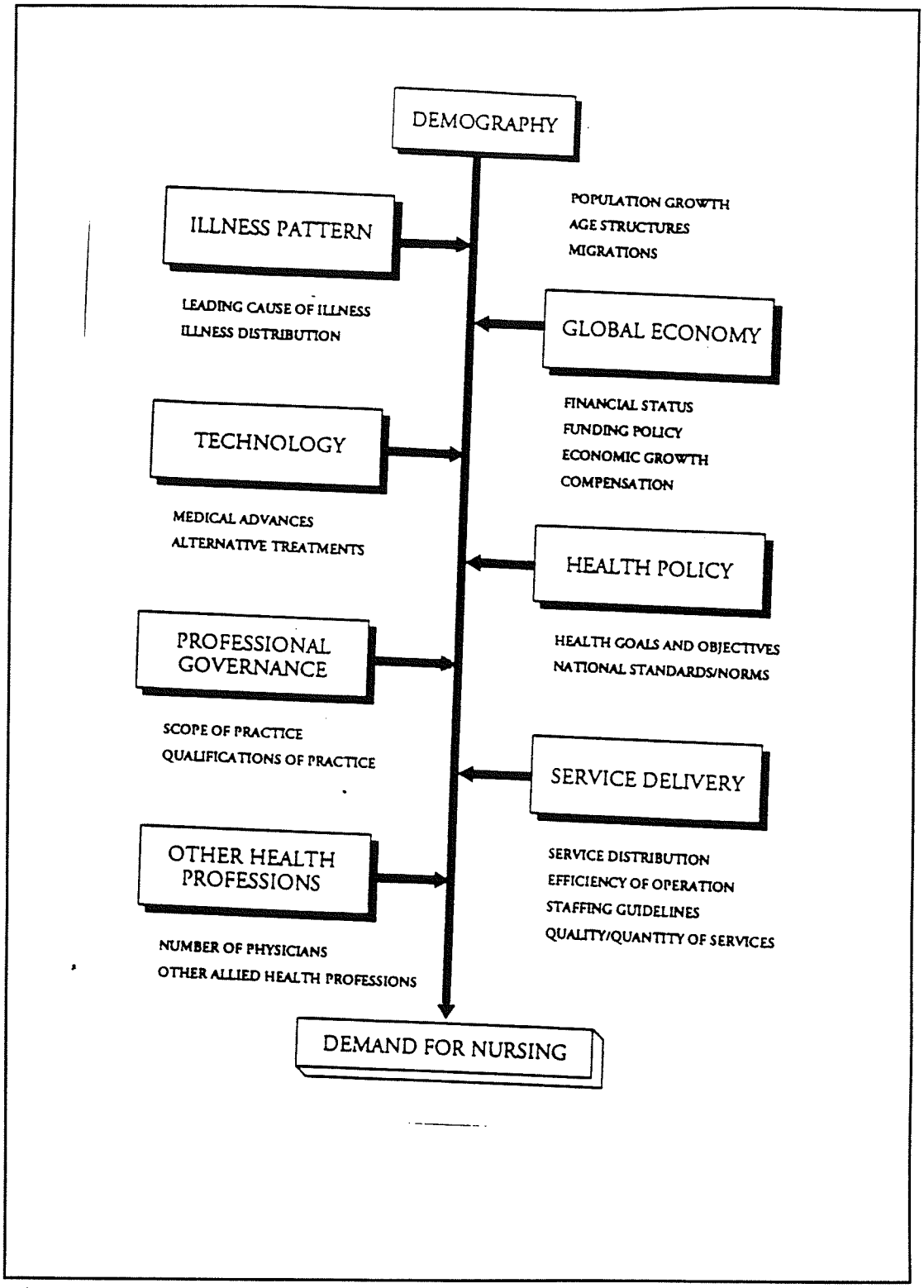

Figure 1.5 Nursing Demand Model
Source: Province of Nova Scotia, 1993, p.92

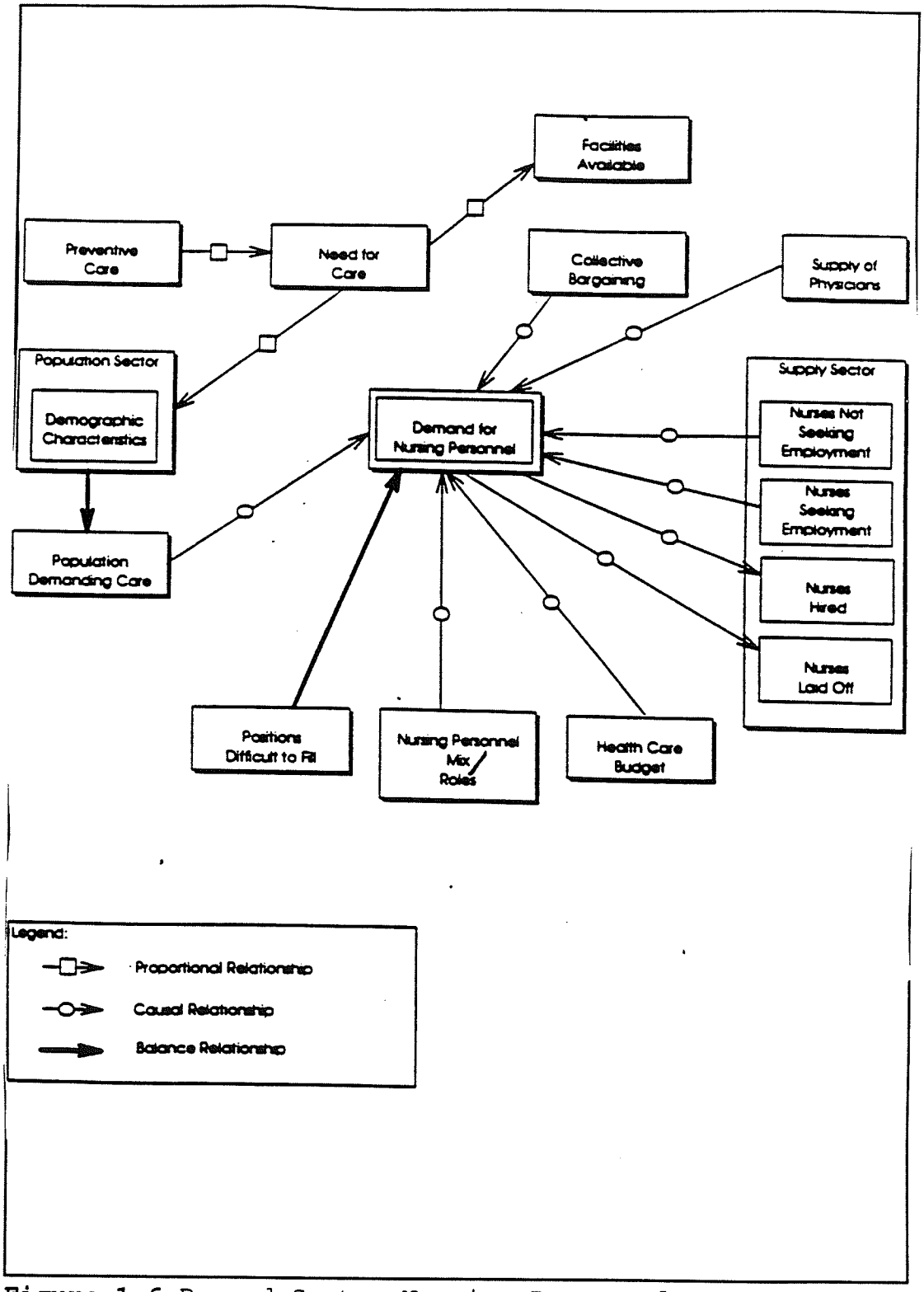

Figure 1.6 Demand Sector Nursing Personnel

Source: University of British Columbia, 1993 p.18

The process used by the Nova Scotia task force to estimate demand provides an example of an attempt to forecast requirements for nursing personnel. A baseline projection was developed based on historical changes in nursing employment patterns over the past 11 and 5 years. (Figure 1.7).

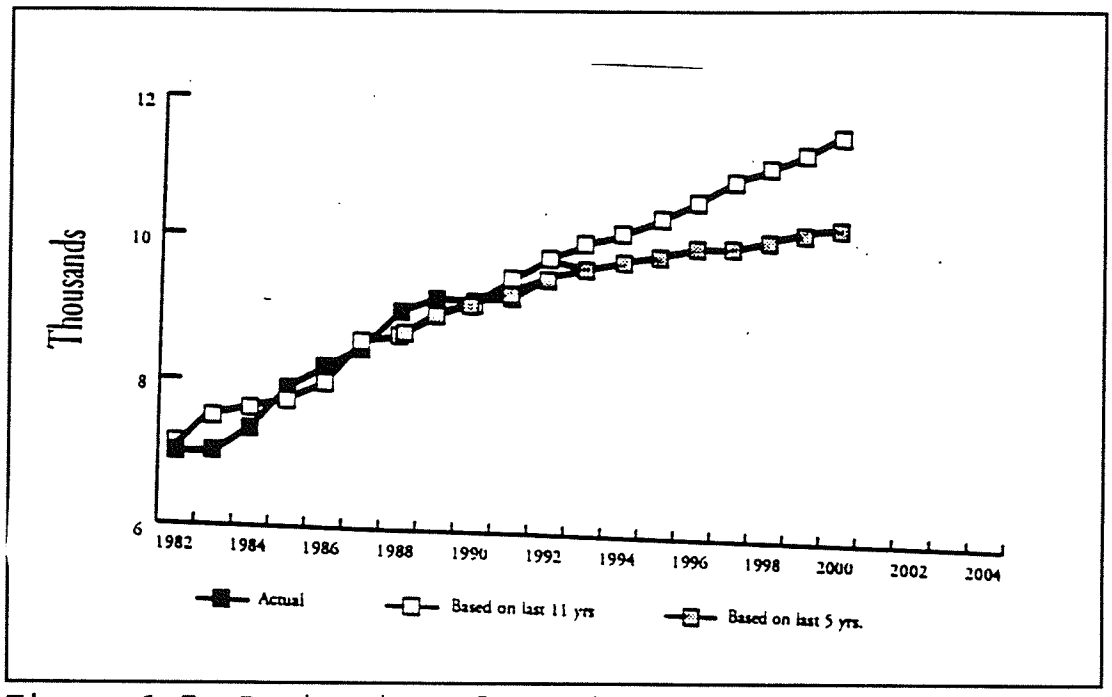

Figure 1.7 Projection of Nursing Demand Model: Status Quo Nova Scotia, 1982 - 2000
Source: Province of Nova Scotia, 1993, p,93

By examining past trends and current policies, the committee assumed that the status quo based on the trends from the past five years would not prevail. They then developed three scenarios which took into account some of the other factors which affect the requirement for nurses such as hospital reductions and the expected increase in demand for community- based nurses.

