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Nursing Care Delivery

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Abstract

The delivery of safe, efficient and effective nursing care requires knowledgeable senior executives and nurses who collaborate, have the common and primary goal of meeting patient need, and a shared understanding of nursing care delivery.

The aim of this research was to explicate executives' and nurses' understanding of nursing care delivery in the Crown Health Enterprise (CHE) setting.

Between March and December 1997 61 executives or senior nurses from 18 CHEs participated in semi-structured interviews. The interview tapes were transcribed and biographical details and some data relating to organisational structure were summarised. The remaining data were analysed using content analysis. Seven themes were identified.

- Organisational structure was seen as a self-contained entity.
- Systems approaches were not used.
- Planned, systematic and ongoing evaluation of structural change and care delivery was not evident.
- The resource implications of proposed changes were not canvassed.
- Little was known about the nature of nursing work in the CHE.
- There was a desire for closer links between nursing practice and nursing education.
- The approach to nursing research was fragmented and ad hoc.

The findings indicate an overall lack of knowledge about nursing care delivery and the nature of nursing work in the reformed health care environment. It is suggested that the primary reasons for this are the paucity of international and national research on these subjects and a fragmented approach to the management and development of nursing in New Zealand. The findings also suggest a lack of sophisticated resource management and evaluation expertise.

To ensure the development of innovative nursing practice/care delivery models and systems that will meet New Zealanders present and future need for nursing care it is strongly recommended that priority be given to identifying the nature and scope of nursing work. It is also recommended that:

- An independent nursing research unit with a capacity to carry out national and longitudinal research in nursing is established.
- An independent national agency to oversee the management and development of nursing in New Zealand is established.
- The Ministry of Health commission a review of health management education.

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Chapter one

Introduction

What management needs from its nurses is that they shall realize their opportunities and prepare themselves to be able to meet these opportunities. What the nurse needs from management is that management shall recognise her share, even though it may be a small share, in a multiple leadership, multiple leadership which demands a continuously co-operating relation in order that it shall become integrated and hence effective leadership. (Follett, 1987, p.292)¹

With the advent of Crown Health Enterprises (CHEs), responsibility for the delivery of safe, effective nursing care and the management of nurses, formerly the accepted domain of Hospital and Area Health Board nurse executives, was replaced by the formally prescribed management of nurses by CHE Chief Executive Officers (CEOs). In the process management of nursing care delivery fell to an uneasy coalition of executives and senior nurses. The development, implementation and evaluation of new and/or improved nursing practice/care delivery models and systems suited to New Zealand once, the exclusive concern of nurses, now required a “continuously co-operating” (Follett, 1987, p.292) relationship between executives and senior nurses.

This study arose from the researcher’s perception that care delivery problems arising in the CHEs were compounded by executives and senior nurses operating as if they occupied fragmented and parallel environments. Executives, whose primary concern was the efficiency of ‘their’ organisation, and health professionals, whose primary concern was the health outcomes of ‘their’ patients, seemed to lack a common goal and shared understanding of the patient and nursing care delivery systems. A person admitted to hospital and once called a ‘patient’ by all was now variously referred to

¹ From a 1928 paper presented to the American [actually Connecticut] Association of Industrial nurses

as a 'client', 'customer', 'consumer' or 'patient'². Organisational structures seemed to have replaced systems as the primary frame of reference and management of the financial resource now had priority over management of the human resource. New organisational structures and new nursing practice/care delivery models were introduced in an ad hoc fashion and seldom, if ever, evaluated. Workforce planning was minimal and nursing education and research functions seemed to operate quite independently of the clinical sector.

In the early days of CHE existence the researcher's conversations with executives and senior nurses repeatedly revealed executives who were concerned that nurses did not 'understand the business' and senior nurses who felt executives did not 'care about the patients'. While expressing a willingness to work together these executives and senior nurses seemed to be talking past each other. Disharmony caused by the tension between the priority executives gave to business and nurses to patients was compounded by a competitive environment and organisational structures that did not provide an environment conducive to explicating and resolving problems.

New Zealand demography, geography and health system structures are unique. The development, implementation and evaluation of innovative nursing care delivery models and systems suited to New Zealand is a complex and difficult task requiring the harmonious collaboration of executives and nurses. The starting point for this is executives' and nurses' common understanding of nursing care delivery and nursing work. The researcher's conversations with executives and senior nurses in the early years of CHE existence suggested that this understanding was more 'apparent than real'.

After a literature search revealed a dearth of relevant combined executive and nursing related research³ it was decided to undertake a research project that explored and described the views of executives and senior nurses and laid a foundation for

² In this thesis patient/s is used as a generic term and includes client/s, customer/s and consumer/s

³ That is research in and about organisations where non nurses managed nurses

future research combining management and professional aspects in a single study. Although there is no precedent for this research, in its approach it does have some similarities to David Ritchie's (1998) exploratory study looking at the context and process of health reform in New Zealand. For this study he interviewed 31 managers in 3 CHE's.

Undertaken at the height of the 1990s health 'reforms' this national exploratory descriptive study explores and describes the views of 61 executives or nurses from 18 CHEs with regard to nursing care delivery. Its aim is to explicate executives' and nurses' understanding of nursing care delivery in the CHE setting. Its purpose is to obtain information that will provide insight into nursing care delivery in New Zealand and assist in the development of innovative nursing care delivery models and systems that will best meet the needs of New Zealanders. The study is qualitative with data being obtained by interview. Findings are situation and time specific but the themes yielded provide insights relevant to the current nursing care delivery and indicate areas for further research.

The timing of this study is significant. The pressures exerted by the driving forces of academia and the restraining forces imposed by a competitive health marketplace, dynamic organisational and professional environments, unstable CHE staffing, the complexities of negotiating with multiple and diverse organisations and committees and CEOs' powers of veto were considerable. At times it seemed that the obstacles to completing an independent, national study would be insurmountable. Devising and implementing a proposal that was academically respectable and acceptable to CHE CEOs, ethics committee members and participants proved to be a difficult task. Negotiation, re-negotiation and modification became an integral part of the research process.

It could be argued that the study was compromised by the negotiation process to the extent that it should have been abandoned. This argument is not accepted by the researcher for the following reasons. The:

- Study is qualitative and as such has an in-built flexibility.

- Integrity of the data obtained and its analysis were not compromised.
- Process illuminated the difficulties encountered in researching in a fragmented research environment and facilitated positive changes.
- Thesis is expected to yield useful, publicly available information about nursing care delivery in the New Zealand public health sector

This study required the researcher to canvas a number of fields. These included organisational structure, systems, nurses and caregivers knowledge, skills, and expertise, nursing research and nursing education. Each of these is a complex entity in its own right and has its own literature. With minimal literature directly related to the research topic and a considerable literature devoted to each of the fields the classical literature review has been replaced by selection of literature related to each field and is designed to illuminate that aspect of the study. The advantage of using a multi field approach is that it enables exploration of a topic as complex and wide ranging as nursing care delivery. The disadvantage is that it does not permit the in-depth exploration of each of the component parts.

Originally conceived as a combined quantitative/qualitative study using a questionnaire as the primary quantitative data source and interviews of key CHE personnel as the primary qualitative data source this study evolved into a qualitative study using semi-structured interviews of CHE personnel as the data source.

A discussion of the original study design follows. The study as implemented is discussed in chapter three.

1995 proposal

The purpose of the original 1995 proposal was to obtain information that would assist in the development of nursing care delivery systems that would best meet the unique needs of the New Zealand public sector health service within available resources.

The study was designed to explore the following with CHE executives:

- The contribution of registered nurses to the work of the CHEs.

- What they would have liked the contribution of registered nurses to be.
- How they saw that contribution changing and developing in the future.
- What they would expect and demand of nurses in five years and in ten years.

It was also designed to include CHE employed registered nurses and canvas with them:

- Their contribution to the work of the CHE.
- What they would have liked their contribution to be.
- How they saw the registered nurses' contribution developing and changing in the future.
- Their satisfaction with their job.
- Their commitment to the organisation; and
- Their perception of the organisation's climate and culture.

The questionnaire, designed to be sent to 200 CHE executives and 1500 CHE employed registered nurses, was in three parts.

Part 1 requested participants to complete a personal profile, which was in general form to protect their anonymity. It included data on gender, ethnicity, age bracket, and information about present position, qualifications and work experience.

Part 2 used previously validated questionnaires relating to job satisfaction, organisational commitment, climate and culture, and newly developed questions relating to qualified nurses' contribution to the present and future work of the CHEs. One questionnaire was compiled for CHE executives and another for registered nurses. Questionnaires contained a mix of short answer multiple choice questions and open ended questions.

Part 3 of the questionnaire requested participants to indicate their willingness to participate in a one hour audio taped interview with the researcher to discuss the results and implications of the researcher's analysis of the questionnaires. It was planned that from the list of those executives and nurses agreeing to interview that

the 50 executives and 50 nurses would be randomly selected and invited to participate in a semi-structured interview.

Prior to the development of the 1995 proposal two fully developed, unrelated research proposals had foundered on the researcher's inability to get consent to access data sources. From these time consuming and ultimately unproductive experiences the researcher had learned the necessity of obtaining executive support very early in the research process. Therefore on 12 September 1995 a proposal was sent with a covering letter to CHE CEOs requesting support in principle for the proposed research. 21 of the 23 CHE CEOs gave this support. A number of CEOs set conditions to be met before final approval would be given. A result of these conditions was the need for the researcher to obtain ethics committee approval from the Massey University Human Ethics Committee and all 14 CHE related ethics committees. Another was the need for the researcher to consider the wish of some CEOs to edit and/or veto publication. This was not acceptable to the researcher. However no action was required to address this as those CEOs who wished this to be a condition of their agreement were no longer in place when the final consent process was completed.

The proposal was sent to the required ethics committees. Agreement over processes for distribution of the questionnaires proved to be a major problem. Distribution by CHE staff members was not acceptable to some ethics committee members. Neither, the New Zealand Nurses' Organisation or the Nursing Council of New Zealand, both of which were deemed to be appropriate and independent distributors of the questionnaire, was at that time constitutionally able to allow an independent researcher access to their databases. A distribution system acceptable to all parties was not found. This, combined with the researcher's wish for a national study, a failure to access financial support and a significant erosion of the time available to complete a PhD, ultimately led to the abandonment of this questionnaire based proposal.

At this point consideration was given to abandoning a national CHE based research

project but it was felt by the researcher that to do so was to accommodate the view that published independent, national research was inappropriate in a competitive health market. By continuing with the project, albeit within constraints imposed upon the researcher, useful information that would not otherwise have emerged is now in the public domain.

Since the competitive model of health service was abandoned and the CHEs dissolved in 1998 obstacles to independent national research have lessened.

1996 proposal

In 1996, after identifying obstacles to progress previously encountered the 1995 proposal was significantly changed. The 1996 proposal was designed to be academically acceptable as a PhD research project and also acceptable to:

- CHE CEOs.
- Ethics committee members.
- Senior CHE executives.
- Senior nurses working in the CHEs.
- Funding agencies.
- The researcher and her supervisors.

This proposal, with modifications, provided the framework for the present study.

Ethics Committee Approval

On 4th October 1996 a letter approving the new project was received from the chairperson of the Manawatu-Wanganui Ethics Committee. This followed protracted communications, most of which required the researcher to explain and/or clarify points, with various ethics committees via the facilitative and supportive chairperson of the Manawatu-Wanganui Ethics Committee. On 25 November 1996 final written approval was obtained from the Massey University Human Ethics Committee

Although the approval process had been streamlined and the researcher dealt directly with only two Ethics Committees the follow up and auditing process required her to

maintain direct and ongoing communication with a number of ethics committees about her progress and compliance with the agreed mechanisms to protect participant anonymity and confidentiality and ensure participants' rights were protected throughout the course of the study.

Only one participant requested a copy of the audio-tape of their interview. No participants requested a copy of the interview transcript. A number of participants did request at interview that their audio-tape and transcript of it be destroyed when the study was completed. All audio-tapes and transcripts, currently kept in locked filing cabinets, will be destroyed when the study is completed. As was their right a number of participants chose not to answer a particular question but none withdrew from the study.

Outline of the thesis

As previously explained this thesis canvasses a number of interrelated topics. In order to clearly convey the findings these topics are addressed in individual chapters. The linkages between these topics are then made explicit in chapters eleven and twelve.

The remainder of the thesis is presented as follows:

Chapter two provides background information necessary to 'set the scene'.

Chapter three contains details of the present study.

Chapters four to ten each address a separate but related topic.

Each chapter is self-contained. Each topic is introduced individually, the research questions relevant to that topic are recorded and the relevant findings given and clustered. Each chapter concludes with a statement of that chapter's themes.

The topics covered are:

The participants (chapter four).

Organisational structure (chapter five).

The patient care delivery system (chapter six).

The nursing care delivery system (chapter seven).

The knowledge, skills and expertise of the registered nurse, enrolled nurse

and caregiver (chapter eight).

Nursing education (chapter nine).

Nursing research (chapter ten).

Chapter eleven identifies and discusses the study themes.

Chapter twelve concludes the thesis.

Chapter two

Background

This chapter includes a brief introduction to health care reform in New Zealand (NZ), the United States of America (USA) and the United Kingdom (UK).

Health sector

Mediated by government policy, the inertia of large organisations, and the flow-on effects of previous decisions, health service reform is complex and little understood. Indeed it can be argued that it is so complex that it can never be understood. In an endeavour to impose limits on ministerial portfolios boundaries have been placed by succeeding governments around segments of the government services that have a health component. In this process agencies that have a health related element have lost their identification with the health portfolio and become part of the ACC⁴, defence, education, justice and other portfolios. As a consequence the health service is now most commonly identified as that sector of government service encompassed by the portfolio of the Minister of Health (and for a time the Minister of Crown Health Enterprises). Because the context of this thesis is limited to the Crown Health Enterprise environment the convention of linking the boundaries of the health service to the boundaries of the health minister's portfolio is used in this thesis.