Scenario 1 was based on the provincial government's fiscal policy of zero percent budgetary growth for the 1992-1993 and 1993-1994 fiscal years and 3 percent growth for the 1994-1995 fiscal year. This scenario proposed that the demand for nursing services would parallel the fiscal policy - no growth in the first two years and 3 percent growth in the third year of the plan. The assumption was that fiscal controls directly affect the majority of publicly funded nursing positions and indirectly many other nursing positions. In plotting the effects of this scenario, the 3 percent growth projected for year 3 almost reaches the estimated growth based on the 5 year linear regression which produced the baseline forecast.

Scenario two was based on the assumption that there would be a decline in demand for RNs over the next three to four years based on current trends in nursing employment. The committee assumed a decrease to 1990 levels and that this decrease would take place in a linear fashion over the next three years.

Scenario three estimated a reduction of 5 percent per year for the next three years based on move by government to a target service ratio of 1,200 patient days per year per 1,000 population rather than the current average of 1,500 patient days per 1,000 population.

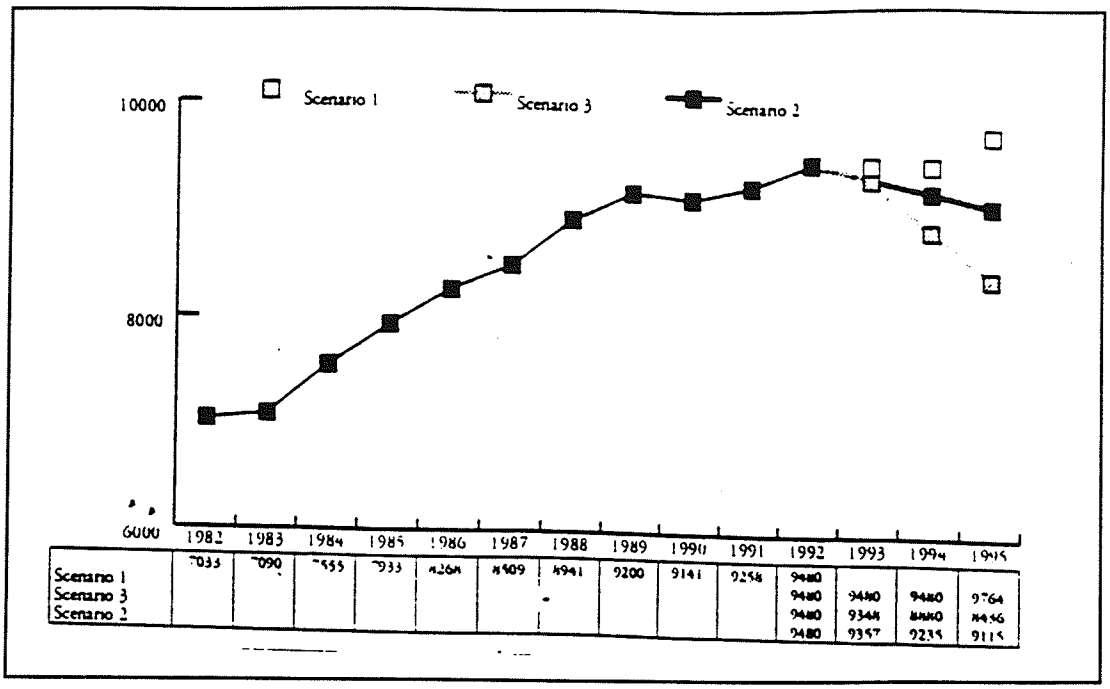

Figure 1.8 Projection of RN Demand - Three Scenarios Nova Scotia, 1982 - 2000
Source: Province of Nova Scotia, 1993, p.93

These three scenarios are shown in graphic form in Figure 1.8.

This example provides an idea about how factors which affect demand can be used to forecast requirements for RNs. The same process can be applied to other personnel. This type of modelling relies on past trends to develop the baseline data and, as noted by the Nova Scotia task force, the accuracy of this model decreases with time and exhibits considerable variance beyond the end of the decade. The application of factors affecting requirements to the projected baseline is also hypothetical rather than scientific. Nevertheless, there is currently no other method to use to predict the affects of these factors on requirements. Furthermore, expert opinion and experienced intuition applied to sound data definitely have a place in performing this challenging

task.

2.4 MODELS

Clearly within the health care system, a most important topic for policy makers is that of nursing personnel and the need to fully understand all the issues related to supply, distribution, deployment, and utilization. Although research in this area is hampered by lack of available, reliable data, efforts are currently in progress to develop models sufficiently complex to examine the multi-faceted nature of human resource planning for nursing personnel.

The Health Manpower Research Unit at the University of B.C. has compiled a bibliography of abstracts on Health Personnel Modelling. In the introduction to the bibliography, it is noted that

> the successful construction of a model requires a clear understanding of the system. Models play an important role in the planning of health personnel because of their ability to abstract the system to the most relevant elements of the situation under study, and to represent the system in symbolic (mathematical) form which allows the use of analytical procedures. Planners are often interested in knowing future outcomes under the influence of a sets of alternative actions and the sensitivity of the system under "what if" situations (University of B.C., 1990, p.2).

Prescott, when examining this issue from the American perspective, identified five general approaches to health manpower planning: a) professional needs approach, b) personnel to populations ratio, c) econometric approaches, d) Bureau of Labour statistics, and e) hybrid approaches.

A. Professional Needs Approach

> This approach uses expert opinion of clinicians to define what, in their judgement, a given population of clients or patients should have in the way of health care services to achieve a usually undefined, but maximal, state of health. Statements of need are unrestrained by existing conditions and also by economic considerations (Prescott, 1991, p.19).

The strengths of this approach, according to Prescott, are that it produces formalized statements against which actual conditions can be compared and quality of care taken into consideration when formulating estimates of personnel requirements. The negatives of this approach are that the estimates may be unrealistic because there is no definition of ideal conditions, no consideration of current existing conditions, and no economic constraints placed on needs. These estimates can also be self-serving and are often based on untested assumptions about quality of service and outcome.

B. Personnel- to- Population Ratios

With this approach existing personnel are projected to population ratios given expected population changes and anticipated changes in the delivery of services.

This approach is simple and based on existing data and it is useful for making comparisons over time and between regions and countries. The drawbacks of this approach are that it assumes that the existing personnel to population ratios are adequate and that future changes in demand will be matched by corresponding changes in supply. This approach also does not account for changes in technology, care delivery, regulation, and reimbursement and essentially projects the status quo into the future. Consequently, the results are neither a statement of need nor a statement of

demand.

C. Econometric Approaches

These approaches are based on the quantity of services employers are willing and able to purchase during a particular time at a specific price or wage. In general, these demand models examine the relationship between the quantities of services over a relevant time period at given prices, financial resources, size, and preferences of the population for services.

The strength of the demand-based models is the inclusion of economic factors in relationship to supply and demand over time. However, these models do not include other factors such as technology, regulations, and delivery system variables. An example cited is the chronic and cyclic shortage of nurses in the U.S.A. despite the consistent growth in supply. Factors such as productivity and how personnel are used within the health care system seem to be as important as economic factors.

D. Bureau of Labour Statistics

With this approach, demand for specific occupations is estimated as the end result of six stages, each of which is based on a separate model of: a) labour force, b) aggregate economy, c) industry final demand, d) input-output, e) industry employment, and f) occupational employment. This model projects growth in the labour force and

economy across all sectors and then develops occupation-specific projections. It has the advantage of examining the health care sector relative to all other sectors of the economy but does not capture many health care specific factors that may significantly influence demand.

E. Hybrid Approaches

These models combine features of the other types and tend to examine information about projected population growth and change in relationship to data about current and projected levels of service. They are helpful for examining historical trends but neglect economic variables and major changes such as technological and delivery system adjustments (Prescott, 1991, p.20,21).

Prescott (1991) indicates that, during the 1970s, substantial effort was devoted to the development of models for projecting requirements for health care personnel in the U.S.A., but that the high cost, complex models which required large amounts of data and technical sophistication have had limited use. She notes that

> models of single occupations cannot capture substitution within and across occupational groups and determine the impact of supply changes in one group on the demand for another. This is particularly important for nursing as substitution of nurses for other nursing personnel and others is pervasive. The substitution of nurses for other workers which normally support nursing units is the likely explanation for the perceived nurse shortage, even in the presence of a historically large supply of nurses (p.21).

Prescott (1991) suggests the components which should be included in a supply/demand model for health care personnel. (Table 1.1) Although she is writing in relation to the

Table 1.1
Analytic Components of a Model for Forecasting Imbalance in Supply and Demand for Health Care Personnel Source: Prescott, 1991. p.23

I. Contextual Factors
- a) Predictions about economic growth and its distribution across the sectors of the economy.
- b) Predictions about changes in the labour force and its distribution across economic sectors

II. Technology, Delivery System, & Regulatory Factors
- a) Labour saving and labour intensifying technological changes.
- b) Organizational and delivery system changes that significantly changes influence productivity.
- c) Significant regulatory requirements impacting on staffing requirements.

III. Economic Factors
- a) Prices and availability (quantities) of goods, services, and capital equipment.
- b) Methods and levels of payment and associated economic incentives such as prospective payment.
- c) Relative wages and wage elasticities for specific occupations and their relevant substitutes.

IV. Manpower Factors
- a) Supply of target health care occupation.
- b) Supply of relative substitutes.
- c) Relative productivity of target occupation and substitutes.

V. Population Factors
- a) Service utilization by various population subgroups.
- b) Projected change in population by variables such as age, sex, race, income, and health status.

American Health care system, her approach provides a direction and beginning focus for attempts at modelling within the Canadian system.

The contextual component places demand for health care personnel within the overall economic environment. The technology and delivery system component is intended to

identify factors with significant impact on productivity or staffing requirements and consequently, demand. For example, the technological advance of laser surgery has decreased the need for hospitalization for many procedures and therefore, created less demand for nurses to provide postoperative care. Other technology such as organ transplants has increased the demand for nurses. Economic factors such as wages relative to other non-health and health workers also have an impact on forecasting nursing requirements. For example, low salaries for nurses in the U.S.A. relative to other nursing personnel may contribute to the substitution of the more flexible and generalist nurse for these other workers. Manpower factors are intended to identify the supply of health personnel and take into account the substitution of one type of worker for another both within nursing and across other occupational categories. The fifth component identifies the health needs of the population (p.22,23).