General background

Although the manipulation of the public health sector by government reached its height in the last two decades of the 20th century it had its roots in the Social Security Act of 1938 following the election of a Labour government in 1935. The intent of this act was to legislate universal tax-financed access to a comprehensive health care system and included responsibility for medical, hospital and other health related benefits being given to the Minister of Health (Bloom, 2000). In 1941, after lengthy negotiations about fees with the medical profession an acceptable compromise was

⁴ Accident Rehabilitation Compensation and Insurance Corporation

finally reached. The public hospital system would be accessible without direct charges to both inpatients and outpatients. A fee for service would be charged by General Practitioners (GPs) and other services subsidised by the government. This arrangement laid the foundation for a “complex pattern of public and private funding and provision” (Bloom, p.29). The structures and the consequent boundaries determined at this time laid the foundations for the medically dominated private health sector and the hospital dominated public health sector that continues to exist today.

For the next 25 years health service structures and processes remained fundamentally unchanged. The Department of Health (DOH) administered public health including infectious disease, dental, quarantine and mental health services. Local Hospital Boards with a membership elected from the Board’s catchment area, governed public hospitals. Operational funding was centrally allocated and capital expenditure separately and centrally controlled. With minimal information about Boards’ efficiency and/or effectiveness available operational grants reflected historical patterns and political demands.

Hospital administration was shared between the Secretary to the Board and the Medical Superintendent. The Matron who was responsible to the Medical Superintendent headed nursing services and nursing education. Wards and some departments for example Operating Theatre, Accident and Emergency (A&E) and Outpatients, and District Nursing were administered by Sisters often relieved by Staff Nurses. Ward beds were allocated according to medical speciality for example medical, surgical, psychiatric and obstetric beds. Medical directives dictated the plan of care. Hospitals were obliged to provide, free of charge, medical student and nurse trainee clinical (bedside) experience. Medical education was apprentice based and controlled by education sector medical schools, and professional colleges based outside the hospital. Nursing education was hospital based, managed by the hospital Matron and controlled by the Nurses and Midwives Board and the Department of Health.

Restructuring is not a recent phenomena however as revealed by Dr. Kennedy the Director General of Health, who in his Foreword to the DOHs *Review of Hospital and Related Services in New Zealand* (1969, p.3) noted that “some significant changes had taken place in the organisation and administration of health services...in recent years”. St Helens (obstetric hospitals) and the Queen Elizabeth Hospital at Rotorua had been transferred to Hospital Board control. Farmland around psychiatric hospitals not required for future use was transferred to the Departments of Lands and Survey or Agriculture. Hospital Boards (by amalgamation) were reduced from 37 to 31.

A medical practitioner, as was required at that time for a person in this position, Dr Kennedy’s appreciation of the complexities of reorganisation and the need to manage resources efficiently is evident in his following statement.

Health service organisation and administration is complex. It is made infinitely more so by its multi-disciplinary nature and complicated still further by the fact that it must be linked with university and other educational agencies in the training of all the categories of people needed to staff our health services. It is becoming technically more and more complex and in operation more expensive. It is even more important that people at all levels of administration within the service ensure they obtain the maximum benefit for expenditure in men, money and materials (Kennedy, 1969, p 3.)

In spite of his recognition of the complexities involved, Dr Kennedy signalled a desire to continue the restructuring process by creating an “appropriate number of viable administrative units ‘at grass roots level’” (Kennedy, 1969, p.4), transferring non-policy and operational activities to these units and reducing the number of Hospital Boards.

By the mid 1970s the sustainability of the New Zealand health system was being questioned (Cheyne, O’Brien & Belgrave, 2000). The health sector was fragmented. Hospital Boards provided regional secondary care services. The DOH Health provided public health services via regional offices that had boundaries that did not

necessarily match Hospital Board boundaries. GPs provided the bulk of primary health care services. Health insurance was in its infancy and a small, but developing, private health sector existed. (Barnett, & Barnett, 1999). Government subsidies were failing to keep pace with medical fee increases (Borren, & Maynard, 1994). Health spending was increasing, rising from 5.1% of GDP to 7.2% of GDP between 1970 and 1980 (Blank, 1994). In 1975 the oil crisis and a stagnating economy led the Labour government in its White Paper *A Health Service for New Zealand* (McGuigan, 1975) to propose a reorganisation of public health services (Blank, 1994).

The proposal for a New Zealand Health Authority which would “be responsible for planning the strategy of health care, determining national priorities, and laying down the guidelines on policies needed to achieve planned targets, as well as invoking statutory responsibilities in certain critical areas of and international health” (McGuigan, 1975, p.8) did not come to fruition under that Labour government. It is being pursued by the present government as it remoulds the Ministry of Health (MOH) into the dominant health authority.

Neither did the proposed fourteen Regional Health Authorities designed “to be concerned with the tactical planning to ensure that policies are implemented in the manner which best serves the population of the region” (McGuigan, 1975, p.8) eventuate, although the designation Regional Health Authority (RHA) was used later by a National government.

Section 317 of the White Paper devoted to *Boundaries of Health Care* (1975) emphasised the need to ensure “effective operation of services in those areas where there must be an interface between health and other social services” (McGuigan, p.109). The following sections devoted to the environment, welfare, justice, education and training are precursors of the present government’s agenda for District Health Boards (DHBs). Indeed it can be argued that the present Labour/Alliance coalition government has not strayed far from the 1974 Labour government’s proposed health service reformation. Grounded in the “historical perspective”

(McGuigan, 1975, p.9) the White Paper had a very modern emphasis on primary health, the promotion of good health and the integration of services related to health. With the change of government in 1975 the White Paper was set aside. In 1976 the National government established a Special Advisory Committee on Health Services Organisation (SACHSO). This government, possibly mindful of the powerful medically led opposition to the White Paper, took a cautious and incremental approach to implementing the committee's proposals for the establishment of Area Health Boards (AHBs). However as Blank (1994, p.124) pointed out "fragmentation of the system, cumbersome hospital management systems, weak accountability mechanisms, increased hospital expenditures, and lengthening waiting lists produced strong incentives for major health policy changes."

The consequent move to Area Health Boards (AHBs), piloted in two areas and legislated by the Area Health Boards Act of 1983, coincided with a stagnant economy (Bloom, 2000). Designed to ensure regional co-ordination of public primary and secondary health services Area Health Boards new population based funding remained separate from funding for the primary medical service subsidies. This funding duality which had the effect of encouraging doctors to see patients in their private practices, increasing waiting lists (Brown, 1996) and capped funding. Coupled with a rising demand for hospital services this produced an "increasingly acrimonious relationship between the health community and the government". (Blank, 1997, p. 270).

Parochial interests could not be easily put aside. Hospital Boards with an elected Board and AHBs with a mix of elected and appointed Board members were sensitive to public demand and health professional pressure. Co-ordinating the activities of private and voluntary sector agencies that were independently funded proved difficult. The death of Hospital Boards proved to be a long drawn out process. By 1989 14 of 29 Boards were still in existence which fuelled tension between the community and government. Formal evaluation of health sector change was minimal with the length of waiting lists becoming the public and the media benchmark for efficiency. Health care costs were not contained. The role and processes of the DOH

changed with the introduction of AHBs and their take over of local public health units but the mechanisms of government had remained fundamentally the same as they had been for the previous 100 years (Boston, Martin, Pallot, & Walsh, 1996). It was into this climate that the Fourth Labour government came to power in 1984.

Kelsey argues that New Zealand in 1984 “provided almost perfect political,, economic and intellectual conditions in which to experiment.” (Kelsey, 1995 p.19) For the next decade New Zealand became a laboratory not just for radical health service reform but also for all state sector reform. This laboratory characterised by its “small size, a centralised, unitary system of government a unicameral legislature, and relatively secure single-party majority governments” (Boston, et al., 1996, p.352) enabled a rapid and radical, comprehensive and reasonably well integrated restructuring of the bureaucratic landscape. It also contributed to the lack of internal evaluation that has characterised the reform process. The incremental approach of the National government was replaced by a rapid and comprehensive reformation of the state sector. While economic imperatives were the primary driver for change, these combined with a fertile ground for experiment and a political leadership that was, in common with its counterparts in other western countries ready to explore a more market driven approach to the provision of public services. Deregulation, corporatisation and privatisation through the sale of public assets, resulted in a reduction in the size of the state sector. Of those remaining a number of public organisations were via the State Owned Enterprises Act (1986) converted to business or commercial enterprises Economic reform was accompanied by a series of investigations into the social service sector. The largest, most ambitious but ultimately ineffectual of these The Royal Commission on Social Policy, released its report in 1988. Following as it did the 1987 stock market crash the report with its emphasis on equity was now out of step with the government’s agenda for economic efficiency. The 1986 report of the Health Benefits Review Taskforce, *Choices for Health Care* (Scott, Fougere and Marwick, 1986) much narrower in its scope, had suggested competition for the provision of primary health services via a tendering and contracting process.

The report of the Taskforce to Review Education Administration (1988) (also known as The Picot Report) and the *Unshackling the Hospitals* report of the Taskforce on Hospital and Related Services (also known as The Gibbs report) were published in 1988. While Picot report launched a rapidly implemented programme of change labelled *Tomorrow's Schools* in the education sector The Gibb's report foundered on public and health professional discomfort with the market oriented nature of the proposals. While The Gibb's report proposals were not adopted state sector reform continued with the implementation of the State Sector Act (1988) and the Public Finance Act (1989). The State Sector Act (1988), disbanded the traditional public service. Chief Executives appointed on a limited contract became employers responsible for pay fixing, conditions of appointment and other human resource functions (Boston, , 1996). Because the greater part of a health service is delivered via its personnel the State Sector Act (1988) when combined with the new Public Finance Act (1989) which required Chief Executives to also be responsible for financial management, effectively restructured the public health service. This was accompanied by a shift from input control to output assessment (Boston et al., 1996). Health care organisations' output assessment became the combined assessment of service outputs. The natural unit of measurement in the health sector is the service offered and while it was recognised that the core of these services is common across the health sector it was generally not appreciated that service boundaries derived from entrenched professional boundaries. Service development groups were established in an effort to better assess the need for services in particular areas (Cheyne, et al., 2000). The service boundaries established during this process were to be later reflected in the services developed in the CHEs such as services for older people, child and family services, women's health services.

In tandem with the state sector reform the somewhat muted health sector reform continued with the restructuring of the DOH, the mandated move to Area Health Boards and the publication of the *New Zealand Health Charter, National Health Goals and Targets* and *A Contract for Area Health Boards* (Clark, 1989). The Labour/Alliance coalition government's *The New Zealand Health Strategy* (King, 2000) is reminiscent of the Health Charter which "defined the principles guiding the

public health services as a whole while the *Health Goals and Targets* document set out the health services objectives in key areas for the next ten years” (Bowie, & Shirley, 1994, p.302).

By the end of 1989 structural reform of the state sector was well underway. Political manipulation of the state sector with minimal consultation and even less evaluation was firmly established. Financial systems had been re-vamped, Chief Executive management responsibilities were enshrined in legislation and the balance between efficiency and effectiveness was tilted in favour of efficiency by the predominance of economic and administrative goals and the consequent organisational fragmentation.

In the absence of formal evaluation of structural reform thoughtful commentary, such as Enthoven’s (1985) *Reflections on the Management of the National Health Service* (subtitled *An American looks at incentives to efficiency in health services management in the UK*) in which he promoted the internal market, Upton’s (1987) *The Withering of the State* which canvassed the diminution of the welfare state and Goldsmith’s (1989) *A Radical Prescription for Hospitals* in which he canvassed the need for community hospitals which would weave their services into “the fabric of the neighbourhood and the community” (p.111), influenced policy making.

By 1990 successive New Zealand governments had created a climate that made the rapid and comprehensive health sector change undertaken by the incoming National government possible. General management, service based structures, hospital closures, embryonic contracting processes and seemingly ad hoc policy making were all features of the Fourth Labour government’s term in office. The scope and pace of this government’s reforms, while interrupted by Prime Minister David Lange’s ‘stop for a cup of tea’ established a pattern of rapid legislated reform followed by tinkering as required to meet the exigencies of government.

Health service reform in other Western countries

Health services in the West are underpinned by a medical practice/education matrix that makes up a strong but covert framework on which all other structures are laid.

Modern medical practice is research and specialist based. It is a reductionist model of practice accompanied by a similar model of education. With a few exceptions, for example Andrew Weil a graduate of the Harvard Medical School who is exploring the mind–body perspective, Western medical practitioners operate within boundaries posed by the limits of their specialist practice and education domain. The traditional Western model of medical education is essentially apprentice based. The apprentice works under the supervision of a master until such time as they themselves become a master practitioner. While modern interactive educational technology is modifying some aspects of the apprenticeship process the apprentice based model of medical education remains a significant influence in determining the extent and rate of change that occurs within the health system. When this is combined with the role of the medical practitioner as the primary public system signing authority and the predominantly treatment orientation of most medical education and practice the forces restraining fundamental change are considerable. While the primary driver for health service change remains financial the other forces driving new developments in Western medicine are increasing in intensity and complexity. The most potent of these have been

- New therapies.
- New diagnostics.
- Computers.
- New biologies.
- Synthetics: and
- Robotics. (Porter O’Grady, 1990, p. 43).

Recently these have been allied with a growing older population, mapping of the human genome and increased pressure on academics to research and publish. These forces are inter-related and inter-active and are responsible directly or indirectly for the rapidly rising costs of Western health systems.

Different countries tried different approaches to health care reform. The largest was the USA which has a health care system that is “a paradox of excess and deprivation” (Ham, Robinson, & Benzevel, 1990, p.60). In 1977 Ginzberg identified the principle targets for reform of the United States health sector:

- Expanded access to healthcare for the underserved.
- Improved quality of health services throughout the country.
- A levelling off of cost escalation of health services.
- Equity in health care for all groups and the population. (Ginzberg, 1977, p.198).

Ginzberg (1977, p.212) further concluded that United States (US) health reform “is as inevitable as it is doomed to disappoint its advocates” for the following reasons:

- Many health related innovations and changes occur without governments playing more than a modest role...
- Three out of every five dollars spent on health care still originate from outside the government arena...
- The regional and area distribution of health resources is grossly uneven...
- Most members of the medical profession prefer to live and work in large metropolitan communities...
- It will be difficult to assure future large inputs of new resources for the health care system... (p.212).