Kazanjian, Brothers and Wong (1986) have done extensive work on the development of a stochastic model to predict nurse supply and to estimate their work-life activity patterns. The model is described by the authors:

> A simple , age-specific projection model was developed that comprised two submodels: a Markovian one to monitor yearly movements from one membership state to another and a linear submodel for the infusion of new members. The model assumes that the likelihood of moving to any membership state depends only on the nurse's current age and membership state. The details of the projections of labour force over time show a particular age cohort's characteristic behaviour and delineate the effect of childbearing and aging on the supply of nurses. As well as projecting future manpower, the age-specific transition matrices were used to estimate the professional life expectancy of registered nurses. This information includes the average number of

> continuous years of practice for each age, as well as the average total number of years of practice until being deleted from the system at the age of 75. The forecasting capability developed from this work attempts to address two questions central to manpower planning: 1) how many nurses will there be in the province in the next 5 years? and 2) what is the time-frame involved in nurses' life-cycle activity patterns? (p.1067)

The authors tested this model with data on registered nurses in British Columbia in 1982 and 1988. Their analysis indicates that the model does answer both questions at any point in time. They also found that the model is highly sensitive to changing demographic and socioeconomic conditions occurring either gradually over time or abruptly.

> It is unlikely that any model could anticipate sudden fluctuations in labour market conditions. The next best alternative is then to have a model that most accurately captures changing conditions. While other models often fail because underlying assumptions are no longer held true, our model is almost assumption free. When there is sufficient evidence of changing conditions: social, demographic, economic, etc., repeated applications of the model to current membership data will define the magnitude of these changes and their impact on nurse human resources. Continued application of the model will provide longitudinal data on the relationship between the logic of individual decisions and the structural parameters which define the limits of individual action (Kazanjian, 1989, p.9).

The work of Kazanjian and her co-authors is focused on the supply side of the equation. The requirements dimension is even more complex and difficult to model and requires a Canadian focus. The collection of abstracts on Health Personnel modelling which was produced by the Health Manpower Research Unit at UBC contains only two of twenty-one citations which are Canadian. One of these is that of Kazanjian and the other is work done by the Alberta Hospital Association in 1980. Because the collection was produced from a search which ended in 1989, a recent

literature search on nursing models was recently completed in October, 1994. This search was done for the years 1989 - 1994 and found two additional Canadian citations. Obviously, there is much work to be done.

3. CONCLUSION

Historically, there have been cycles of nurse oversupply and undersupply in this country. A few years ago, in the mid to late 1980s, concerns were rampant about the nursing "shortage." Recruitment and retention initiatives were developed and implemented in order to address this supply crisis. Over a period of two to three years, a dramatic shift occurred and in the early 1990s nurses began to lose their jobs and new graduates have not been able to find work. These supply and requirement "swings" are not new within the nursing profession although the current "teeter-totter" has been one of the most dramatic. It remains to be seen if the recent cataclysmic events will be the impetus to additional research and serious policy initiatives on this topic.

Human resource planning and forecasting is not a precise science. However, the general approach to the topic should use a model which has the sensitivity to capture as many as possible of the many factors influencing supply, demand, population health needs, and economic factors. Government leadership at both the national and provincial level is necessary in order that accurate, current and complete information on the supply of health care workers is readily available. As O'Brien-Pallas, (1992)

notes,

> It is paradoxical that, when the supply, distribution, deployment, organization, and utilization of health human resources are of interest to many stakeholders and the research community is poised to conduct such studies, efforts are seriously hampered by the amount and quality of information available (p.21).

The Workshop on Priorities in Health Human Resources Research in Canada, 1989, brought together 27 academic and government representatives from the federal, provincial/territorial levels to identify priority research areas within the field of health human resource planning. The participants concurred that research in this area is not only important in understanding and explaining the current situation, but also central to the development of public policy. A number of research gaps were identified and priorities for research topics were established. The exploration of the optimal number and mix of providers to meet the health needs of the population was established as one of these priorities.

Human Resource planning within the health care field is a complex task which has generally been avoided within Canada. The current dramatic changes in health care systems across the country have highlighted this omission and provided impetus to address the issues. Portions of a speech presented by the Minister of Health, the Honourable Diane Marleau, at the National Conference on Nursing Administration on October 17, 1994 indicate this growing intent,

> I welcome the Integrated Human Resources Development Framework being co-developed by the Canadian Nurses Association and three other professional groups. Your framework fits in well with the work underway to respond to the shift from an institutional to a continuum-of-care model. As Partners in the

> Federal/Provincial/Territorial Working Group on Integrated Health Human Resource Planning, we, too, are examining the new types of health workers who will be needed; the multi-disciplinary training they will require; and the different delivery structures that must be developed to accommodate these new trends (Health Canada, 1994, p.4).

In its submission to the standing committee of the House of Commons on Health and Welfare, Social Affairs, Seniors and the Status of Women, in March 1990, the CNA recommended that Health and Welfare make research in the area of predictive models for nursing resource planning a priority (Canadian Nurses Association, 1990, p.16). In August 1992, the staff of the CNA noted that

> there is a lack of formalized planning to consider the impact on nursing when new services are introduced or changed. There is a pressing need for research to determine future nursing workforce requirements, especially in this time of health care reform. In short, predictive models are needed which will allow demographic and epidemiological factors to be varied in forecasting supply and demand (Canadian Nurses Association, 1992, p.2).

This review of the recent literature on nurse human resource planning provides a context within which the topic may be approached. Nurse requirements are influenced by the complex interaction of so many economic, political, and social factors that it is difficult to quantify and fully measure all of the variables concerned. Consequently, regardless of which model is developed or used, the quality of the product will depend as much on the insight and judgement of the researcher as on the excellence of the instrument.

CHAPTER 2

DESCRIPTION OF THE CURRENT SUPPLY OF NURSING PERSONNEL IN MANITOBA

This chapter provides a descriptive overview of the current Manitoba nursing supply situation and addresses the following questions: How many nursing personnel do we have? Where are they? What are they doing? What characteristics do they have? Data were obtained from various sources including the professional associations of MARN, RPNAM,and MALPN, Manitoba Health, and the Provincial Labour Adjustment Committee. Included in the classification of nursing personnel are the following categories: Registered Nurses (RN), Registered Psychiatric Nurses (RPN), Licensed Practical Nurses (LPN), Health Care Aides (HCA), and Home Care Attendants (HMA).

Much of the data included in this chapter were collected by the Supply Working group of the Manitoba Professions Advisory Council (MNPAC). The MNAPC was formed in April 1994 to develop consensual solutions to the issues of role clarification amongst nursing personnel and to facilitate the development of a framework which would lead to a provincial nursing resource plan and a nursing education plan for the province . The membership of the MNPAC includes the Provincial Nurse Advisor, two representatives from the Manitoba Association of Registered Nurses (MARN), two

representatives from the Registered Psychiatric Nurses Association of Manitoba (RPNAM), two representatives from the Manitoba Association of Licenced Practical Nurses (MALPN), two health care aides, one representative from the Manitoba Council of Health Care Unions (MCHCU), and one representative from Manitoba Health.

1. EXISTING NURSING WORKFORCE

1.1 Membership Profile

In order to be employed as a Registered Nurse, Registered Psychiatric Nurse, or Licensed Practical Nurse it is necessary to be a practising member of MARN, RPNAM, or MALPN. Associate and Non-practising members pay a lesser fee, may not use the appropriate designation (RN, RPN, LPN) and cannot be employed as such. There is no like requirement for Health Care Aides and Home Care attendants. Consequently, it is much more difficult to obtain accurate numbers and information about this group.

A brief review of the data from 1990 to 1994 indicates that the numbers of RNs and RPNs have remained relatively stable but that the numbers of active practising LPNs have decreased by 625 persons. Longitudinal and comprehensive data on Health Care Aides and Home Care Attendants is not available. The MCHCU was able to obtain specific information from 19 work sites which indicates that, as of May 1995, there were a total of 1257 Nursing Assistants working at these sites of which 922 were

female and 335 were male. Other demographic information was not available.

Table 2.1 Number of Registrants by Year 1990 - 1994 Manitoba Nursing Personnel

	1990	1991	1992	1993	1994
Registered Nurses					
Active Practice	10,896	11,103	11,206	11,125	11,026
Associate	297	266	185	196	191
TOTAL	**11,193**	**11,369**	**11,391**	**11,321**	**11,217**
Registered Psychiatric Nurses					
Active Practice	1,166	1,173	1,198	1,175	1,149
Associate	137	118	106	91	87
TOTAL	**1,303**	**1,291**	**1,304**	**1,266**	**1,236**
Licensed Practical Nurses					
Active Practice	3,368	3,084	2,992	2,741	2,743
Associate	597	445	343	284	N/A
TOTAL	**3,965**	**3,529**	**3,335**	**3,025**	**2,743+**

SOURCE: MARN, RPNAM, MALPN

1.2 Gender

The numbers of male RNs, LPNs, and RPNs have remained relatively stable. In 1993, close to 28% of RPNs were male as compared to 3% of RNs and 2% of LPNs. No information is available about Health Care Aides and Home Care Attendants

.

Table 2.2 Nursing Classification by Gender, 1990-1991 and 1993

	1990-1991		1993	
	Male	**Female**	**Male**	**Female**
Registered Nurses	267	9489	326	9932
Registered Psychiatric Nurses	315	800	317	815
Licensed Practical Nurses	59	3470	60	2965

SOURCE: MARN, RPNAM, MALPN

1.3 Age

An examination of the age structure of the 1993 cohorts of the various groups of nursing personnel indicates that one-third or more of all the active practising RNs, RPNs, and LPNs are over 45 years of age. More detailed examination by region shows that this same fact holds true for all three groups who work in Winnipeg or the rural regions. There is a difference in the Northern regions where over one-third of

the RPNs and LPNs are over 45 but only one-fifth of the RNs are in this age category. RNs who work in the North are a younger group. No information is available about Health Care Aides or Home Care Attendants.