For health sector reform to succeed in the U.S. with a fragmented political system Presidential will, Congress and public support and private sector good will are essential. The most recent attempts at reform of the total U.S. health sector initiated by President Clinton and led by his wife Hillary Rodham Clinton, soon foundered on the implacable opposition of the health insurance industry to user pays. Although this concept was abandoned within six weeks of the 1993 Taskforce on National Health reform convening (Hamburger, 1994) the opposition aroused in private and political sectors ultimately determined the poor reception given to the Taskforce report. The process however was successful in drawing world attention to the advantages and disadvantages of a market led approach to health care and generated further debate on health sector reform in New Zealand. Some advantages are financial incentives to promote efficiency, a wide range of services offering consumer choice and a flexible system open to individualism and experimentation. Disadvantages include an inexorable rise in health care expenditure, only mediated in part by competition,

difficulty ensuring quality and appropriate care and equity of access to that care. (Ham, et al., 1990).

Reform did take place at State level. Of these it was the reforms in Oregon that generated most public interest in New Zealand. Reforms in Holland, Norway and Sweden also proved to be a relevant source of ongoing information and interest for New Zealand politicians and their officials. However it was reform of the UK National Health Service (NHS) that generated most interest in New Zealand because its social, political and professional foundations were similar to New Zealand's. Only in the United Kingdom and New Zealand, both Westminster style democracies, was health reform initiated and implemented rapidly and comprehensively. Unfortunately the ability of these countries to do this appears to be inversely related to the capacity to evaluate the impact of the changes made (Klein, 1995). Possibly this is in part because the drivers for such rapid, radical and comprehensive reform were economic and political while the public's benchmark was equity of access to a quality service. Possibly it is because some reforms merged with others while others built on previous reforms creating a continuous revolution (Allsop, 1995). Most likely it was because reforms were not confined to the public health service, independent research funds were limited and the evaluation of effectiveness required a systems approach that runs contrary to the competitive market approach.

Reform U.K. National Health Service [NHS]

Commentary on the reform of the NHS abounds. Klein (1995) examined the new politics of the NHS and concluded that the 1980s health related debates were a "dialogue of the deaf" (p.181) which ultimately led to highly controversial 1989 product of the Prime Ministerial Review of the NHS *Working for Patients*. Klein's careful analysis of this review led him to the somewhat depressing conclusion that "the NHS is, therefore, likely to remain a self-inventing institution, responding incrementally to the evolving and unpredictable pattern of health care delivery and to the ideological biases of whichever party happens to be in power" (Klein, p. 253). It can be argued that this conclusion has proved to be as relevant to New Zealand as the U.K.

In her contemporary examination of health policy Allsop (1995), while noting there is no single explanation for policy change, suggests that underpinning policy shifts from the mid 1980s and mid 1990s in the U.K. was the displacement of social policy goals by economic goals. Ranade (1997, p.25), in her exploration of policy and management issues, argues that “the ideological debates which surround the NHS often seem to take place in a vacuum, oblivious to the massive social, economic and technological changes which are taking place in post industrial societies”. Her argument could equally well be applied to the health service in New Zealand, a country even more exposed to the effects of developments in other countries and a country with a ready uptake of new technologies.

Meads (1997) offered an insider’s (turned academic) view of the reforms. His central premise that “with the demise of strategic planning and organizational coherence, the contemporary NHS in terms of its continuing national identity can only be recognized, and understood, as a political development” (p. 4) and his comment that “those who begin a revolution do not finish it” (p. 33) could as well be applied to the New Zealand health service. Most telling he notes the absence of academic critique brought about because academics are “preoccupied with fundamental changes in their own institutions and left behind by the pace and peculiarities of political development processes that now hold sway in the NHS” (p.42). This situation initially duplicated in New Zealand has now been made worse by the restructuring of tertiary education sector, constraints on research funding and a complex research consent process.

A philosophical view, the essence of which is captured by the title of his book *Fortress NHS*, is offered by Seedhouse (1994). He argues that in commercial organisations such as banks, supermarkets and factories “the essential purpose of business activity is known and agreed, but in the health service it is not” (p.9). Nor can it be so until there is a universally accepted theory, or even a nationally accepted theory. As a consequence there is competition inherent in any health service. When this is coupled and with uncertainty about the purpose of a health business the

measurement of unit or departmental efficiency is a much more attractive operation than evaluation of service effectiveness.

Packwood's (1997) observation captures the primary dichotomy of interests that operates in all parts of the health sector and lays a foundation for this research. He stated that "health service management has to "link together and integrate two potentially conflicting sets of interests... those focused on the provision of health services for a population, the responsibility of elected or appointed authorities and their senior managers, and those focused on providing services to individual patients, delivered by professional practitioners" (p.92).

The move to general management in the NHS triggered by the 1983 report of The National Health Service (NHS) Management Inquiry Team (also known as The Griffith's report) slightly preceded the introduction of general management in New Zealand.

The solution to often quoted criticism in The Griffith's report that "if Florence Nightingale were carrying her lamp through the corridors of the NHS today, she would almost certainly be searching for the people in charge" (p.14) was the introduction of powerful health general managers. This conveniently overlooked a far more likely scenario namely, if Florence Nightingale were carrying her lamp through the corridors of the NHS today she, with her background in statistics, health service architecture and planning combined with her clinical and management skills would be in charge.

The move to an internal market in the NHS (and indirectly New Zealand) was spurred by a reflective essay⁵ written in 1985 by American academic Alain Enthoven. His suggestion of an 'Internal Market Model' for the NHS, possibly because he had made a point of not making an overall judgement about the NHS, received widespread attention. In his view an internal market would lead to the most efficient

⁵ *Reflections on the management of the National Health Service*

use of resources, force the development of proper costing systems and create more cost efficiency (Enthoven, 1985).

Enthoven's suggestion of an internal market coincided with an emerging perception of health as a business that could be managed by executives competent in and knowledgeable about general management but not necessarily health management.

In 1998 the Nuffield Trust which had published the original essay invited Enthoven back to review the reforms. His conclusion from this review was that "the traditional NHS structure of centralized planning and top-down management control lacks a coherent strategy for motivating innovation and improvement" (Enthoven, 2000 p.116). His suggested solution that "something closer to a real market model driven by consumer choice" be adopted is likely to be much less well received by populations in the United Kingdom and New Zealand, disenchanted after more than a decade of structural reform, than his 1995 suggestions.

The 1991 NHS reforms (and those in New Zealand) separated purchasers and providers and established an internal market in health care. Contractual arrangements were put in place. Structural reform was the tool and efficiency the goal. Reform triggered further reform. In both the United Kingdom and New Zealand there has been a "lack of detailed and systematic research appraisal of the internal market" (West, 1998, p.167). One reason for this is that "the normal standards of liability for bad service that apply in other areas of the economy do not apply in health either in Britain or New Zealand" (Scott 2000, p.126).

The timing of the major reforms in the NHS and the New Zealand health service suggest the 1990 National government used UK blueprints when planning its own reforms. Reform however was already underway in a number of western countries and New Zealand developed its own model. New Zealand's geography has more in common with Norway than the U.K. Its ethnic mix, lack of an established class system which has more in common with the situation in Canada and its affinity with Australia suggest that a U.K. model might no longer be appropriate for this country.

The reform of the welfare based health sector in New Zealand however, was framed by a parliamentary system and a system of health professional education derived from Britain.

New Zealand

What is now commonly referred to, as ‘The health reforms’ were part of a systematic programme of structural adjustment. Referred to by Easton (1997, p.153) as a “health blitzkrieg” these reforms had their roots in previous Labour and National government reform. Without these precedents which laid the foundations for further structural reform it is doubtful if the reform undertaken by the 1990 National government could have proceeded so rapidly or with so little public consultation.

A Ministerial Committee on the Funding and Provision of Health Services was set up in 1991 by the Minister of Health, the Honourable Simon Upton. The five committee members, the majority of whom were medical doctors, were instructed by the Minister to:

Develop a model in which everyone, regardless of income, has access to an acceptable level of health care; in which the right mix of services was delivered with maximum efficiency; and in which, where possible, consumers had a choice of services (Upton, 1991, p.10)

The committee presented its findings to the government in a number of briefings and papers. After considering its advice and recommendations in July 1991 the government in its publication *Your Health & the Public Health* (Upton) (generally referred to as *The Green and White paper*) outlined the decisions it had made and the timetable for implementation. Described in the Green and White paper by Simon Upton as “building a re-vitalised system which is both strong and flexible enough to serve all New Zealanders in the future” the consequent large scale 2 year restructuring of the public health sector was labelled by McLoughlin as “Simon Upton’s leap in the dark” (1993 p. 65).

McLoughlin who was highly critical of the government's sidelining of the previous government's Health Charter and Health Goals, felt that health was incidental to Upton's reforms which were in his opinion about structures, management, lines of accountability and cost control. This is in stark contrast with his belief that Clark's December 1989 Health Charter was "a 10-year blueprint to shift the focus of health services away from treating the sick in hospitals to preventing many of the lifestyle related diseases which put people in hospital in the first place" (McLoughlin, 1993, p. 67).

The Health Charter representing itself as "a commitment to the people of New Zealand until the year 2000 in respect of the operation and goals of the public health system" (Clark, 1989, p.1) was swept away with the defeated Labour government. With it went a focus on health goals and non-hospital services. In its place came a new focus on the health sector, public and private, as a competitive marketplace. Ironically seeking the competitive advantage, a concept promoted with great effect nationally and internationally by Harvard University Professor Michael Porter (1990), only became a viable ploy because the Labour government from 1984 onwards created an environment which favoured the rapid restructuring of the health service.

The Labour government's (McGuigan) 1975 White Paper *A Health Service for New Zealand* apparently came to nothing with defeat of that government. However the move to a single New Zealand Health Authority; the amalgamation of services into regional services and appointed board members are all concepts canvassed in the White Paper. It could be argued that Upton's 'leap' was no greater than that proposed by the Labour government 1975.

Upton however did not 'leap' alone. His restructuring of health services occurred in tandem with the restructuring in allied and other sectors and promotion of the generic manager. Interdependence of the social welfare, housing, justice, education and health sectors meant that restructuring in one sector inevitably had an impact in allied sectors. The legislative empowerment of the generic manager and the private

business model embraced by the Health Boards meant that for the first time in public sector CEOs were legitimately managers of all their organisation's health professional employees. As such they assumed responsibility for the recruitment, retention and evaluation of these employees. Their responsibility for professional practise, education, research and development of individual employees was less clear. Professional disciplinary bodies, the activities of which are sanctioned by legislation, had no power over the CHE environment in which the individual practitioner practised. The CHE CEO had no direct power over the health professional education sector but had negotiating power by virtue of their role as gate keeper of the student learning environment. This complex matrix of executive and professional responsibilities and boundaries has been for over a decade overlaid by a process of constant organisational and government wide reform.

The establishment of CHEs paved the way for the fragmentation of the public health sector into 23 competing CHEs, 4 Regional Health Authorities (RHAs) and 1 Public Health Commission (PHC). With the imposition of these and other organisational entities the government hoped to create a public sector market that would ultimately return a profit. The Health and Disability Services Act 1993 provided the necessary legislative foundation for this separation of funder and provider roles and the definition of core services, both key planks of the National government's health policy. Funding became contestable and programmatic.

The new structure implemented in 1993 ultimately proved to be vulnerable at a number of key points. Contracting was serviced based and competitive across the public private and voluntary sectors. While this enabled some positive developments particularly in the provision of Maori health services in the public sector it fractured services, disrupted national health research and created a climate of secrecy. While contracting for non-medical services such as cleaning proceeded with minimal problems contracting for health care posed particular problems accentuated in New Zealand's case by the limited pool of health care specialists. Competition in many situations was limited; providers were often considerably more knowledgeable than

purchasers; for many cases there was not one best plan of care and unsatisfactory clinical performance proved difficult to detect and remedy.

The existence of four, independent purchasing authorities (the RHAs) each with their own regional perspective compromised the orderly and efficient development of expensive tertiary services. In 1996 the new coalition government, responding to increasing public and health professional criticism replaced the Four Regional Authorities with a single Health Funding Authority (HFA) which in December 2000 became part of the Ministry of Health.

The National Advisory Committee on Core Health and Disability Support Services (NACCHDS also known as the Core Services Committee and the National Health Committee) failed to define the core services the four RHAs (and later the HFA) were to provide for people in their regions. This ultimately led to the inequitable provision of services, a situation that caused considerable public disquiet. The failure to clearly define the core remains.

The Public Health Commission which operated separately from the Ministry of Health tended to take a somewhat independent line in meeting its responsibility “for public health policy, monitoring of health indicators, and the purchase of public health services, among other responsibilities” (Bloom, 2000, p.35). In 1996 the PHC was disestablished and its policy functions transferred to the Ministry of Health and the purchase functions to the RHAs. This move further reinforced the dominance of the hospital-based services.

23 Crown Health Enterprises replaced 14 Area Health Boards. The responsibility of the newly created Minister of Crown Health Enterprises, these CHEs were established as limited liability companies with a profit agenda. This raised “important questions about the underlying ethics of health service providers and the compatibility of combining financial targets with social objectives” (Ashton, 1993, p.61) an issue that has not yet been satisfactorily resolved. In 1996 the profit agenda

was removed and they became not for profit companies known as Hospital and Health Services (HHSs) under the jurisdiction of the Minister of Health.

As in the decades before, in the 1990s structural reform continued to trigger further structural reform. Built into health sector reform is a considerable inertia that results in time lag between a government's promulgation of reform and its full implementation. This means that in a three-year term of office the government that instigates reform has only a limited period in which to evaluate their reforms and convince the voting public of their value. It is therefore not surprising that the Crown Company Monitoring and Advisory Unit (CCMAU) set up to monitor the performance of hospitals and other Crown agencies chose to give priority to monitoring financial efficiency.

Throughout the ongoing restructuring new care delivery systems were sought by CHE (and later HHS) executives seeking improved systems of resource management in order to be able to meet government and governing board requirements, and nurses seeking to provide better patient care while retaining or expanding their professional power base. Much of the search was focused overseas. However overseas models and systems have limited application in New Zealand with its unique demographic, geographic, economic, and social structures and there remains an urgent need to develop indigenous systems of health care delivery that will meet the health care needs of all New Zealanders now and in the future.

With the coming to power of a new Labour/Alliance coalition government the 1975 White paper which has lain dormant for a quarter of a century appears to be seeding some of the present round of reforms. The present government with the creation of a New Zealand Health Strategy to be delivered primarily via the growing and increasingly powerful Ministry of Health and the newly created District Health Boards may be the catalyst for change. It is a strategy that has as its foundation further restructuring of the health sector, a factor that suggests efficiency rather than effectiveness remains the dominant value. However as the following quotation from

a recent book chapter by the Director General of Health hints this dominance may be beginning to fade.

Governments considering or in the throes of reform would be well advised to consider the following:

- Understanding the complexity and interconnectedness of health systems is essential in order to achieve ultimately simple solutions.
- An understanding of both historical and contemporary influences is needed in order to build a positive environment for change...
- There is no 'magic bullet', no one right solution waiting to be discovered, Incremental change that draws on insight, wisdom and energy is the key to successful health reform...
- People matter. (Poutasi, 2000, p.146)

Chapter three

This study

The 1996 proposal

On 21 November 1996 a new proposal for a qualitative exploratory/descriptive study with all participants being senior staff members was sent to all CHE CEOs. An explanatory covering letter was sent to the CHE CEOs who had been appointed after their predecessor had replied to the initial letter requesting support in principle.

Participants

People selected for possible recruitment to the study were:

CHE Executive staff

The CEO who was:

- The person who implemented government and board decisions.
- Responsible for services provided to patients.
- Responsible for ensuring the CHE met legal requirements.
- Responsible for the nursing workforce.

The Finance manager who was:

- The CHE fiscal planner and operations manager.
- Responsible for funding nursing services.
- A person who had an overview of the organisation.

The Human Resource Manager who was:

- The human resource planner and operations manager.
- Responsible for the recruitment and employment of nurses.

A total of 69 people.

[The human resource management role gave way to the human resource advisory role in some CHEs during the course of the study.]

CHE Nursing Staff

The person employed in the most senior nursing position in the CHE. This nurse:

- Was a New Zealand registered nurse and required to hold a current practising certificate.
- Was likely to have the title of Nurse Advisor or Director of Nursing.
- May or may not have been part of the CHE management team.
- Provided strategic and/or operational advice to management on nursing related matters.
- May have also had a non-nursing line management role.
- May have had a line responsibility for some nursing services,

The most senior nurse on night duty. This nurse:

- Was a New Zealand registered nurse and required to hold a current practising certificate.
- Was likely to have the title of Night Supervisor or After Hours Manager.
- Was likely to be the person supervising the operations of the hospital at night.
- Supervised nursing services delivered at night.
- Was responsible for patient/staff safety on night duty.
- Was responsible for ensuring management decisions were implemented by nurses and caregivers on night duty.
- May or may not have had some direct input into CHE strategic and operational plans.

The most senior nurse in the CHE community health services. This nurse:

- Was a New Zealand registered nurse and required to hold a current practising certificate.
- Supervised nursing services delivered by the CHE in the community.
- Was responsible for ensuring CHE nurses and CHE employed caregivers working in the community implemented management decisions.
- May or may not have had some direct input into CHE strategic and operational plans.

A total of 69 people.

The choice of 6 CHE senior staff members as potential participants was influenced by the aim of the study and the need to find a project acceptable to a number and variety of parties. By recruiting only senior staff members the issue of undue pressure being placed on potential recruits did not arise. The six staff members chosen were all senior staff members each with a responsibility for a significant component of CHE operations. All could reasonably be expected to have a good working knowledge of the CHE structure, systems and activities.

Non CHE staff

It was planned to interview the 138 CHE staff, transcribe and analyse their interviews, then develop a new set of structured questions derived from the analysis of the CHE transcripts for the remaining non CHE interviews with the:

- Chairperson and the Chief Executive, Nursing Council of New Zealand.
- Chief Nurse Ministry of Health.
- Chief Executives of the 4 Regional Health Authorities.
- Chief Executive of the Crown Company Monitoring and Advisory Unit.
- Chief Executive of the Clinical Training Agency.
- President and the Chief Executive, New Zealand Nurses' Organisation.
- The person responsible for Health Policy in Te Puni Kokiri.
- The person responsible for nursing education in the Ministry of Education.

A total of 13 people.

These people were all involved with nursing care delivery at the national level. By interviewing them it was hoped to obtain some insight into the way in which people who made significant nursing related decisions perceived the CHE interview results and implications for their organisation and its ongoing relationship with the CHEs.

Interviews

Interviews with CHE staff were to be face to face, audio-taped, and in two parts. Other interviews would be audio-taped, face to face or telephone interviews. Telephone interviews would be undertaken when face to face interviews were not practicable. It was expected that the non CHE interviews would be shorter and structured and therefore lend themselves more readily to telephone interviewing.

For the CHE interviews Part A was to be the structured part of the interview seeking selected personal information in general form and information about participants' qualifications and experience. This was designed to yield a profile of all the participants in the study. Part B was to be the semi-structured part of the interview. It addressed the participant's views on various factors related nursing care delivery. Interview transcripts were to be analysed using content analysis.

Review

It was also proposed to do a line by line review of:

- CHEs' Annual Reports for information concerning future strategies for care delivery.
- Publicly available documentation concerning planned CHE strategies for care delivery.
- Publicly available documentation from the Nursing Council of New Zealand concerning future strategies for care delivery.
- Publicly available documentation from the New Zealand Nurses' Organisation concerning future strategies for care delivery.
- Publicly available documentation from the Ministry of Health concerning future strategies for care delivery.
- Publicly available documentation from the Regional Health Authorities concerning future strategies for care delivery, and;
- Other such documentation as may be given to the researcher by those being interviewed.

This review was designed to ensure background information about relevant organisations came from similar and reputable sources.

Recruitment

Once CEO approval was obtained in writing the researcher planned to write to those executives and nurses nominated by name as eligible for participation in the study requesting their participation in the study. It was anticipated that the CEO, would if agreeable, give their signed consent and write his or her nominations on the form provided by the researcher.

CHE staff members wishing to participate in the study would be asked to signify their willingness by completing a consent form and returning it to the researcher. Once the researcher had the consent form she planned to arrange an interview at a mutually convenient time and place using the contact information provided on the consent form.

On the basis of her previous experience which had shown it could take up to three months to get a reply from some CHE CEOs, combined with the continuing requirements of the researcher's employment, the researcher expected it would take at least 9 months to complete the CHE interviews.

Implementation of the 1996 proposal

3 CHE CEOs declined permission. These were not the same three CEOs that had previously declined to support the research in principle. This immediately reduced the number of staff members who could be approached to participate in the study by 18. Two CEOs did not reply to the initial letter requesting approval or to any follow up communications. This reduced the number of potential participants by a further 12. The final number of potential participants was 108 CHE executives and nurses.

The remaining CEOs all communicated their approval in writing. CEO turnover meant that in some cases the process of CEO consent had to be repeated in order to obtain the approval of the current CEO. Not all CEOs completed the nomination form, some indicated their approval in a separate letter. Of those who did complete the form not all listed requested names on the form provided. Two CHEs provided names via fax at a later date. If a name was not made available the research information pack was addressed to the person with the particular title for example, 'The Finance Manager' or 'The Most Senior Nurse on Night Duty'.

Recruitment

A letter was sent to nominated staff members requesting their participation in the study. The letter was accompanied by:

- A copy of the research proposal.
- A copy of the ethics committees' letters of approval.

- The information sheet (refer appendix 1)
- A consent form (refer appendix 2) to be signed if they wished to participate in the study and a coloured form to be signed if they do not wish to participate in the study.
- A pre-addressed envelope in which to return consent or the coloured form.

Ultimately 31 people signed and returned the coloured form indicating they did not wish to participate in the research. During the course of arranging interviews it became evident that 2 people to whom the forms had been sent were on long term leave. 2 positions were vacant at the time the forms were distributed and a number of other positions became vacant or obsolete before the interviewer could obtain consent.

63 people indicated that they were willing to participate. One person agreed to interview but the researcher was never able to negotiate a mutually convenient appointment time. One person who agreed to be interviewed left their position at short notice.

Interviews

61 interviews were completed between March and December 1997. Every attempt was made to cluster appointments but staff leave, days off, the need to accommodate night staff, the need for some CEOs to travel to Wellington at short notice and the researcher's work commitments meant it was necessary for the researcher to make repeat visits to some CHEs.

Using the contact information provided by each participant on their consent form the researcher contacted potential participants. In some cases the contact information were work telephone numbers, others gave home numbers and a few offered a choice of work and home numbers. Interviews were arranged on the understanding that they could be cancelled or postponed at short notice if the participant's work or personal commitments made this necessary. Question areas, but not the actual questions, were provided so that those who wished could consider these prior to interview. The researcher however, made it clear when arranging appointments that she recognised

the demanding nature their work and indicated that she did not expect time to be devoted to preparing for the interview. All interviews were scheduled for an hours duration. Available interview time on the day was often eroded by work commitments especially in the case of CEOs. Five interviews were 30 minutes in length and three 90 minutes. These however were the exceptions with most being between 40 and 60 minutes long. Occasionally interviews were delayed. This did not cause problems as time was built into the interview programme to allow for this and local travel to interviews. In some cases this was to another building on the same CHE site, in others to a CHE site some distance away and in a few cases to the person's home. All interviews were conducted in the place chosen by the participant.

All participants were given copy of actual questions (refer Appendix 3) at time of interview. The researcher indicated that these were the questions she wished to cover during the course of the interview. 2 people chose to treat the list of questions as a set of structured questions to be answered briefly and concisely. While this yielded useful data it did not yield the same rich data as the more conversational type answers.

After the first few interviews it became apparent that the distinction between present and future events was not appropriate. This was confirmed as the interviews progressed. All CHEs in the study were in a state of transition at the time the interviews were undertaken. Past, present and future were not easily identifiable entities. For consistency the same question sheet was used through out the interviews but the distinction between present and future events was only pursued when this distinction was clearly made by the participant.

No participant declined to answer a question but a few participants avoided answering a question or answered elliptically. In most cases the researcher felt that this was not an oversight but a deliberate choice and did not pursue the matter further. In a few cases the participant in the course of the interview indicated that they believed they had previously answered a question and the researcher asked for clarification.

All interviews were audio-taped with the participant's consent. One participant requested the tape to be turned off while clarifying a point about the research process another while providing personal insights into a sensitive situation.

All audio-tapes were transcribed. Two tapes were difficult to hear on transcriber and were played back by the researcher using a large audio system. The majority of tapes were transcribed by one of two professional transcribers who had signed a confidentiality agreement, the others by the researcher. Transcription, as opposed to only listening to the audio-tapes, was chosen because it was easier for the researcher to find and highlight, using different coloured highlighters, material in the transcripts relating to specific questions.

Because the process of obtaining and analysing the interviews took over two years in 1999 it was decided not to seek the proposed interviews with New Zealand Nurses' Organisation, Nursing Council and other non CHE executives as during the time taken to obtain, complete and analyse the CHE interviews considerable health sector change had occurred and these interviews would take place in a markedly different context and time frame and with different staff. This decision meant that the planned review of documents was no longer required. These documents were however read as part of the review of relevant literature.

The difficulties encountered negotiating and completing interviews highlight the complex challenges facing a researcher wishing to undertake an independent national study in the New Zealand health sector at height of the 1990s health reforms. The competitive model, the decision making powers of CEOs, the complexities of staffing 24 hour a day/ 7 day week services and the exigencies of the service all contributed to an obstacle course that at times seemed overwhelming. 61 of the potential 108 interviews were however satisfactorily completed and yielded interesting and thought provoking data.

Funding

An application to the Massey University Research Fund (MURF) was successful and this paid travel, accommodation and the majority of transcribing costs.

Timetable

The original timetable that anticipated completion of the present study in 1999 was compromised by a variety of factors some of which were external produced by changes in the health sector. Others were internal including unanticipated changes in the researcher's workload.

The research design

This is an exploratory descriptive study. This is unusual in industrial and organisational psychology "which has been relatively slow to adopt qualitative research methods" (Muchinsky, 2000, p.34). Some textbooks do not include material on 'exploratory descriptive' or 'descriptive exploratory' research on the grounds that a prior knowledge of the problem is required to develop the research question (Carter, 1991). For this study which seeks to explicate executives and nurses understanding of nursing care delivery in the CHE setting it is an appropriate method because it is particularly suited to a study where researcher plans to "assemble new information about an unstudied phenomenon" (Seaman, 1987 p.181). It is also a method that offers a degree of flexibility making it possible, as in this case, for the research process to evolve in response to external conditions.

Although the exploratory descriptive method is appropriate for comparing results from two groups of people and the research data base clearly identifies information as coming from executives or nurses, in one format being categorised according to position, the focus of this study is firmly on the combined results. Little is known about the management/nurse interface post reform health system yet at executive and senior nurse level it is the one that is crucial to safety, efficiency and effectiveness of the organisation. It is also "the meeting ground of two very different cultures, both of whom are working in the rapidly changing, relentlessly restructured and value laden health care system" (Maher, 1998, p.27). If positive and productive changes are to be made to nursing practice models and systems this interface must be bridged by a common understanding of the relationship between the organisation's structure and function, the nursing care delivery system, its component parts, their interface and interaction with each other and with other systems and this combined with a high

level of management knowledge and expertise. A study that combines executives' and nurses' views facilitates this process.

Qualitative research

There is no specific and agreed upon definition of qualitative research (Cassell, & Symon 1994; Lee, 1999). However, qualitative research does have a number of defining characteristics. These include a focus on interpretation, an orientation toward process, and a concern with context (Cassell, & Symon). In a study such as this, where very little is known about a broad and complex topic, a predominantly qualitative study seems the appropriate methodology to produce theory generation and testing.