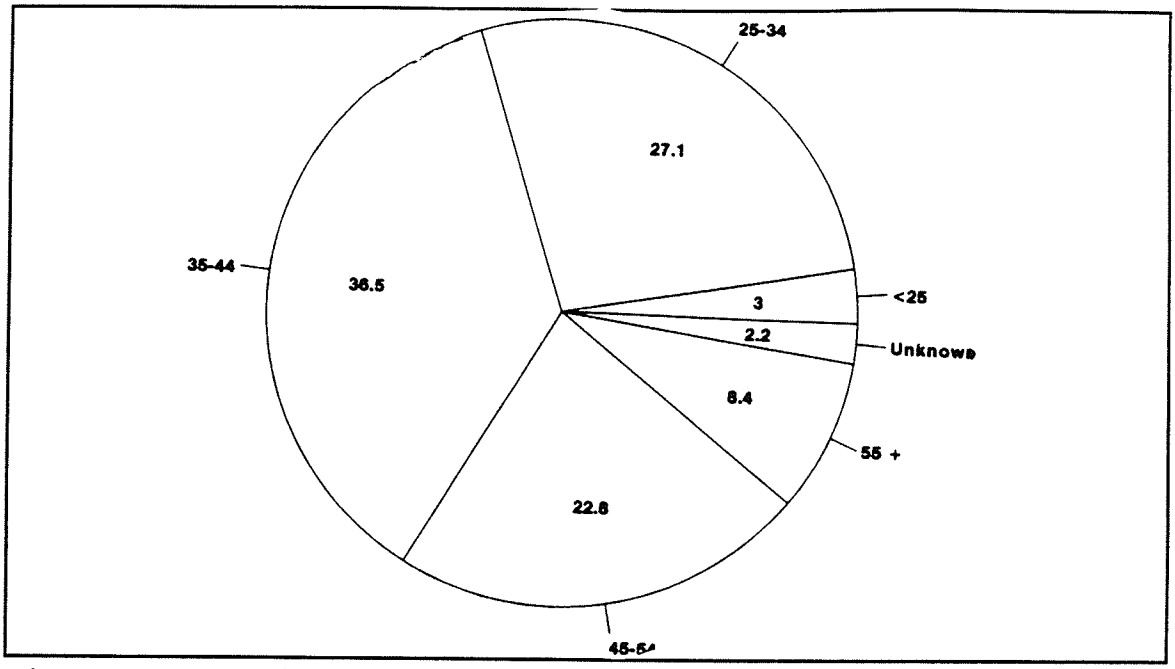

Figure 2.1 Manitoba RNs by Age Category 1993 SOURCE: MARN

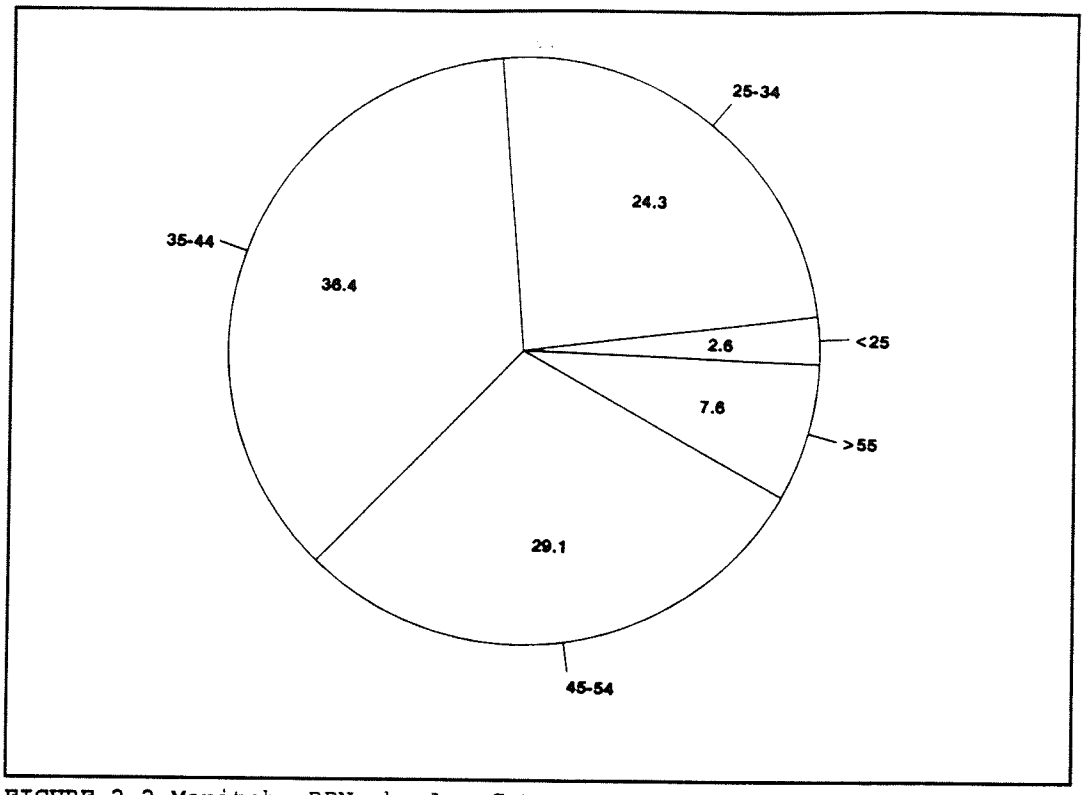

FIGURE 2.2 Manitoba RPNs by Age Category 1994 SOURCE: RPNAM

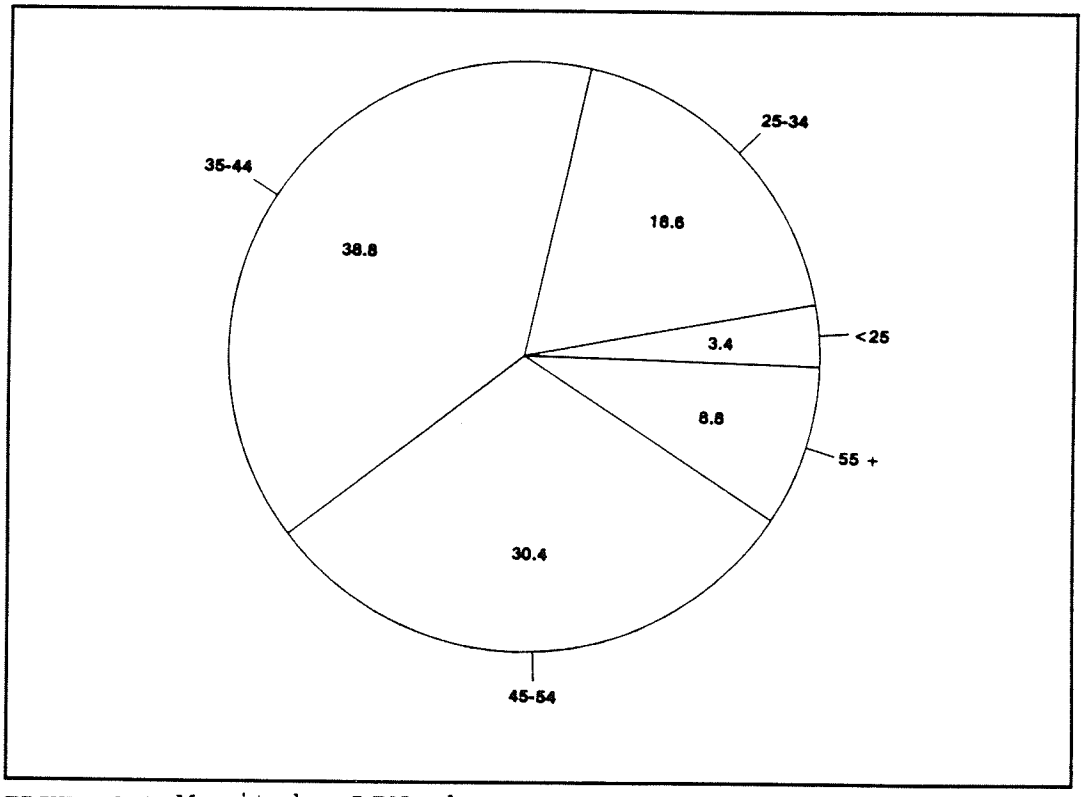

FIGURE 2.3 Manitoba LPNs by Age Category 1993
SOURCE:MALPN

1.4 Educational Preparation

All active practising LPNs, RPNs, and RNs must have completed an approved education program. The education of RPNs is in the process of being changed from a two year diploma program to a four year degree program with an optional diploma exit. When there are graduates from the new degree program there will be two levels of education accepted as qualification to be a RPN. This is already true of RNs. Currently, approximately 84 % of RNs are educated at the diploma level and 15% at the baccalaureate level. The education of currently employed Health Care Aides and Home Care Attendants varies from no formal education to preparation by in-facility programs to formal education by an educational institution.

Table 2.3 Educational Preparation of Manitoba Registered Nurses - 1993

EDUCATIONAL PREPARATION	1993	PERCENT
DIPLOMA	8591	83.75%
BACCALAUREATE	1552	15.13%
MASTERS	102	0.99%
PhD	13	0.13%
TOTAL	**10,258**	**100.00%**

Source: MARN

1.5 Place of Graduation of New Registrants

New registrants in the RN and LPN groups refers to those registering with the association who have not been previously registered. This group includes those who were educated outside of Manitoba in other provinces or countries and those who received their education within Manitoba Nursing Programs but does not include those who were registered as inactive and who have now registered as active. The RPNAM data include in the new registrant "all" category those who were previously inactive and who have now registered as active practising.

It can be seen that 75-85% of new RN registrants since 1983 have been graduates from Manitoba Nursing Education Programs. The new LPN registrants came primarily from Manitoba programs (80-89%) while approximately 68-88% of new RPN registrants were Manitoba graduates.

TABLE 2.4 New Registrants Manitoba Nursing Personnel

CATEGORY	1983	1987	1990	1991	1992	1993	1994	1995
RN ALL	961	738	650	638	643	587	N/A	N/A
NEW GRADS	771	549	489	486	516	489	468	390*
RPN ALL	N/A	N/A	63	64	60	35	31	N/A
NEW GRADS	N/A	N/A	43	49	51	31	22	27
LPN ALL	N/A	N/A	N/A	146	112	66	54	N/A
NEW GRADS	275	174	131	131	100	52	51	27*

* Projected

Source: MARN, RPNAM, MALPN

1.6 MIGRATION STATISTICS

The interprovincial migration statistics for the MARN provide an illuminating picture which reflects the Manitoba nursing employment picture from 1987 to 1993. In 1991 and 1992 the total out-migration of RNs exceeded the total numbers of new registrants including the new Manitoba graduates. It is also important to note that Manitoba graduates need to register with the MARN prior to registering in another jurisdiction and that this data is based on requests for verification rather than on information that the requesters actually left the province. It appears however, that the numbers of active practising nurses within the MARN statistics include a substantial number of nurses who have registered with the sole purpose of moving elsewhere. They are not available for employment in Manitoba. The RPNAM out migration data relates to persons who were actually confirmed as having left the province. LPN data are pending.