Content analysis

The chosen method of analysis is content analysis. It has the advantage of "being able to accept relatively unstructured symbolic communications as data" (Krippendorff, 1980, p.33). The data generated may be examined to reveal information that is present or absent, the absence of information sometimes being as telling as its presence. This factor combined with the checks and balances inherent in the other questions and sub questions asked means that the participants' lack of comfort with the concepts of patient and nursing care delivery did not hinder the study.

The earlier use of content analysis as primarily a technique for the "objective, systematic and quantitative description of the manifest content of documents" (Berelson, 1952, p.18) has been updated with the use of computer programmes designed to objectively categorise and analyse data according to a predetermined framework. This technique has since been adapted for use in qualitative research. Leaning much more to the art end of the science/art continuum it relies more heavily than the original technique on analyst's craft and knowledge of the area being researched (Carney, 1972; Weber, 1990; Cassell, & Symon, 1994; Lee, 1999).

Qualitative content analysis is based on “the assumption that analysis of language in use can reveal meanings, priorities, understandings and ways of organising and seeing the world” (Edwards, & Talbot, 1994, p.103). In its most common form the analyst combs the data looking for themes or patterns of data that can be clustered and coded.

Qualitative content analysis poses special challenges to the researcher. Because it is essentially reductionist the researcher needs to guard against that the meaning and integrity of the whole being lost. Validity which refers to “the internal logic of the research” (Lupton, 1999, p.454) is heavily dependent upon careful explication of the study by the researcher and dependability which Robson (1993) suggests is analogous to reliability requires the researcher to leave an audit trail that is clear and adequately documented. Perhaps the greatest challenge is the need to be aware of the deficiencies of the human as an analyst (Robson). These include limitations on the amount of data that can be processed, resisting the revision of first impressions, and subsequently evaluating the same data differently.

Data, once clustered, may be further analysed and reclustered, the resulting findings containing the essence of the research expressed as themes. These themes generate hypotheses and seed future research. Although this process requires careful and time consuming analysis it has the advantage of generating information that is useful in contemporary situations.

The questions

This study used a set of questions which participants were requested to canvas as they wished. This was done in order to make explicit the agreed framework for the interview and to ensure the topic could be canvassed within the requested hour-long appointment time. The biographical information sought was the minimum required to obtain a useful picture of the participants.

All participants were asked for a description of the CHE organisational structure, the patient care delivery system (PCDS) and the nursing care delivery system (NCDS).

Additional questions were used to obtain information about why the particular structure was chosen and the advantages and disadvantages of the patient care and nursing care delivery systems. Given that these were senior staff who could be expected to possess knowledge of and an ability to influence changes to the organisational structure and care delivery systems information was also sought about who chose the structure and care delivery systems and when those described were put in place. Questions relating to evaluation and resource implications were included because to answer both requires a good understanding of the organisations structure and systems and both are an integral part of management.

The questions relating to the knowledge, skill and expertise required by registered and enrolled nurses and caregivers were designed to obtain information about participants' knowledge of nurses and caregivers work.

The questions relating to nursing education and nursing research system designed to obtain information about participants understanding of the relationship between nursing practice, nursing education and nursing research and to indicate areas of future research that could be of value to the CHE.

The questions were finalised after CEOs by giving permission to approach staff members who had signalled their comfort with the proposed content areas and the questions asked had been piloted on work colleagues. After the first few interviews it became apparent that work colleagues were more comfortable than participants with the concepts of patient and nursing care delivery systems. Consideration had been given to piloting the questions in the private sector but many senior nurses in this sector combined executive and nursing roles. In hindsight this may have proved the better option.

Analysis

As a consequence of the commitment made to participants to ensure confidentiality and limit access to data the issue of researcher dependability could not be addressed by introducing another person into the process. Therefore each transcript was

checked against the appropriate audio tape then a set of transcripts were read a number of times from beginning to end and what appeared to be the significant points noted in pencil and hand recorded in notebooks by the researcher. The information in these notebooks was then summarised question by question. The notebooks were then put aside and a period of months allowed to elapse before commencing the line by line analysis. This was to avoid the possibility of the summarising process influencing the line by line analysis. After all the themes had been identified they were then checked for congruence with the summaries in the notebooks. This process also ensured that significant information that did not necessarily relate directly to the questions answered was not lost. This information is, as appropriate, incorporated into the commentary.

A second set of transcripts was then read and re-read to find answers to the specific questions asked at interview. Answers to each question were highlighted in a different coloured highlighter and significant points recorded against each participant's unique identifier (a number) on the computer using the Excel data-base. Excel was chosen because it provided a consistent template on which to record the answers to questions. At the end of the recorded answers to each question the researcher noted 'off the cuff' comments and points she felt to be of special interest or significance.

Transcripts were first searched line by line for answers to the questions requesting biographical data. Data for each participant was recorded on the computer. The results are presented in summative form in chapter four. Answers to each of the remaining questions were then printed out in alphabetical order thus mixing answers from various categories of staff. Later the exercise was repeated after ordering the answers by category of staff and the possibility of undertaking some quantitative analysis of the data by category of staff explored. This process proved to have a very high risk of some participants being identified and was consequently abandoned.

The diverse demography, geography and phase of transition from one structure to another of the participating CHEs combined with differing dates, length of interview

and the conversational nature of the interviews prohibited meaningful quantitative analysis of the answers to the majority of questions. Where this data does provide useful insight it is given.

The process of thematic analysis comprised four steps:

- The core components of participant's answers to each of the questions were recorded
- These were then clustered by percentage and participant number. [Participant numbers were included solely for ease of checking by the researcher and her thesis supervisors and examiners]
- These clusters were then distilled to yield the chapter themes that capture the essence of the participants' replies to a particular question
- The chapter themes were in turn distilled to become the study themes that contain the essence of the thesis.

This technique of clustering and distillation is time consuming and no matter how knowledgeable and careful the researcher and how many internal checks are put into place is ultimately subjective (Carney, 1972; Krippendorff, 1980).

In some cases the contextual discussion provided background information which helped to clarify the participant's meaning. While weight was given to the percentage of participants contributing to a particular cluster of answers this is not a quantitative analysis. The process required that the researcher have an in depth knowledge of the subject under discussion in order to cluster some answers appropriately. For example the reference to 'joint appointments' in an answer to the question 15 relates specifically to joint appointments between a tertiary sector nursing programme and a CHE.

In the data chapters that follow selected interview data from participants' responses to each of the study questions is presented. This data yielded the chapter theme/s at the end of each of the data chapters. In chapter eleven, the study themes, which contain of the essence of the chapter themes, are presented and discussed. Chapter twelve concludes the thesis.

Chapter four

Participants

Introduction

A very important consideration for the majority of participants was confidentiality and anonymity. For this reason data which could identify an individual participant has been omitted. For example qualifications in a number of cases proved to be unique identifiers. Information that would identify a particular CHE for example, a CHEs' place on the publicly available financial table of CHE performance, and/or geographic identifiers, have also been omitted. Adverse comment about a CHE or a person that did not directly relate to the research topic was omitted from the analysis.

Summary data

CHEs taking part

18 of 23 CHEs (78.26%) took part.

5 of 23 CHEs (21.75%) did not participate.

Of the 5 which did not participate, 2 CEOs (8.69%) did not reply to any communications and 3 (13.04%) declined participation by their CHE.

Number of interviews

Of a potential total of 138 research participants (6 staff members from each of the 23 CHEs) a total of 61 staff members (44.20%) were interviewed)

Of the possible total of 108 research participants (6 staff members from the 18 CHEs participating in the study) a total of 61 staff members were interviewed (56.46%).

People Interviewed

CEOs

12 (66.66%) of 18

Human Resource (HR) Managers/Advisors

6 (33.33%) of 18

Finance Managers

2 (11.11%) of 18

The most senior nurse in the CHE (as nominated by the CEO)

17 (94.44%) of 18

The most senior nurse on night duty (in most cases as nominated by management)

11 (61.11%) of 18

The most senior nurse in the community health services (in most cases as nominated by management)

13 (72.22%) of 18

Length of interviews (to the nearest 5 minutes)

5 (8.19%) were 30 min.	5 (8.19%) were 35 min.
9 (14.75%) were 40 min.	10 (16.39%) were 45 min.
5 (8.19%) were 50 min.	6 (9.83%) were 55 min.
13 (21.31%) were 60 min.	2 (3.27%) were 65 min.
1 (1.63%) was 70 min.	2 (3.27%) were 80 min.
3 (4.91%) were 90 min.	

Gender mix

Of the 61 interviewed 16 (26.22%) were male and 45 (73.77%) were female.

Findings (Biographic information)

Question 1. Please give the full title of your present position

It soon became apparent that with the sole exception of the CEO title there was no consistent use of titles across the 18 CHEs. This meant that, with exception of CEO, any publication of titles was likely to lead to the identification of participants and in some cases non-participants. Precise data has therefore been omitted. Some participants, mainly, but not exclusively nurses, had changed their titles so often they could no longer easily recall their present title. For some the nature of their work had changed and with it their title and for some the only thing they felt had changed was their title. Over time it became apparent to the researcher that the nature of the work undertaken by people in particular positions, often with the same title, varied from CHE to CHE. This lack of congruity has implications for communication and national evaluation processes.

Question 2. How long have you been in this position?

The length of time people had been in their position proved to be a potential identifier. Consequently precise data has been omitted. A few participants had been in their present position since the beginning of the CHE, some doing what they regarded as essentially the same job under different titles, others had working been in the CHE for some time and had recently undertaken a new job. Some participants were new to the CHE but had worked in the health sector previously, others were new to the CHE and the health sector.

Question 3. Please list your academic and professional qualifications in full.

Nurses in nursing positions were, as required by the conditions of their employment, a New Zealand Registered Nurse.

9 (14.75%) participants had completed both management and professional qualifications. 3 (4.91%) participants had completed health management qualifications. 6 (9.83%) participants were enrolled in management programmes. Of

these 2 (3.27%) participants were enrolled in health management programmes. 2 (3.27%) participants had been selected for and completed Health Service Management and Development Unit (HSMDU) programmes. Of the remaining participants the majority had completed professional or management qualifications. A few participants had not, at the time of interview, completed formal qualifications. A number of participants had completed a programme with a management component, for example the Advanced Diploma in Nursing.

Given the participants were working in positions with a significant management component it was surprising to the researcher that a significant number (approximately 50%) of participants did not possess internationally recognised management qualifications. Of these who did possess these only a small number of participants had completed or were undertaking health management programmes. Given the complex nature of health management it would seem likely that qualifications specific to this area would be among most useful for health service personnel with a considerable management component to their work.

Question 4. If you are agreeable please indicate which ethnic group you identify with.

This information proved to have the potential to identify certain people and this information is therefore omitted.

Question 5. If you are agreeable please give your age within one of the following 10 year

bands:10-20 20-30 30-40 40-50 50-60 60+

14 participants (22.95%) were in the 30-40 age bracket.

30 participants (49.18%) were in the 40-50 age bracket.

15 participants (24.59%) were in the 50-60 age bracket.

2 participants (3.27%) were in the 60+ age bracket.

In the following chapters information about the answers given to the remaining questions and the themes that emerge from those answers is presented.

Chapter five

Structure

Structure as a tool for efficiency

Designed as a tool for improvement of the public sector health service, reform has over the last decade become the constant and poorly evaluated re-form of that sector. Immediately prior to and following the 1999 New Zealand general election increasingly evident public disenchantment led first the retiring National/New Zealand First Coalition government and then the incoming Labour/Alliance Coalition government to announce moderation in the health sector reform processes. This moderate approach however includes re-formation of organisational structures for example, the establishment of District health Boards and integration of the Health Funding Authority into the Ministry of Health, which history suggests will have an inevitable impact on service delivery structures and systems and in its turn spur further restructuring. While there has been a constant public critique of health sector reform by, among others, Coalition for Public Health (1991); Ashton (1993); Blank (1994; 1997); Borren and Maynard (1994); Scott (1994; 1997); Salmond, Mooney and Laugesen (1994); Kelsey (1995); Boston, et.al. (1996); Brown (1996); Easton (1997); Scott (1998); Ritchie (1998), Barnett and Barnett (1999); Bloom (2000); there has not been a clear rationale given for the continued use of restructuring as the primary tool for public sector reform.

The findings of this research suggest that when primary value of government is efficiency, restructuring is of necessity the tool most used by public sector executives striving to meet government demands. This is because the assessment of efficiency requires systems to be broken down into measurable chunks by the imposition of vertical boundaries. If the optimum placement of boundaries is to be achieved the person or persons placing them needs to have an in-depth knowledge of the system being divided and systems interfacing with that system. The inappropriate placement of boundaries creates inefficiency and frustrates the work of staff whose jobs transcend organisational and systems boundaries. The solution then becomes further

restructuring. A “restructuring culture” (Wintringham, 1998 p.8) develops and the restructuring option is used regardless of the problem to be solved.

Organisational structure

Over the last century, in tandem with the increasing interest in the formal study of organisations, organisational structure was extensively researched and documented. With the introduction of scientific management (Frederick Taylor, 1856-1917) prosperity became the goal, efficiency the means, specialisation a primary determinant of structure and work study the means to research it. Taylor’s (1947) work signalled the beginning of the focus on organisational efficiency and the development of management as a specialist occupation. Previously management had been a by-product of professional rank in a particular organisation. Throughout history senior positions in government, the military, the church, the law and medicine were accompanied by a set of organisational duties but it was the person’s place in the professional hierarchy, often purchased at considerable expense, that determined their power base rather than their management status.

Organisational structure, a key determinant of formal power, initially designed and manipulated by the leaders of professions to achieve their own goals became the entrenched structural skeletons of the professions we still see today. These structural skeletons, combining as they do the education, discipline and management components of a profession, are ever present shadows lurking behind the formal, management imposed organisational structure of the public health service. Taylor’s work systems predicated, as they were on the organisation as a single entity, with clearly defined functions and speciality areas, took no account of these shadows.