TABLE 2.5 **MANITOBA NURSING PERSONNEL MIGRATION 1987 TO 1993**

YEAR	IN			OUT			NET		
	RN	RPN	LPN	RN	RPN	LPN	RN	RPN	LPN
1987	189			536			-347		
1988	155			657			-502		
1989	161			685			-524		
1990	161	20		626	44		-465	-24	
1991	152	15		640	21		-488	-6	
1992	127	9		655	30		-528	-21	
1993	98	4		577	27		-479	-23	

SOURCE: MARN, RPNAM

TABLE 2.6 RNs Net Gain/Loss

	1987	1988	1989	1990	1991	1992	1993
NEW REGISTRANTS TOTAL INCLUDING MB. GRADS	738	916	685	650	638	643	587
OUT MIGRATION*	536	657	685	626	640	655	577
TOTAL	+202	+259	0	+24	-2	-12	+10

* Does not include retirements, decisions to leave nursing

Source: MARN

2. EMPLOYMENT PROFILE

Members of the three professional associations report their employment status as part of the registration process. The 1991 and 1993 self-reported employment data from the three associations was compared to the information obtained by the 1994 Manitoba Health Survey. The Health Survey also included data on Health Care Aides and information about full-time, part-time and casual status. It can be seen in this comparison that, while the numbers of employed RNs has remained relatively stable, more than 50% of them are working part-time. There were 6,416 full-time positions for 9,335 - 10,227 employed RNs. This same table also clearly shows the decrease in the numbers of LPNs who report themselves as employed (343 less between 1991 and 1993). Like the RNs, the majority of LPNs are employed in part-time positions. The health survey results related to the RPN group are not accurate because some of the key

employers of RPNs such as the Manitoba Development Centre and the Corrections department did not respond. The number of RPN fulltime positions also does not include those RPNs working as Community Mental Health Workers. A review of association data indicates, however, that RPNs are the only group which has a significant percentage of its members employed full-time (69%).

It is interesting to note that the number of full-time positions for Health Care Aides is only 790 fewer than the number of full-time positions for RNs. Like the RNs and LPNs, the majority of Health Care Aides work part-time. Casual numbers for all categories of workers are probably inflated due to persons being on multiple lists.

TABLE 2.7 EMPLOYMENT STATS: MANITOBA NURSING PERSONNEL COMPARISON TO MANITOBA HEALTH SURVEY 1994

CATEGORY	1991 Assoc. Data	1994 Assoc. Data	1994 MB Health Survey	Survey Breakdown	Survey EFT's
RN	10,290	11,026	9,335.5	F.T. 3,745.5 P.T. 4,009 CAS. 1,581	6,416.7
RPN	1,115	1,149	845	F.T. 525 P.T. 256 CAS. 64	691.5 * (987)**
LPN	3,084	2,743	2,661	F.T. 725 P.T. 1,259 CAS. 677	1,604.9
HCA			9,165	F.T. 2,491 P.T. 2,955 CAS. 3,719	5,626.05

* Does not include MDC, Corrections, or RPN's as CMHW
** Corrected total

RPNAM provided data re EFTs: MDC : 158, Corrections : 13, CMHW : 125

The dramatic shift from Full-time to Part-time status within the RN group is highlighted in the following graph. It can been seen that this change occurred from 1988 to 1989. Figure 5 shows this same change has occurred with the RPN group although it is not as dramatic.

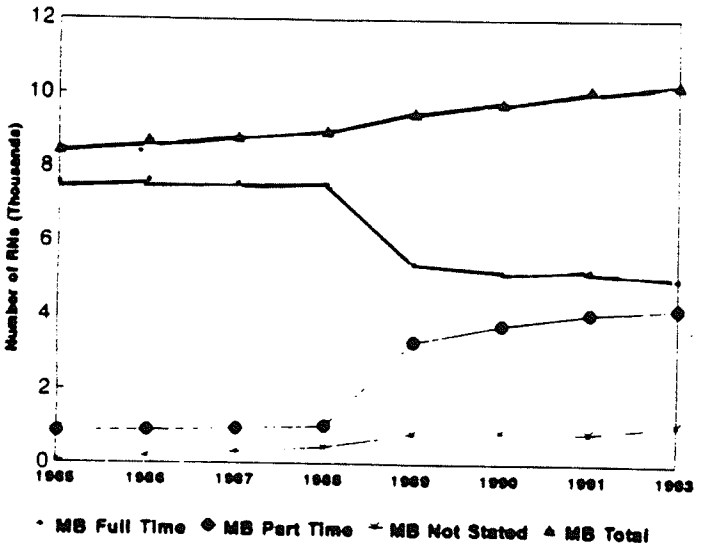

Figure 2.4 **Manitoba RNs Employment Status 1985-1993** **Source:MARN**

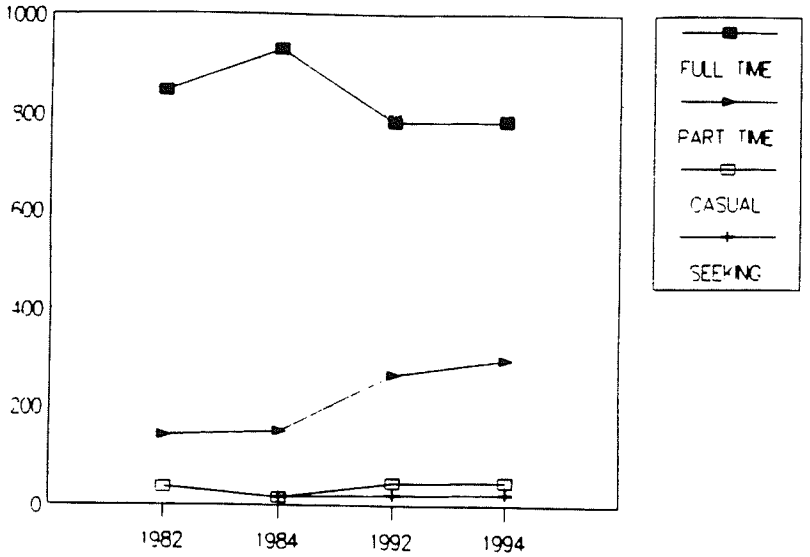

Figure 2.5 RPNs Employment Status 1982-1994 **Source: RPNAM**

There are some interesting differences between the three professional nursing groups related to location of employment. 65% of RNs work in the city of Winnipeg as compared to 31% of RPNs and 44% of LPNs. 67% of RPNs work in rural Manitoba as compared to 30% of RNs and 49% of LPNs. Only a small percentage of all three groups work in the Northern regions of Norman and Thompson.

TABLE 2.8 Manitoba Nursing Personnel Regional Summary

	RPN (1994)	RN (1993)	LPN (1993)
WINNIPEG	358 (31.9%)	6736 (65.1%)	1164 (44.3%)
RURAL	751 (67.0%)	3164 (30.6%)	1289 (49.0%)
NORTHERN	12 (1.1%)	447 (4.3%)	175 (6.7%)

SOURCE: MARN, RPNAM, MALPN

There has been a definite shift in employing agency between 1991 and 1993. 799 fewer RNs are working in general hospitals and 584 more RNs are employed in the fields of personal care, rehabilitation, and extended care. This same shift holds true for RPNs and LPNs although the numbers are less. It can also be seen that there is a beginning shift to the community and home care for all three groups.

TABLE 2.9 Change in Employing Agency 1991 to 1993
Manitoba Nursing Personnel

AGENCY	RN	RPN	LPN	TOTAL
GEN. HOSPITAL	-799	-11	-340	-1150
PSYCH/MHC	+2	-32		-30
COMM/HOME CARE	+95	+14	+7	+116
PCH/REHAB/EXT.CA	+584	+15	+31	+630
DEVT/HANDICAPS		+18		+18
NURSING STATIONS	+5			+5
M.D. OFFICE	-7		-9	-16
EDUCATION	-17			-17
OCC. HEALTH			-2	-2
PRIVATE DUTY			+1	+1
TOTAL	-137	+4	-312	-445
OTHER/UNKNOWN	+24	+56	-31	

SOURCE: MARN, RPNAM, AND MALPN

The previous table also shows an overall decrease in LPN and RN positions from 1991 to 1993. This information is obtained from the registration data of the two associations. The Provincial Health Care Labour Adjustment Committee reports a total of 112 RNs and 141 LPNs remaining on the redeployment list as of March, 1995. It must be noted that some of the persons on the redeployment list may be working in term positions or be employed by facilities that are not part of the Provincial Labour Adjustment Program.

TABLE 2.10 Manitoba Facilities Layoffs/ Redeployment Nov.92 to Mar. 95

	LAID OFF		RESIGNED RETIRED, ETC.		CONFIRMED IN NEW PERM. POS.		REDEPLOYMENT LIST	
	#	EFT	#	EFT	#	EFT	#	EFT
RN'S	257	172	20		125	83	112	75
RPN'S	12	9	2		2	1	8	7
LPN'S	185	129	17		27	17	141	96
HCA'S	13	9	2		1	1	10	8
TOTAL	467	319	41		155	102	271	186

SOURCE: PROVINCIAL HEALTH CARE LABOUR ADJUSTMENT COMMITTEE

Data on practising RNs positions indicate that there has been a substantial reduction in a variety of positions from 1991 to 1993. This information confirms a wholesale reduction in nursing positions regardless of position within the nursing hierarchy.

TABLE 2.11 Reductions in RN Positions other than General Duty

POSITION	1991	1993	DIFFERENCE
Chief Nursing Officer	342	250	-92
Clinical Nurse Specialist	132	59	-73
Head Nurse	795	637	-158
Instructor	363	323	-40

Data from MARN 1995

Data from the RPNAM indicate that Supervisor, Director, and Clinical Nurse Specialist positions have slightly increased while charge/assistant charge positions have decreased. There has been an increase in community positions.