It was Taylor’s contemporary, Henri Fayol (1841-1925) who created the first clear definition of management as a separate activity with five clearly defined functions namely forecasting and planning, organising, commanding, co-ordinating and planning. In doing so he laid claim to these functions as the legitimate and primary concern of management. Fayol, a mining engineer by profession, also advocated a one man, one boss approach to structuring an organisation, a recommendation made

feasible by the relatively small size of organisations at that time. It is somewhat ironic that Fayol who contributed so much to the discipline of management inadvertently sparked a debate about the nature of administration and management with translation of his important publication *Administration Industrielle et Générale* into English (1949) as *General and Industrial Management*. With management as an occupation assuming a more prestigious position in recent years this debate which continued for half a century has been effectively silenced.

In Germany Taylor and Fayol's contemporary Max Weber (1864-1920) examined authority structures. His work, not readily available in English speaking countries until after World War Two, proposed that there are three main ways authority in an organisation is legitimised. The best known of these, bureaucracy, he labelled *rational-legal*, the others *traditional* and *charismatic*. In traditional organisations such as the military and the church long-standing usage primarily determines structure and process. In charismatic organisations the charismatic leader originates structure and process. In *rational-legal* organisations these are determined by the hierarchical structure of the organisation. Office holders roles, including professional management roles, and authority are clearly defined. In a bureaucracy it is the office that is paramount not the office holder. Weber's (In Pugh, Hickson & Hinings 1964) model made it possible to conceptualise, and display on a chart, the inter-relationships between parts of an organisation. The organisational chart thus became an acceptable representation of the formal structure. Implicitly it also made clear the boundaries of the organisation and the scope of its legitimate authority.

Taylor, Fayol and Weber's work laid the foundations for the modern study of organisations as an entity. Their highly influential work launched the deluge of research and publications, some of which are contradictory and/or inconclusive, about which debate continues to the present day. Much less influential was the work of their contemporary Mary Parker Follett (1868-1933). Follett, in her 1926 lecture to the Taylor Society observed that "the essence of organisation is the interweaving of functions" (Follett, 1926, p4) and noted "it is not sufficiently recognised that co-ordination is not a culminating process. You cannot always bring together the results

of departmental activities and expect to co-ordinate them. You must have an organisation that will permit interweaving all along the line” (p. 10). To achieve this she strongly recommended participatory management and team work. Possibly because she was female and never practised as manager, but more likely because of the volume of authoritative literature generated by Weber’s work with its emphasis on rationality, Follett’s work with its focus on the harmonising and co-ordinating functions of the manager’s role has, until recently, been largely overlooked. This is unfortunate as this lecture in particular raises issues of relevance to a professional organisation.

Mid century a great deal of work was done on organisation size. This work, much of which is well summarised by Slater (1985) is now a topic of waning interest. This is possibly because the emerging globalisation of industry accompanied and driven by new communication technologies has eroded the relevance of size. Nevertheless there remains general agreement that there is a relationship between size and structure. However that “relationship is not linear. Rather size affects structure at a ‘decreasing’ rate; the impact becomes less important as the organization expands” (Robbins, 2000, p.248).

In the 1960s there was a flurry of important publications related to organisational structure. One of the most important was Chandler’s (1962) publication *Strategy and Structure*. Chandler defined structure as:

The design of an organization through which the enterprise is administered... It includes first, the lines of authority and communication between the different administrative offices and officers, secondly the information and data that flows through these lines of communication and authority. (p.14)

Chandler examined the administrative histories of 70 of America’s largest industrial enterprises including du Pont, General Motors, Jersey Standard and Sears and concluded that his thesis that structure follows strategy which was accompanied by the corollary that “growth without structural adjustment can lead only to economic inefficiency” (Chandler 1962, p.16) was correct. Over the years this view has been

challenged, with probably the most effective challenge being from Peters and Waterman (1984) who conducted a similar study some 20 years later and concluded that Chandler's notion that form follows function was a product of his time when a popular strategy of broad diversification necessitated a structure marked by decentralisation. In their studies, captured in their best selling 1984 publication *In Search of Excellence* they found that "strategy rarely seemed to dictate unique structural solutions." (p.4)

In the United Kingdom Burns and Stalker published *The Management of Innovation* in 1961. It was this respected and highly influential work that seeded some of the work on groups by Benne and his colleagues at the National Training Laboratory in the USA. In their book Burns and Stalker described:

Two divergent systems of management practice.... One system to which we gave the name 'mechanistic' appeared to be appropriate to an enterprise operating under relatively stable conditions. The other 'organic', appeared to be required for conditions of change (Burns & Stalker, 1978, p. 367).

Robbins describes the characteristics of a modern mechanistic and organic organisation. The mechanistic organisation:

Has a rigid and tightly controlled structure. It is characterised by high specialization, extensive departmentalization, narrow spans of control, high formalization, a limited information network (mostly downward communication) and little participation by low level members in decision making. (Robbins, 2000, p. 246)

The organic organisation is in direct contrast with the mechanistic form. It is a highly adaptive form that is as loose and flexible as the mechanistic organization is rigid and stable. The organic structure is flat, uses teams to cut across functional departments and hierarchical levels, has low formalization, possesses a comprehensive information network (utilizing lateral and upward communication as well as downward) and actively involves all employees' in decision making (Robbins, 2000, p. 247)

Reminiscent of the contrasting Weber and Parker Follett approaches to organisation, the mechanistic model is most appropriate when the organisation is stable and efficiency is the primary goal and the organic model when the organisation is unstable and flexibility and adaptability are required.

Work carried out at the Industrial Administration Research Unit of the University at Aston in Birmingham (later the Aston Management Centre) in the 1970s also proved to be highly influential triggering further research in the UK and other countries. The original studies on “organisational structures were based on the comparative method as defined by Blau” (1965) (Pugh & Hinings, 1976, vii). That is “the systematic comparison of fairly large numbers of organizations to establish relationships between their characteristics” (p.vii). The findings of the original Aston studies (Pugh & Hinings, p.ix, x) highlighted:

1. The division of labour (specialization), the existence of procedures (standardization) and the use of written communication and role definition (formalisation) are highly related.
2. The locus of authority (centralization) is negatively related to specialization.
3. Various aspects of role structure such as the number of employees and the span of control of the first line supervisor and so on are related.

However concepts such as *specialization*, *standardization* and *centralization* have been criticised as vague and not measureable and there is a view that causal relationships were improperly deduced from cross sectional data (Dawson, 1996).

In 1981 Walton noted that the survey approach and the institutional approach to research on organisational structure were not interchangeable as had previously been assumed. He suggested “research using either approach should be interpreted with caution” (Walton, 1981, p.160). Twenty years later the difficulties of categorising and measuring organisational structure remain. Indeed it could be argued that much of the research on organisational structure should be treated with caution because of the difficulty of separating structure from the rest of the organisation in general, and the environment of the organisation, and the people within it in particular. That said,

“an appropriate structure is vital to the efficiency of the organisation.” (Pugh, et al., 1964, p.3).

In 1982 Hodgetts and Cascio (1993, p.109) identified seven principles that are the basic building blocks for most organisational structures. These principles derive from early searches for a general science of administration that could be applied equally to all organisations. Although this approach was called into question as early as the 1950s, as evidenced by the work of Hodgetts and Cascio it lingers to day. Consideration of these principles as applied to the health sector and nursing offers a glimpse of the myriad complexities facing a CEO developing a CHE structure.

Hodgetts and Cascio’s principles

Division of work (p.110)

This principle lies behind the division of work into jobs. This in turn leads to the concepts of job specification, job description and job or work design. It is predicated on the notion that all the work of an organisation can be identified and cleanly divided into its component parts, a notion that is challenged by the ill-defined nature and scope of any profession where the personality, intelligence and education of service providers is a key ingredient in the provision of services. It also precludes consideration of the view that an organisation is more than the sum of its parts. That said, the complexity of a modern health service means that a CEO has to make a decision about how the work of the organisation will be divided in order to meet contractual obligations. As will be demonstrated later in this chapter the determinants of a particular structure are not easily explored.

Unity of command (p.110)

The notion that each person in an organisation should have only one boss is challenged on a daily basis by health professionals who have a formal responsibility both to the organisation and to their professional body. The accompanying notion that there should be a single line of command running through an organisation is compromised by a health professional’s obligation to also take account of their patient’s wishes.

Span of Control (p.110)

In early work, as demonstrated by Woodward's study of manufacturing firms in the 1950s (Woodward, 1978), research on span of control centred on the span of control exercised by officers of a single entity. Today span of control may cover numerous and diverse entities. Outside contracts and consultancies have moved important work outside the traditional span of control. In many teams temporary control by a team member is negotiated and may never be made explicit. In traditional organisations such as the military and the church the span of control is sanctioned by custom and amended at the margins temporarily as necessary.

Assignment of authority (p. 112)

In a small country such as New Zealand high-level specialist expertise is a rare commodity. Its practitioners are valued and accommodated, often in staff positions. Even while having no formal authority these people exert tremendous power and influence by virtue of their knowledge and expertise. Seldom residing permanently within one organisation these people have, until recently, usually been located nearby. With modern communications technologies this is changing and experts may reside many thousands of kilometres from the organisation.

Parity of responsibility and authority (p.113)

In a traditional nursing structure a person occupying a more junior position is required to 'act up' and regularly perform the duties of an absent senior nurse. This often occurs without any formal hand over of authority or responsibility. Sanctioned by usage this regular occurrence has implications for the more junior nurse who is deemed by the Nursing Council of New Zealand to be responsible for all aspects of his or her practice and for the senior nurse whose work appears to be so easily undertaken by a less senior person.

Centralisation/decentralisation (p.113)

While management decision making may be centralised or decentralised in accordance with the prevailing trend and authority professional decisions are by definition decentralised. A theoretically centralised organisation with a strong

decentralised component, for example medical services, is in part a decentralised organisation.

Delegation of routine matters (p.114)

The principle of delegation to the lowest possible level of the organisation has led to many tasks previously identified as nursing tasks being delegated to non-professionals. This raises two important issues. If nursing is a profession can the tasks identified as nursing tasks be delegated to non-nursing personnel? The second issue is the point at which nursing tasks become routine and non-nursing tasks. A corollary to this is the point at which previously medical tasks become nursing tasks.

Almost a decade later these guiding principles of delegation have become submerged in the complexities and intricacies of managing a modern health service. Added to the pressures exerted on a CHE CEO by his or her board and the pervasive presence of the professional bodies were the pressures exerted by the health funding authority and the Ministry of Health. As a result, economic and legal constraints combined with professional constraints and dynamic government policy to influence the design of a CHE structure. A change in any one of these external influences could result in a need for change in the organisational structure. Small wonder that, 8 of the 18, CHEs (44%) visited by the researcher were identified as being in a period of transition or significant change.

Other factors that need to be considered when designing organisation structure/s are well captured by McPhee (1985, pp. 151-159). He argues that rarely when researchers look at organisational structure do “they attend to the variety of its meanings and implications” (p. 151). It is an argument that can be extended to the designers of health care organisation structures. McPhee identifies several themes in the social scientific literature on organisational structure and suggests there is a need to be alert to these. These themes are identified and discussed in the following section.

McPhee's themes

Structure as an empirical object (p.151)

Here structure is identified as a raw object for study. Examples of classical studies given by McPhee (1985) include the work of Weber (1968), Burns and Stalker (1966), Pugh, et al. (1986) and Mintzberg (1979). In nursing, structure as object most commonly arises in discussions among nurses about clinical career paths (CCPs) and the place that the most senior nurse in the organisation occupies on the organisation chart. These discussions are often heated and inevitably flawed because they are discussions about conditions of employment and professional power disguised as discussions of the structure.

Structure as an information processing/ co-ordination mechanism or tool (p.152)

Theorists working in this area are concerned with the information processing and co-ordination components of an organisation. These two components are a feature of health sector organisations because much of their core business is directly dependent upon professionals' ability to acquire, process, record and communicate information to others (including patients and people outside the sector for example lawyers, pilots, welfare agency staff). Parsons (1937), March and Simon (1958), Lawrence and Lorsch (1967) are well known theorists in this area identified by McPhee (1985).

In recent times information processing and co-ordination are surfacing as one of the significant determinants of organisational structure. The multimillion dollar cost of health information systems, the globalisation of information and communication systems, health professional's dependence on others to develop and maintain these systems combined with the accessibility of these systems to non-professional staff and lay people, signals a strong challenge to entrenched professional power.

Structure as system form (p. 153)

The two main paths of the systems approach to organisations are represented by the general system approach of Bertalanffy (1968) and the social systems approach of Katz and Kahn (1966). This topic is further developed in the following chapter.

Structure as negotiated (p.153)

Writing in 1985 McPhee predates recent interest in chaos theory. McPhee notes that in the 1970s theorists such as Strauss (1978), Maines (1977), Day and Day (1977) argued that order in some organisations has little to do with formal structure but derives from the nature of the work to be done and disciplinary world views. In large health sector organisations the evident order may derive as much from the self patterning that is inherent in chaos as from the formal structure. Temporary negotiated structures are common in nursing practice when knowledge and expertise in a particular area will often take precedence over a formal structure. For example a junior staff nurse who has previous experience and/or qualifications in a particular domain of care may oversee and/or direct the work of a senior staff nurse with less expertise in that a particular area.

Structure as power object/ resource (p.154)

French and Raven's (1959) classic work on the classification of power into coercive, reward, legitimate, referent, expert and representative power made clear the existence of power as an entity derived only in part from formal structure. In the health sector expertise and legitimacy convey power, often considerably in excess of that conveyed by the formal structure, to senior health professionals. In the CHEs the government's legitimisation of a CEO's absolute right to determine the structure of the organisation often clashed with the power exerted by health professionals in general and medical experts in particular.