TABLE 2.12 Change in RPN Positions 1991 to 1994

POSITION	1991	1994	DIFFERENCE
Staff Psychiatric Nurse	709	745	+36
Charge/Assistant Charge	144	99	-45
Supervisor/Coordinator	56	60	+4
Director/Assistant	22	27	+3
CNS	12	17	5
Instructor	17	18	+1
Community Work	90	97	+7
Other	77	86	+9

SOURCE: RPNAM

3. GRADUATES OF NURSING EDUCATION PROGRAMS

Between the years of 1991 to 1994 there was a reduction in the numbers of graduates in all the nursing categories. The numbers of RN graduates decreased by 18%, LPN graduates decreased by 61%, RPN graduates decreased by 56%, and Health Care Aide/ Home Care Attendants decreased by 33%. It is interesting to note that the combined numbers of health care aide/home care attendant graduates far outnumber the numbers of professional graduates. For example, in 1991 there were 1113 new graduates from the Aide/attendant programs while there were 715 graduates from the professional nursing programs. In 1994, there were 753 graduates from the Aide/attendant

programs and 510 graduates from the professional programs. Projections for 1995 indicate further reductions in the groups for which data were available: the number of LPN graduates will drop from 51 to 27 between 1994 and 1995 while the numbers of RN graduates will decrease by 53. This decrease in graduates is due to a number of factors including the closure of some Schools of nursing, a reduction in the number of classes within the schools, and uncertainty surrounding future directions of nursing education and about job opportunities. RN Education program projections for 1996 and 1997 indicate that this trend will continue with 310 graduates in 1996 and 285 graduates in 1997.

Table 2.13 Graduates: Nursing Personnel - Manitoba

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
LPN	173	154	174	173	95	137	131	100	52	51	27
RPN	77	59	47	38	47	43	50	52	38	22	
RN	464	523	519	503	539	502	534	522	537	437	384
HCA HMA	523	555	741	918	887	936	1093	770	992	753	

RN, LPN 1985 - 1991 stats from Health Personnel in Canada
All other stats from Supply Committee, MNPAC
1995 stats are projected by MNPAC
The breakdown of HCA and HMC is as follows:

NOTE: HCA = Health Care Aide
HMA = Home Care Attendant

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
HCA	375	366	501	578	527	748	671	535	640	517	
HMA	148	189	240	340	360	188	422	235	352	236	

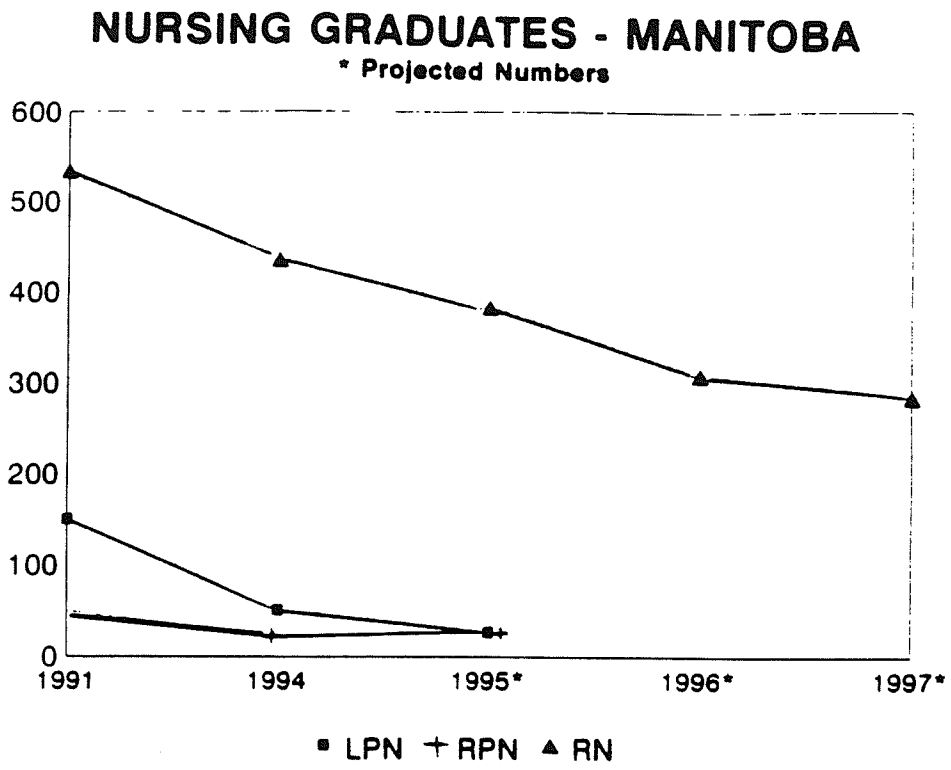

FIGURE 2.6 Nursing Graduates - Manitoba SOURCE: MARN, RPNAM, MALPN

4. OTHER CONSIDERATIONS

The MNPAC (Manitoba Nursing Professions Advisory Council) as part of its deliberations, determined the ratio of Manitoba Nursing Personnel to Manitoba Population. This ratio was determined using two different methods: 1) numbers of active practising members to the Manitoba population, and 2) Number of full-time equivalent positions to the Manitoba Population.

TABLE 2.14 Ratios of Manitoba Nursing Personnel to Total Population

Source: MNPAC

	1994 Active Practicing	Per 10,000 Population	1994 Survey EFTs	Per 10,000 Population
RNs	1 : 108	92	1 : 186	53.5
RPNs	1 : 1042	9.5	1 : 1213	8.2
LPNs	1 : 436	22.8	1 : 746	13.3
HCAs	N/A	N/A	1 : 212	46.9
Canada RNs	1 : 125	N/A	N/A	
NUMBERS USED				
RNs	11,026		6,416	
RPNs	1,149		987	
LPNs	2,743		1,605	
HCAs	N/A		5,626	

Manitoba Population (Manitoba Health Report, 1993/94) = 1,198,214

Finally the MNPAC also obtained information concerning the numbers and types of facility beds in Manitoba and trends from 1991 to 1994. It is anticipated that there is a correlation between acute care bed reductions and decreased numbers of nursing positions and between the increase in personal and chronic care beds and the shift in employing agencies.

TABLE 2.15 Health Facility Rated Bed Summary 1991- 1994

Level of Care	1991	1992	1993	1994	Percent Change 1994 vs 1991
Acute Care	5,503	5,466	4,931	4,669	-15.2%
Extended Treatment	902	923	951	907	0.6%
Personal Care	8,411	8,558	8,669	8,924	6.1%
Total	14,816	14,947	14,551	14,500	-2.1%

SOURCE: MANITOBA HEALTH ANNUAL REPORT 1994

It is difficult to assess the amount of shift in employment from acute care institutions to the community with the current data available. A report from the Continuing Care Programs of Manitoba Health seems to indicate a decrease between 1989 and 1994 in numbers of persons receiving Home Care Services from RNs and LPNs and an increase in services provided by Home Care Attendants.

TABLE 2.16

AVERAGE MONTHLY NUMBER OF PERSONS RECEIVING SELECTED SERVICES BY CATEGORY 1989/90 TO 1993/94					
SERVICES	AVERAGE MONTHLY NUMBER OF PERSONS				
	1989/90	1990/91	1991/92	1992/93	1993/94
HOME SUPPORT SERVICE	6349	6384	5928	5266	4541
HOME CARE ATTENDANTS	4645	5252	5799	6317	6448
OVERNIGHT/DAILY WORK	138	189	160	151	138
RN	4033	4113	4180	4163	3679
LPN	1029	1097	1017	930	754
THERAPY	564	490	467	432	557

SOURCE: MANITOBA HEALTH 1994

5. OBSERVATIONS

This section provided a detailed examination of the current numbers and types of Manitoba nursing personnel. It is important to remember that the information provided by the Associations is gathered through self-reports by individual members at annual registration.

While there is no reason to believe that the data are incorrect, the accuracy of information provided by individuals depends on the correct interpretation of the questions being asked. Consequently, there is room for error.

CHAPTER THREE

POLICY CONSIDERATIONS

INTRODUCTION

As was noted in Chapter One, research in the area of Human Resources within the Health Care field is in its infancy and has been hampered by the lack of available, reliable data. The information provided in Chapter Two was gathered from a number of different sources and compiled, as much as possible, in a consistent format. The data provided represents one of the first attempts made in Manitoba to provide reliable, comprehensive data on all categories of Nursing personnel. The information draws attention to a number of significant considerations which will need to be addressed by government and other stakeholders within the health care system.

1. CURRENT PERSONNEL

The finding that one-third or more of Rns, RPNs, and LPNs are 45 years of age or older has significant implications for the future supply of these professions. Additional research is required to accurately predict the work-life expectancy of this current stock of nursing personnel. To that end, the model developed by Kazanjian, which provides the ability to monitor yearly movements from one membership state to another and to predict membership state based on the nurse's current age and membership state, is in the process of being applied to Manitoba nursing personnel. Work is well underway on this collaborative project between Manitoba Health and the MNPAC.

This model also has provision for the infusion of new members and, in its totality, provides the ability to forecast a) how many nurses there will be in the province in the next five years and b) what the life-cycle work activity patterns of nurses will be. Future endeavours within Manitoba will include experimenting with the complete model to ascertain if we can reliably predict this type of information which is crucial to the development of a long-term nursing resource plan.

The dramatic decline from 1991 to 1994 and expected further decrease in new graduates from the professional nursing education programs could be due to a number of factors including decreased government support and declining interest in nursing as a profession especially considering the current job market. Regardless of the causal factors, the decreased numbers of new graduates coupled with the fact that the current work force is aging should trigger alarms about whether future requirements for nursing personnel can be met.

These concerns need to be balanced against two other considerations which signify current oversupply of professional nursing personnel. Firstly, there are still a significant number of RNs and LPNs on the redeployment list. These nurses have been laid off by their previous employers and are looking for work. Secondly, 50% or more of RNs and LPNs are working part-time rather than full-time. Again, it is not clear whether this is by choice or because only part-time work is available. Regardless of the reason, the part-time workers represent a ready resource if the demand for nursing

services increases. The potential exists to maximize existing resources before incurring the expense of educating new personnel.