Structure as carrier of social psychological processes (p.155)

McPhee (1985) argues that socio-psychological processes in an organisation may be transformed by the formal structure. He gives an example of role conflict engendered by the need for a person to report to two different superiors. For many nurses, the majority of whom are female, the organisational and professional role conflict inherent in working for a health care organisation is compounded by the addition of personal role conflict. Daughter, partner, and mother roles add an additional burden to the working nurse. McPhee (p.156) makes particular reference to the work of Kanter (1977) which he believes makes clear how formal structures can affect social psychological processes.

Structure as carrier of social processes (p. 156)

McPhee (1985, p.156) begins by discussing Marx's work on the class distinctions arising between the owners of an organisation and the labourers who sell their labour to the organisation. In the public health sector CHEs are the property of government. All employees of a public health service organisation are in effect labourers in that organisation, however at the same time some may also be owners of their own business. According to McPhee (1985) the emergence of a middle class of professionals and managers was noted in the 1970s by Walker (1979) and Giddens (1971). Powerful and well rewarded in comparison with other employees of the organisation members of this growing middle class in the 1980s came into conflict with others over the precedence being given to economic as opposed to social goals.

Structure as a control /domination mechanism (p. 157)

In his discussion of this theme McPhee argues that structure can be used a means of manipulating organisational members against their interests. He supports his argument with reference to the work of theorists in the Marxist tradition, among others Friedman (1977), Salaman (1982), and Storey (1983).

Currently perhaps the most blatant means of manipulation is the prevalence of short term employment contracts (and their corollary short term employment structures), the use of personal appraisal systems and the secrecy engendered by the Privacy Act 1993. Behind this overt manipulation is covert use of specialisation as a tool for manipulation. Specialisation, which encourages the fragmentation of professional power, is a powerful management tool especially in a country small as New Zealand. Specialisation has as its focus a narrow scope and considerable depth. It underpins the silo, columnar or chimney approach to structuring a health service organisation and usually has as its outcome some form of service management structure: a structure, which if not carefully managed invariably results in the duplication of work with the inherent inefficiencies that creates.

Structure as counter productive/dysfunctional (p.157)

The classic description of an organisation rendered dysfunctional by its structure is the government bureaucracy. Usually evidenced by the presence of procedure

manuals and numerous documents proclaiming local policies and regulations these organisations are rendered dysfunctional by the red tape. Enrolled nursing in New Zealand has succumbed to this death by red tape. An enrolled nurse is a qualified nurse who is required to work under the supervision of a registered nurse. While the definition of supervision varies (to include in some cases supervision off site) an identifiable registered nurse is required to supervise the enrolled nurse's work. The financial and practical implications of this ultimately contributed to the discontinuation of enrolled nursing education with the consequent limited availability of New Zealand trained second level nurses. The structural requirements over time became counter productive.

Structure as resisted, evaded or ignored (p. 158)

McPhee (1985, p.158) notes that workers may ignore or break rules. As examples of this he highlights: exchanging jobs; attributing more authority to some managers than to those managers' bosses; communicating when, where and what they should not; circumventing key employees in a bureaucratic chain of work, all against regulations. Such actions may of course be sanctioned and productive in certain situations such as an emergency. However if used consistently they undermine the authority of those people responsible for developing and implementing the structure - in the case of a CHE the CEO.

Structure as enacted /accomplished (p.159)

McPhee's observation that "rules of any sort do not apply themselves" (1985, p.159) is of crucial importance when considered in the context of rapidly and consistently changing organisational structures and senior staff. As Weick (1969; 1979) noted (in McPhee, 1985) many things affect a staff member's knowledge of structure. Among these assimilation and memory may be adversely affected by constant change. If structure is to be more than an object of study or manipulation it must be enacted by all staff members. In a CHE where some nurses may be absent from the CHE for days or weeks communicating current structures is a major and ongoing task.

Gortner, Mahler and Nicholson (1989) add yet another dimension to a discussion of organisational structure. They argue that “public bureaucracies are different from private firms in ways that warrant their being treated separately (Gortner et.al. p.16). They further argue that “private firms form the substance of discussions, research, case studies, and exercises by most writers and researchers” (p.17). They explicate 12 domains of difference including market exposure; legal, formal constraints; political influences; complexity of objectives, evaluation and decision making. They argue that a public bureau has a wider scope of concern, the public interest, and faces greater public scrutiny. Their argument is based on the system in the USA of the late 1980s but is equally relevant to New Zealand. They note that “the prescriptions that define [public] structures are a product of legal, managerial, and professional decisions, all tempered in many cases with a strong dash of political strategy.” (Gortner, et al., pp.102-103).

Mintzberg added a further dimension with his conception of the professional bureaucracy which has at its core a group of well educated, highly trained and experienced specialists (Mintzberg, 1989). People in this group identified as ‘dionysians’ by Handy (1978) have few peers in a country the size of New Zealand. Their input is central to the functioning of a professional organisation and they usually have legal responsibility for their own practice.

When a professional bureaucracy is also a public bureau a complex set of factors influence the efficiency of the organisational structure. A matrix design, where the formal vertical structure found on the organisation chart is overlaid with a recognised horizontal professional based structure, is common in these organisations.

Recently Handy’s (1989) notion of the shamrock organisation has gained currency. In this model, one leaf is made up of professional core workers; the second leaf, contract workers; the third leaf is the flexible labour force, the temporary and part time workers. This model is of particular interest as many medical specialists are de facto part time workers contracted to the organisation to perform specific work. Often they are also operating their own independent business outside the

organisation. In the public health sector it is usually the management worker who is a core worker, yet management is not the primary business of the organisation.

Emerging recently is the notion of the boundaryless organisation. While organisations will of necessity continue to have boundaries “to separate people, processes and production in healthy and necessary ways” (Ashkenas, Ulrich, Jick, & Kerr, 1995 p.3) these boundaries need to be porous. As a boundaryless organisation evolves and grows, boundaries shift. The boundaryless organisation “is a living continuum, not a fixed state” argue Ashkenas, et al., (1995 p.4). These authors promote the idea that this model will give the speed, flexibility, integration and innovation needed for future organisational success. The idea however is not new and health professional boundaries, which are always porous, have become more so with the advent of new international and communication and service technologies.

Recent developments in communication technology are leading to the creation of virtual organisations “sometimes called the *network* or *modular organization*” (Robbins, 2000, p.257). With a small core staff of executives these organisations outsource all of the primary functions of business. In health care another version of organisational networking can be also found. This is:

An organised delivery system (ODS), a network of organizations that provides or arranges to provide a coordinated continuum of services to a defined population and is willing to be clinically and fiscally accountable for the outcomes and health status of a population served. (Leatt, Shortell, & Kimberly, 2000, p.281)

As has been demonstrated structure is not a simple entity. The age old debate as to whether form follows function or function follows form has given way to a new process where re-form follows re-form and triggers further re-form. In the New Zealand public health sector in the early 1990s the re-form process was instigated by government and once underway maintained its own momentum fed by the government’s requirement for the efficiencies needed to generate a profit. The current Labour/Alliance coalition government is promoting a form follows function agenda by promoting The Health Strategy (King, 2000) as the driving force but links

between strategy and structure appear tenuous. The model chosen for the new District Health Boards appears to be closer to a boundaryless organisation than has been the case in the past but with its increasing outsourcing of work and increasing numbers of part time employees it also has elements of a shamrock organisation.

The nursing structure

A brief history of how the nursing structure developed, first overseas, then in New Zealand provides an insight into the structural framework inherited by CHE CEOs. General medicine once practised by Western physicians with recognised qualifications gained in established teaching centres, via a sophisticated apprenticeship system, over the centuries became specialised. The first major speciality to be clearly identified and separated from its parent was surgery followed by psychiatry and obstetrics. Specialist subjects were taught and examined by the relevant medical colleges. Practical experience was gained in the public hospitals. Doctors sought and were granted admitting rights to public hospitals. Doctors who had passed the college examination became consultants to their colleagues and teachers to medical students. Much of this teaching took place in the hospital wards. At the same time the ward became a centre for clinical research. Not surprisingly the logistical reasons for allocating a consultant beds in a ward managed by a nurse familiar with his, or occasionally her, practice teaching and research components became compelling. Nursing education then paralleled these developments. Medical nursing, surgical nursing, obstetric nursing and psychiatric nursing became established nursing specialities. Over time the initial medical specialities have been superseded by formal subdivision into further specialities for example anaesthetics, radiology, ophthalmology, general practice (initially a non-specialist career) is now established as speciality practice. Today the control of medical education, examination and professional discipline remains with the medical profession. Pre-registration nursing education once the domain of doctors supported by nurses has passed into the hands of nurses, the Nursing Council of New Zealand and tertiary sector education institutions. Post registration education, has become an unstable mix of courses provided by public and private sector health services and education sector services. Until the 1990s nursing practice was in the main managed by nurses. Today

a nurse's practice, deemed by the Nursing Council of New Zealand to be the sole responsibility of the nurse practitioner, may also be regarded by non-nurse managers as their responsibility.

Over the years many new nursing models (some which will be discussed in a later chapter), predicated on structural change, have been introduced but throughout all the changes nursing's traditional hierarchical structure of Matron, Ward Sister and Staff Nurse has remained as a ghost structure. It may be camouflaged by new titles, divisions of work and authority but in terms of nursing practice the core nursing structure has remained essentially unchanged in the private sector New Zealand since nursing registration was introduced in 1901. In the public sector since the reforms of the early 1990s, there is a push by some nurses for a return to the traditional structure. Whether or not this is a useful activity remains to be seen. Certainly it is an push that has little foundation in research.

As a consequence of the state sector and health reforms the unique configuration of an individual CHE, and designing and adapting the structure of a CHE, became the legal responsibility of the CHE CEO. The nursing structure of a CHE was therefore the responsibility of the CHE CEO. As a consequence for the first time in recent history the nursing structure was no longer the domain of nurses. Designing a health care organisational structure that will enable the optimum delivery of nursing care now requires the combined management and professional knowledge, skill and expertise of executives and senior nurses. As Khandwalla observed almost half a century ago:

The designing of an organization's structure is a highly complex task. There is no one best structural design. If however the designer is aware of the demands that the organization's environment and technology make on the organization and the costs and benefits of structural alternatives, the chances are that the organization will not be saddled with a faulty design. (1977, p.523)

Findings: Note:

Only the words used by participants are reported. These are recorded in *italics*. Uhmms' and 'Aahs' have been omitted. Grammar and sentence structure has not been amended. 'Because a primary consideration has been to preserve CHE and participant anonymity some answers have been edited by changing a few words e.g. 'his' or 'her' to 'they' to preserve the anonymity of the CHE and individuals within it. When, in a very few instances, this could not be done the answer has been omitted or the findings reported in general terms. In some cases answers were not included either because they revealed no apparent relationship to the question or were one off comments (some of which were about individuals) that did not add useful information. Where more than one person made similar comments these have been clustered. All personal comment/s about individuals have been omitted. In some cases X is used as a substitute for a name e.g. [X] service. Additional information designed to clarify an answer is encased in square brackets []. To assist anonymity and tracking and checking of data participants were allocated code numbers by the researcher. These numbers are to be found beside participant's comments in square brackets []. Given that the care of patients is central to nursing comments specifically about patients are noted separately. All participants had the right to choose not to answer questions. All participants are senior staff members who could reasonably be expected to answer the questions asked. The number of participants choosing exercise their right not to answer a particular question is therefore noted. Comments on night duty are noted separately because the nursing care delivery system should deliver safe effective nursing care over 24 hours as and when required. The category 'remaining' contains single participant's answers of particular interest.

The sections on findings in this and succeeding chapters are designed to explicate the source data for the main themes listed in chapter 11.

Findings (Structure)

In question 1 participants were asked to describe the organisational structure. The answer to this question may have provided a frame of reference for answers to the remaining questions about structure. This is particularly the case with nurses who described the organisation structure as either a service, as designated by the CHE, or a nursing service that in some cases was seen as crossing CHE services. The effect of this on the overall results is minimal because some nurses changed tack and answered the question, for example nurses who had answered in terms of the nursing structure answered the following question in terms of the organisational structure or, the answers given could be extrapolated to give an answer to the original question. For example if nurses did not know who chose the service or nursing structure it followed that they did not know who chose the organisational structure. If nurses could not identify the resource implications of the service or nursing structure they could not identify the resource implications of the organisational structure. It is possible that some participants chose not to answer following questions because they recognised that their answer to the first question was not correct or incomplete.

Given the unique nature of some CHE structures some participants' comments compromise the anonymity of a CHE. This particularly applies to answers to the first question where a full description of a CHE structure could result in the identification of that CHE. For this reason the majority of this information is given in summary form.

Question 1. Please describe the present CHE organisational structure.

Did not answer the question

4 (6.55%) participants did not answer the question

Described in full

9 (14.75%) participants described all parts of the organisation's structure-as on an organisation chart. 6 of these participants offered a copy of the organisation chart.

Described in detail

18 (29.50%) participants described all parts of the organisation's structure in detail-but in general terms e.g. group managers, charge nurse.

Described in general

23 (37.70%) participants described the parts of the organisation in general terms. They did not cover the whole of the organisation. for example,

It's mainly CHE bosses, then resource managers, then clinical nurse specialists and down to the workplace [61]

Of particular interest was the CHE CEO who stated had they had *no knowledge of the nursing structure and no plans to acquire it [X]*

Described service structure in full

7 (11.47%) participants described all parts of the structure of the service, rather than the organisation, in which they worked - as on the organisation chart

Described service structure in detail

2 (3.27%) participants described the service structure in which they worked in general terms e.g. charge nurses, physicians

Described service structure in brief

2 (3.27%) participants described the part of the structure of the service in which they worked.

Identified unit or service based structure

11 (18.03%) participants identified a unit or service based structure e.g.