The numbers and types of nursing personnel deemed as adequate to meet the health care needs of the Manitoba population will depend on the answer to the question raised in Chapter One regarding the definition of "requirement". Does the term refer to a demand for personnel which is a political decision based on the ability of the employer to finance nursing positions or does it refer to the need for nursing interventions based on a professional estimate of what a given population should have in order to achieve a maximal state of health? The current political and economic environment clearly is leaning to defining requirements in terms of demand - a decision which is based on the ability of the employer to finance nursing positions. Consequently, there seems to be movement within the province to substitute the lower-paid, less- educated Health Care Aide for the higher-paid, professionally- educated Registered Nurse. This movement is threatening for professional nursing staff in two ways. First of all, it means fewer positions for qualified nurses and secondly, it raises anxiety about the quality of care which patients are receiving. In most instances, the Aides work under the direction and supervision of nurses who are concerned about their liability for the care provided. In some instances, ethical issues are also a question for nurses who believe that the care being provided is substandard. On the other hand, the movement by government and employing agencies to the use of the least expensive health care provider who can presumably provide the care required, may create new opportunities for nurses who are

educationally prepared to meet some of the care needs formerly met only by physicians. Nurses are a less-expensive alternative who, in some instances, can provide as effective care as the more- expensive physician.

2. EDUCATIONAL IMPLICATIONS

If future nursing resource planning is to be based on providing the most efficient mix of nursing personnel required to meet the health needs of the population, then it follows that the education sector must follow the same plan. A coordinated approach by the health, labour, and education and training sectors will be required in order to provide the right mix of personnel with the right education to meet the expected demand. This coordinated approach would ensure that demands for nursing services could be met and would also provide a standardized education at each level of the Nursing ladder. Consequently, the competencies of each category of personnel would be well know and understood by both the graduates and the employers. Dependant on the philosophy of the government, a policy decision could be made to provide increased financial resources for the education of those types of personnel which were scarce and less to those what are in a surplus situation. There are other issues which need to be addressed within the education sector in addition to the key one of coordinated planning.

Historically, there has been a trend toward the professionalization of RNs, partly as a way of differentiating and defining this group as distinct among the other nursing occupations such as Licensed Practical Nurses and Health Care Aides, and also as a way of defining nurses in relation to other health professionals such as physiotherapists and social workers. In 1982, the CNA resolved to require that nurses have a Baccalaureate in Nursing degree to enter practice by the year 2000. National and provincial efforts to meet this objective have since been underway. With the proposed move of nursing education from hospital - based educational facilities to the universities, concerns have been raised about the extent of clinical preparation and basic readiness for entry level practice. Governments are also concerned about the effect that advanced preparation will have on salary demands and ultimately the public purse. The scope and breadth of this issue is beyond the purview of this paper but the issue is part of the "mix of skills" question which needs to be addressed in any nursing resource plan and future education planning.

This issue also has ramifications for the recruitment of potential nurses into education programs. Factors which affect the selection of nursing as a career include the image of nursing as a profession, the numbers of the population seeking a career, the choices of careers available, and the time and money required to complete the required education. As Kazanjian and Wood (1983) note,

> Current nursing students are drawn primarily from groups of women who expect to enter the work force at a fairly high wage after a relatively brief educational period - a smaller investment of time and money than is required

> from other occupations such as teachers and physiotherapists, for example. It is possible that some substantial proportion of this pool may be unwilling to make a larger investment in their education (p.73).

The image of nursing and its attractiveness as a career option to those choosing professions has received much attention in the nursing literature and again is a subject which would warrant a full paper of its own. Concerns relate to the fact that nursing, by its nature, requires most within the profession to work evening and night shifts and weekends and that nurses do not have the level of autonomy in their workplace which they expect and warrant. These detriments make nursing a less desirable choice amongst an ever increasing number of choices available to a decreasing number of University-aged people. Nursing still attracts very few men to the profession and consequently the increased career opportunities which have become available to women in the past two decades have the potential to reduce interest in nursing as a career option.

Decisions on the mix of skills required to meet the projected health needs of the population are also necessary in order to determine what other categories of nursing personnel are required and to then develop the appropriate educational programs. For example, the Registered Psychiatric Nurse has historically played a role in providing service to the mentally ill. In general, government initiatives have the objective of deinstitutionalizing the mentally ill and moving services into the community. In Manitoba, the RPNAM has successfully persuaded the government that the education of RPNs should be moved from 2 year facility-based programs to 4 year university-

based programs. The rationale for this move is related to increasing consumer expectations and the need for the Psychiatric nurse to practice as a peer professional member of the health care team in community and institutional settings in urban, rural, and remote locations.

The need for, and education of, Licensed Practical Nurses in Manitoba is another example which highlights the difficulties inherent in defining an appropriate staff mix and then providing the appropriate educational programs. Many LPN positions have been deleted in acute care facilities in Manitoba as part of the institutions' reactions to budget constraints and in a move to try to develop a different , hopefully more efficient staff mix. One of the key findings in the supply data is that there has been a substantial decrease in the numbers of active practising LPNs between 1990 and 1994. These actions have been taken although there has been no overall provincial nursing resource plan developed. Future planning for LPN education programs has been left in a limbo of planning month by month rather than, at the very least, year by year, and preferably, over 5 year periods.

The education of Health Care Aides is another issue which is in need of attention in Manitoba. The numbers of unlicensed support personnel currently working within the Manitoba health care system have been increasing as professional nursing positions have been decreasing. Currently, education programs for Health Care Aides and Home Care Attendants are not completely standardized and range from 3 week programs

offered within health facilities to more intensive programs offered by community colleges.

Manitoba is not the only province grappling with these issues. The Nursing Service and Resource Management Plan prepared by the Province of New Brunswick noted that

> other health services personnel receive education through on-the-job or a variety of formal programs through the community college system Several programs educate personnel who assist the nurse in delivering nursing service. These community college programs operate independently. Although the length and structure of the programs and the employment targets differ, there appears to be a significant overlap in curriculum and service targets. Limited labour force information is available on these formally educated and informally trained groups However, there are indications of a growing utilization of less formally educated aides/attendants in hospitals and nursing homes between 1990 and 1993 (Province of New Brunswick, 1993, p.11).

The strategies outlined in the report include recommendations to establish complementary curricula and provincial entry to practice standards for all formal nursing service providers which are reflective of role expectations and to examine the existing health provider programs, determine areas of duplication, and propose cost-effective generic education models for the future (RNA and others such as orderly, geriatric aide, human service counsellor, special home care aide, home care worker).

The Alberta Provincial Nursing Action Plan states that a preferred outcome of education planning will be the development of links between nursing programs and with other health disciplines. The report notes that increasing provincial and national debt demands the rational optimal use of health and education services and that greater

collaboration between disciplines is required (Province of Alberta, 1993, p.13). The Alberta Hospital Association has also gone on record as supporting a continuum of nursing education based on the belief that RNAs should be able to build on their previous education and experience if they wish to become RNs (Alberta Hospital Association, 1990, p.35).

An often little-mentioned source of additional nursing personnel is nurses who have withdrawn from the workforce but who are possible additions to the supply. These nurses, in order to reenter the nursing workforce, are required to upgrade their skills and knowledge through certified educational offerings. Consequently, this is another area of nursing education which needs to be responsive to the supply and demand of nurses and which has the potential to supply, over a relatively short period of time, additional nursing personnel.

There are also educational implications resulting from the increased demand for the provision of nursing care in the community setting and within facilities which provide personal and chronic care. Education programs for all nursing personnel will need to include more emphasis on those skills and knowledge which are required to provide care in these settings.

It is of critical importance that attempts be made to determine the number and types of nursing personnel which will be required to meet system demand. Once a plan is in

place, the appropriate educational programming can be developed and implemented. Until an overall strategy is in place, graduates from various programs will continue to be produced with no clear certainty that their skills are required within the provincial and/or Canadian health care system. This could be an enormous waste of financial and human resources. On the other hand, if no clear strategy is produced and implemented the other scenario could also occur - a shortage of the numbers and types of personnel needed to provide the services required.

3. POLICY REFORM

While current efforts to reform our health care system focus on transforming finance and delivery structures, no significant change will take place without dramatic alterations in the health care workforce. The province's health care workforce has an enormous impact on the cost and quality of health care and access to the health care system. With appropriate reforms, this workforce can become the foundation for an efficient, high quality system which embodies the principles upon which it was founded and which are enunciated in the Canada Health Act.

Clearly, one of the major initiatives which must be undertaken by government, in collaboration with a variety of other stakeholders, is that of human resource planning within the health care field. The nursing professions are the largest groups of health care workers within the health system and consequently, human resource planning

initiatives must address this group within the planning process. The ultimate goal of this activity would be to make the most efficient use of resources - to have in place the optimal number and mix of health care personnel. As Lomas and Barer (1986) point out - "the objective of manpower policy in the health care field is presumably to contribute to the success of the broader set of resource allocation policies designed to improve community health status in the face of resource constraints" (p.243)

These same authors indicate three interrelating policy areas which require attention in order to achieve the most efficient and effective mix of health care personnel: a) professional governance and regulation, b) human resource planning and supply policy, and c) system financing and structure.

A. PROFESSIONAL GOVERNANCE AND REGULATION

The policy area of professional governance and regulation is sacrosanct ground on which any government must tread lightly. Physicians and many other health care professions, including RNs, RPNs, and LPNs, currently have the right to regulate their own professions. These groups control the qualifications of those who are entitled to enter their profession's defined area of practice and define the standards of practice expected within the service provided. They also have the power to enforce these standards. Self-regulation leaves little room for government to influence the scope of practice and relationships between various health care personnel and encourages self-

interest and self-protection by the professions rather than promoting the collective public interest. The current structure of professional governance severely hampers any movement toward the goal of achieving the most efficient and effective mix of health care workers. "Turf" is protected even though a professional's skills may be severely under-utilized in providing a particular service.

Consequently, in order to achieve a more efficient use of health care personnel, policy reform will be required. Legislative changes which restrict the self-regulatory powers of the professions to enforcement of practice standards are required. All other matters such as exclusive scopes of practice need to be controlled by government, representing the public interest, rather than the professions representing their self interests.

This type of policy-making will take great political courage. No profession will easily give up its right to self-regulation for this would result in less control and power for its members and the governing body. Lobbies from powerful groups such as physicians and lawyers would create political "heat" and dissension amongst policy makers. A recent report (1994) by the Manitoba Law Reform Commission on the topic of "Regulating Professions and Occupations" perhaps signifies a willingness on the part of the Manitoba Government to begin to address this policy area. The report provides a model for regulating professional services and stresses cost-benefit and greater government supervision of self-regulating bodies. Implementation of some or all of the recommendations outlined in the Law Reform Commission Report will have significant

implications for all regulatory bodies including the Nursing bodies. For example, all regulatory bodies would be required to justify their existence as self-governing and licensing bodies. Associations with the dual mandates of protecting their members and the public would be required, if allowed to exist, to implement a number of safe-guards against self-interest. Scopes of practice would be defined and enforced by a government body, the costs of which would be covered by the members of the various associations.

The requirements for nursing personnel of various categories will be affected by policy initiatives in this area. For example, Registered Nurses and Registered Psychiatric Nurses could quite well expand their practice into fields previously controlled by physicians. In the same vein, however, other categories of nursing personnel and other health care workers could also take over many of the functions currently considered to be the domain of RNs and RPNs.

B. HUMAN RESOURCE PLANNING AND SUPPLY

Policy initiatives will also be required in the area of human resource planning and supply. A resource plan for nursing personnel is only part of the equation. Clear direction and leadership by government are required in order to achieve an appropriate mix of all health care personnel. Government may decide to set limits on the numbers and types of health care workers which will be educated within the province.

Initiatives which address the question of the geographic distribution of various health care workers are also required. Government needs to develop a process to collect reliable, consistent data about the numbers and type of health care personnel and to track this information over time. Currently, no such process exists in Manitoba. The MNPAC is developing recommendations which address the establishment of an appropriate structure and process to collect the required data.

The province will need to develop a province-wide, integrated, comprehensive, centrally- administered system for nursing education. Currently, the approach is disjointed, more expensive than it needs to be, and slow to respond to changing needs. Currently, funding comes from two main sources within government: Education and Training, which funds programs at the Community College level and University level, and Health, which funds five hospital- based schools of nursing. All the nursing education dollars need to be centrally administered to develop a provincial-wide system which meets the needs of the province.

This centrally administered approach to nursing education could incorporate all levels of nursing personnel including Licenced Practical Nurses and Health Care Aides. Ladder approaches to education could be instituted so that a health care aide with the interest and ability could build on his/her education as time and finances allowed to eventually obtain a nursing degree. The numbers in each category could also be controlled in response to the needs identified within the province. This centralized

approach would also facilitate adjustments to curricula as needs were identified. For example, the new emphasis on community and primary care within the health care system would be reflected in the educational curricula of nursing personnel.

Human resource initiatives are also required to address the current job-shortage for nursing personnel. Ways and means must be implemented which encourage nursing personnel in their 50's and 60's to perceive retirement as an option. The nursing professions require the enthusiasm and vigour which new graduates bring into the profession. This has not occurred over the past few years as nursing positions have been deleted and bumping by seniority has prevailed. New, young graduates cannot find jobs. Better voluntary exit policies for older nurses would open up positions and create a healthier, more vibrant, and enthusiastic workforce. Currently, many nurses in their 50's and 60's are not well served by typical pension policies which require that the employee's age and years of service add up to 85 or 90 years. Many nurses who started their careers in the 1950's or 1960's stopped work outside the home when they had children and then resumed their nursing careers after 10 or 20 years. As a result, these nurses cannot retire with the current pension arrangements. Initiatives within this area are urgently required for, as was presented in Chapter Two, one-third of all the RNs, RPNs, and LPNs in the Province are 45 years of age or older. Assistance to retire with an adequate pension would encourage nurses to retire and create openings for new graduates who, as was presented in Chapter Two, are currently leaving the province to find employment.

C. SYSTEM FINANCING AND STRUCTURAL POLICY

System financing and structural policy influence human resource planning. Fee-for service payment to physicians creates a disincentive to the delegation of practice to health care personnel who are less expensive. There are also few mechanisms by which health personnel other than physicians can be paid can be paid for services outside of the institutional setting. The province has been unwilling to expand fee for service payment to other categories of health care workers which has resulted in physicians being the primary provider of service outside the institution.
Policy directions which are encouraging, and, in fact, demanding, deinstitutionalization of the health care system must address this question in order to ensure that the community-based care provided is done in the most cost-effective way.

Structural changes have focussed on changes in how health care is delivered. On the Manitoba scene, the recent policy decision to develop Nurse Managed Clinics is an example of an alternative delivery approach which is attempting to achieve three goals: first, to shift emphasis from institutions to the community; second, to shift from physician to non-physician providers; and third, to reduce the amount and cost of the existing institutional infrastructure.

These changes are having, and will continue to have, a impact on the numbers and types of nursing personnel required to meet the health needs of the population. If

nurses are allowed to assume a role as the primary entry point into the health care system, new nursing positions which require a different educational emphasis will be created. At the same time, however, the downsizing of the hospital system has caused a decreased demand for nurses within the province. As was presented in Chapter Two, 799 fewer nurses report working in a general hospital in 1993 as compared to 1991. Some of these nurses have found employment in Long Term Care Facilities and the Community but, as was noted in Chapter Two, 112 RNs and 141 LPNs remained on the redeployment list as of March, 1995.

Initiatives to downsize further and to consolidate facilities, both urban and rural, will mean a further decrease in nursing positions. Consequently, government initiatives to assist nurses to make the transition from the institution to the community are required. As well, voluntary retirement packages which encourage retirement and careful consideration of the numbers and types of nursing personnel to be educated to meet future needs need to be a top priority for the government.

CHAPTER 4

CONCLUSION

A Nursing resource plan is one small piece in the big jigsaw puzzle of Health human resource planning. Government needs to provide the framework within which the puzzle can be put together. But, how can this be accomplished ? The approach eventually taken may not, in fact, be the most logical, or most preferred, but rather, may end up to be the only possible approach when all factors are considered.

The policy objective of providing the most efficient mix of nursing personnel required to meet the health needs of the population seems logical and responsible. However, this objective becomes fuzzy as soon as one questions the definition of efficient and how, and by whom, efficiency is measured. The health needs of the population is another term which is currently in vogue but which is not clearly articulated and understood. What are the needs that need to be met? How are they to be assessed? Who will decide?

It would seem to make sense that scientific models and approaches could be used to predict future requirements for nursing personnel. This belief in the scientific method and its applicability to public decision-making reflects the rational approach to policy formulation. This approach "embraces a faith in the need to identify causality, to establish the facts, and to distinguish facts from values" (Doern and Phidd, 1992, p.5).

While this approach to policy-making does not take into account the real world of political behavior with its' " give-and take", it does provide a general standard against which many decisions and policies are measured.

In contrast, the incremental-pluralist approach views decision-making as small, safe steps reached by consensus and usually reflective of broader interest group behavior. "The incremental model suggests that the best predictor of future policy is the recent past" (Ibid, p.7). This approach places a high value on the need for agreement and judges policies as much on consensus-reaching as on results. The government's role, using this approach, is to ensure that a balance of power between various stakeholders is fostered and maintained.

The multitude of mitigating, and sometimes, conflicting factors involved in determining the future demand for nursing services makes scientific predictability, and consequently, a rational approach to policy formulation, impossible. Canada in the 1990s is experiencing influences which are having profound effects on the political, social, and economic fabric of our society - including the health system. These changes in the Canadian environment are strongly influenced by international factors, such as the globalization of the world economy, the North American Free Trade Agreement, immigration patterns, and demographic trends. For example, the effects of the North American Free trade Agreement are reaching far beyond trade and beginning to influence decisions about the structure and breadth of Canadian social programs.

These mounting pressures and concern about the national debt are cited as reasons for declining federal transfer payment to the provinces. In turn, this has led to provincial decreases in funding to health, social services, and education.

At present, health care in Manitoba and across Canada is undergoing a tumultuous transformation. Rationalization, regionalization, and restructuring are challenging the roles of health service agencies, hospital boards, professional associations, health care unions, and every person who works within the system. Regionalization will result in the provincial government turning over authority to rural and northern regional health boards who will have the responsibility and authority to spend predetermined health dollars as they see fit. It is impossible to predict what decisions these boards will make about the design and delivery of health services. Perhaps hospitals and beds will be closed. Perhaps a board will decide to offer the majority of its health services through the use of nurse practitioners rather than physicians. Decisions such as these will have a marked effect on requirements for nursing personnel.

The decision-making process itself will be highly political in nature with many vested interests vying for a role in these evolving systems. The majority of the members on these boards will be elected officials who will be learning their role at the same time as they are being bombarded by the conflicting demands and aspirations of a variety of stakeholders. The policy outcomes will be unpredictable. This same scenario holds true for the First Nation Communities. Approximately one-third of Manitoba's 62

First Nation Communities have assumed control over health care delivery and more are in the process. These Communities have the authority to make the same decisions as the rural and northern regional boards. Consequently, it is impossible to predict how many, and what type, of nursing personnel will be required in these communities in the future.

There are other factors which also are having, and will continue to have, unpredictable effects on demands for nursing personnel. Hospitals are being downsized - sometimes through the use of technology that permits increased out-patient care, sometimes by consolidation and specialization. Related moves are shifts to community-based, rather than hospital-based, care. In addition, some hospitals have responded to fiscal pressures by closing beds. Additional bed reductions are anticipated, but it is impossible to predict the numbers which will be closed. The corresponding impact on nursing personnel is a reduction in nursing positions, layoffs, and bumping according to the provisions of the collective agreements in force. Individual institutions and health care agencies are also moving to the use of lower-cost care providers which is resulting in fewer RN and LPN positions. All of these factors affect the numbers of nurses required and are indicative of the unstable state of the system. During this time of transition it is very difficult to make predictions about what types and numbers of nursing personnel the revamped system will require.

Within this unstable environment, a multitude of stakeholders are positioning

themselves to retain or enhance their roles within the health care system. Government is attempting to obtain increased control over health care professionals such as physicians and nurses who currently have the privilege and responsibility of self-regulation. Government is also looking for ways to control the expenses generated by physicians. Controls are being placed on both the growth in supply and compensation of physicians. Enrolment in medical school has been decreased and global caps on the costs of physicians' services have been established. Government is also exploring changes to the fee-for-service system of physician reimbursement. Nurses are providing evidence that they can perform some functions which are currently within the scope of practice of only physicians and that this can be done at less cost. At the same time, the professional nursing groups are vying with each other over their respective scopes of practice and facilities are moving to the use of unregulated, lower-educated workers. Physicians, in turn, are expressing concern over the quality of care that can be provided within this unstable and hostile environment. Consumers of health care are confused by the rhetoric of all these groups and are demanding a strong voice in the decision-making process.

Within this environment, policy formulation related to current and future nursing resources will be shaped by factors external to the actual facts and rational approaches. It will be difficult for policy makers to develop and implement health human resource policies because of the vested interests of stakeholders to maintain the status quo. Consequently, it is likely that nursing resource strategies will be developed over a

period of time with the introduction of small marginal adjustments to the status quo. This incremental approach ensures greater control by all those involved in the process and is the least offensive to the major stakeholders. This conservative approach to policy direction is the safest path through the political minefield of health care.

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