Service based structure [9], [15], [20] and [28]

Service structure [21] and [23]

Chimney structure [26]

Service delivery structure [7] and [52]

Service based columnar structure [49]

Form of unit management structure [50]

Structure as a model

6 (9.83%) participants referred to the structure as a model e.g.:

Traditional hierarchical model [16]

Partnership model [23]

A very decentralised model with clinical pillars [44]

It's an old model modified [34]

Very decentralised model [42]

Today it's a management model [59]

In transition

5 (8.1%) CHEs were described as being in transition i.e. either between the appointment of CEOs or between structures

Legal

1 (1.63%) participant described the organisation in terms of its legal definition

It's a limited liability company [22]

Clinical career path

1 (1.63%) participant saw the nursing clinical career path (CCP) as the organisational structure [12]

Remaining

Lots and lots of managers. Lots and lots of managers with no clearly defined roles [37]

It's very top heavy management-wise [36]

27 (44.26%) participants demonstrated a good knowledge of the organisational structure.

11 (18.03%) participants identified a service structure as the organisation structure. This suggests that for these participants a service provided their day to day frame of reference.

Why some participants described organisational structure as a model is not clear. It is possible that the reference is to the particular structure as an example of a model but this is not made clear from the phrase used or its context.

6 (9.83%) participants (from more than one organisation) believed the organisation was between CEOs and/or between structures. Implicit in their comments was the expectation that a new CEO would create a new structure.

That one participant offered a precise legal definition while another described the CCP reflects the organisation and service (in this case the nursing service) perspectives evident in the description of the organisation.

Question 1a. Who chose this structure?

Did not answer the question

1 (1.63%) participant did not answer the question

Did not know

4 (6.55%) participants did not know:

Not really-I assume it's the X [21]

I'm not sure who chose the structure. It's something that just happened [46]

I'm not even sure how it came about [47]

I don't know [51]

Identified CEO

27 (44.26)% participants identified CEO as the person who chose the structure. Of these:

20 (32.78%) participants clearly identified the CEO

4 (6.55%) participants' answers compromised anonymity-all identified a CEO

2 (3.27%) indicated the CEO

1 (1.63%) participant identified him/herself [a CEO].

Identified person/s in addition or alternative to CEO

10 (16.39%) identified persons in addition or alternative to the CEO. Of these

3 (4.91%) participants identified the CEO and the executive

3 (4.91%) participants identified the board and the CEO

1 (1.63 %) participant identified the CEO and the senior medical staff

1 (1.63 %) participant identified themselves as part of the team that chose the structure

1 (1.63%) participant identified the management team (including the CEO) ratified by the board

1 (1.63%) participant identified the board

Did not clearly identify person/s

25 (40.98%) participants did not clearly identify the person/s responsible for choosing the structure:

Vague

6 (9.83%) participants answers were vague:

Enforced on us from above [5]

I think the structure was put together [6]

I think it was the General Manager before [20]

It's traditional [22]

I think we inherited it off somebody [25]

Things don't change here [43]

Evolved

3 (4.91%) participants felt the structure had evolved:

Nobody chose the structure-it just evolved [12]

Evolved from the structure of I guess an Area Health Board [30]

I don't know if any particular person chose it. It's really evolved from the Area Health Board days [40]

Outside agency

2 (3.27%) participants believed the structure was determined by an outside agency:

I believe it was the government [36]

I presume it was put in place by the government when they were set up as CHEs [38]

I don't know. Presume it was described you know by the RHA or the government in the first place [38]

Pre dated participants' employment

The structure predated 2 (3.27%) participants' employment:

Been here ever since I've been here [24]

The structure was here when I arrived [52]

Remaining

Developed as part of a review [7]

Good question. Our [X service] management structure was invented about 2-3 years ago [32]

They combined medical and surgical services [60]

Given that 12 CHE CEO's were interviewed this suggests that for a significant number of senior staff (excepting CEOs) there is not a need to know who is responsible for choosing the structure of the organisation (or service). It also suggests that for these people the relationship between organisational structure and the functions of the organisation is either not well understood or circumnavigated by using alternative structures.

Question 1b. Why was this particular structure chosen?**Did not answer the question**

6 (9.83%) participants did not answer the question

Did not know

12 (19.62%) participants did not know

Patient

1 (1.63%) participant while not mentioning patients, noted that the structure was chosen *to ensure the path of care is as smooth as possible* [39]

Clinically related

6 (9.83%) participants cited clinically related issues:

It's a strategy to bridge the gap between clinicians and managers [10]

Increasing the influences of health services within that structure [15]

Medical staff felt they were not having enough input into management [42]

Allows professional guidance to come through [50]

My personal opinion is that the clinicians were fed up with the business model [51]

Best way this organisation could function was to have a clinical services model [58]

Clinical

5 (8.91%) participants cited clinical reasons:

Need to focus on clinical structures [1]

Severe need for clinical input into management [2]

Trying to put clinical structure in place [4]

To focus on clinical [30]

Idea was to get more clinical input into management [48]

Financial

4 (6.55%) participants cited financial reasons:

It was financial mainly [26]

CHE needed to make a profit [31]

Probably financially driven [43]

We were in major [financial] difficulty [56]

Improve services or structure

4 (6.55%) participants felt it was to improve services or structure:

Break down barriers between services [14]

I imagine it was to try and put some structure around some fairly disparate services
[49]

It's a development of what we have had before. We're starting to try and define more about the future of our particular organisation [57]

It's supposed to be flatter [structure] [61]

Changes in service provision/contracts

4 (6.55%) participants cited changes in service provision as the reason:

Change driven by marked changes in service provision [9]

To match the contracts [30]

It's part of the RHA specifications [33]

To match with contract distinctions [40]

Inefficiency

2 (3.27%) participants cited inefficiency:

Part of the reason was that a great many inefficiencies had started in the CHE [7]

They said it would be more efficient I believe [20]

Remaining

2 (3.27%) participants spoke about the nursing structure.

1 participant cited geographical reasons [18].

Duck shoving [5]

It was in vogue at the time [8]

I'm not sure it was a conscious choice [46]

3 (4.91%) of participant's answers compromised anonymity. One of these answers related to the CEO's decision with regard to span of control [the only participant to explicitly mention span of control as a reason for selecting a particular structure], another to the [non-health professional] CEO's need for clinical advice.

The primary function of CHEs was to deliver patient care services to the local population in a businesslike manner. It could therefore be expected that the structure

of the organisation would be related to meeting patient care and financial imperatives. At first glance participants' concerns about clinical matters could be interpreted as concern about patient care but closer examination reveals that the comments of only one participant were directly related to patient care.

Of particular interest is the apparent paucity of research-based decision making. That restructuring was seen as a tool for solving problems is perhaps not surprising given the government's use of structural reform to make efficiency gains. What is surprising is that the tool was used with so little finesse.

Question 1c. When was this structure put in place?

Did not answer the question

3 (4.91%) participants did not answer the question

Gave a figure

27 (44.26%) participants provided a length of time in years/months.

7 (11.47%) participants gave a figure in months less than 12

Number of changes

6 (9.83%) participants indicated they had been involved in more than one change to the structure:

It's evolving. It's frightening. I think it's changed three times since I've had this job [5]

I think we have had about 6 [changes] in 7 years. I'm not going through another one [7]

We've had five different structural changes [19]

About a year and a half. My reporting structure is actually going to change tomorrow [43]

Radically restructured about 3 years ago then restructured about a year ago [48]

Restructured 3 years ago. They've just restructured again [59]

New structure

5 (8.19%) participants indicated a new structure was being put in place:

Currently restructuring by individual services [13]

It's in a state of change [14]

Currently undergoing a total change [20]

The new structure is just going in place now [23]

They're going through another change right at the moment [45]

In transition

3 (4.91%) participants felt the structure was in transition:

It's in the middle of a transition phase [16]

It's going through a transition [26]

So that's again in that sort of transition [28]

Interim structure

2 (3.27%) participants believed the structure to be of an interim nature:

It's an interim structure [2]

Interim structure in place last year. New structure to be put in place over a year or so [35]

New structure planned

2 (3.27%) participants indicated a new structure was planned:

The structure's changing [39] [a major restructuring planned]

We now have a proposed complete new structure [46]

Night

Our night structure was changed 2 to 3 years ago but jobs and shifts have since changed [X]

Remaining

They tweak it the whole time and it doesn't work in its entirety for the whole organisation [12]

A couple of years ago. There have been so many changes [33]

Well it changes so [36]

Although only 3 (4.91%) participants identified the structure as being in transition the answers to this question make clear the fluid nature of many CHE structures at the time of interview.

The answers to this question offer an explanation as to why a service became the day to day frame of reference for participants. Restructuring in the health sector is not overnight process. (To illuminate, one participant indicated that in their experience it took at least three months to implement a new CHE structure). In some cases the organisation was restructured and then the services restructured independently of changes to the organisational structure. This meant that service restructuring could (and did in some) cases occur more frequently than organisational restructuring. This was the case with the participant who could recollect being restructured 6 times in 7 years. When services are repeatedly restructured the need to manage change at a service level is likely to take precedence over being informed about organisational change. This was particularly the case when service restructuring was driven by external agencies.

Question 1d. How is the implementation of this structure evaluated?

Did not answer the question

3 (6.55%) participants did not answer the question.

Did not know

2 (3.27%) participants stated they did not know anything about the structure being evaluated

2 (3.27%) participants commented that they did not know if/or how it had been evaluated

Patient

Not configured around patient need at all [49]

Planned evaluation

18 (29.50 %) participants felt that there was planned evaluation of the structure

Planned ongoing evaluation

6 (9.83%) participants felt there was a planned ongoing evaluation:

[Regularly] evaluated by percentage cost of the management structure [4]

Service and units of service are reviewed individually and changes made [13]

It's done in a number of ways. We sample staff structure. Do they understand it? Do they agree with it? [15]

Constant evaluation of the structure. Is it working or isn't it? [23]

Formal performance measures and appraisal annually with team [management] and the board [27]

From time to time at executive level we discuss it as to whether it is still comfortable and fine tune [40]

Planned evaluation with specific timetable

4 (6.55%) participants felt there was a specific timetable for evaluation:

We evaluate it every three months by the management team [50]

It's evaluated at least once a year. Evaluated on performance criteria of the managers and the CHE [52]

Structure evaluation has happened more as part of the planning process. Each year with the business plan the structure is reviewed [56]

Getting an annual review and looking at it and saying why did we do it? Does it work? [11]

Planned evaluation (limited)

4 (6.55%) felt there was some evaluation:

It has been evaluated [22] Issue of anonymity-further details withheld by the researcher

We had significant feedback from staff [regarding proposed structure] We're just working on that [evaluation] at the moment [16]

There was a review for [X] service co-ordination [20]

They did post implementation review so I guess they've got evaluation [45]

Other

There is a lot of evaluation in terms of government and the responsibilities of the company [10]

CHE needs to make a profit and we look at everything against that [31]

It's probably too early to tell. There are mechanisms in place related to compliance with the business plan [35]

We will evaluate and monitor [new structure] six to twelve monthly by mechanisms we are yet to clarify [39]

Not evaluated

8 (13.11%) participants indicated that they felt that the structure was not regularly evaluated:

Formal evaluation not in place

5 (8.19%) participants believed the structure was not formally evaluated:

I understand it's an evolutionary process and over time it will be re-visited but in terms of formality – no [29]

It's not formally evaluated. It would be evaluated if they thought it was costing too much [32]

Not really. I discuss it with my [X] manager sometimes but I do believe there is supposed to be audits done [33]

Probably informally during reviews of services – just informal feedback [26]

I've initiated my own meetings from time to time partly because I felt I needed on how I was doing [60]

Probably not evaluated

3 (4.91%) participants indicated that the structure was probably not evaluated:

My experience is that we never set up criteria and evaluation processes at the beginning of implementing something [14]

I don't believe there is a continuous programme. I'm not aware that there is an regular system of evaluation [43]

Remaining

Round the coffee table [5]

They're trying to change the way we work without any input from us [25]

Not involved

7 (11.47%) participants stated they had not been involved in any evaluation of the structure.

Participants' answers indicate that there is little evidence of specific evaluation mechanisms being put in place prior to implementing a new structure. The overwhelming impression is that the evaluation of structure (organisation and/or service) was seldom a discrete and planned exercise. There is clear evidence that structures were not evaluated in terms of patient care and at least in some CHEs did not involve all senior staff. One reason for this lack of regular, planned and comprehensive evaluation may be that structures were reviewed (by the management team) prior to restructuring.

It could be expected that an evaluation of the present organisational structure would provide parameters for the new structure. Answers to question 1b (why was this structure chosen?) suggest this is not the case.

In the answers to this question the structure of the organisation was treated as a separate self contained entity by all but one participant. This participant was the only person to relate the structure of the organisation to patient care.

Question 1e. What are the resource implications of having this particular structure?

Using the classic division of resources into information, finance, people (in this case staff); plant and equipment as a classification system participants' comments on the resource implications provided further insight into participants' perceptions of the impact structure has on the organisation. No participant addressed the information, finance, staff and plant and equipment implications.

Did/could not answer the question

2 (3.27%) participants did not answer the question

1 (1.63%) participant felt they could not answer the question

Information

1 (1.63%) participant commented (indirectly) on information as a resource:

Significant resource implications for information training and so forth [50]

Finance**Management/top level structure**

5 (8.19%) participants commented on 'management or top level' structure:

Evaluated by percentage cost of the management structure [4]

Considerable reduction in the amount of resources going into management [15]

The resource implications are quite huge supporting an infrastructure and significantly higher remuneration at top level [23]

There's too much money going into the management structure and not enough into the workplace [37]

Financial issues

5 (8.19%) participants referred to financial issues:

If you put in another layer by definition you have a cost increase [11]

It's supposed to be cost neutral [14]

We might get savings out of this [16]

The overhead costs don't seem out of line but it has a lot duplication in it [22]

I don't think it's any cheaper than the last structure [48]

Primary driver

2 (3.27%) participants referred to finance as the primary driver:

It's essentially a money game rather than efficiencies in medical practice [31]

It's all dollar driven [36]

Staff

Skilled Staff

4 (6.55%) participants referred to difficulties obtaining skilled staff:

There's a five year gap of not having people [nurses] prepared [with knowledge and experience] [2]

We are going to need more nurses skilled in [X] care [13]

There is difficulty attracting a sufficient breadth of good staff [22]

[There is an issue] with finding enough people with skills [40]

Management /clinical

4 (6.55%) participants commented on numbers of management and clinical staff:

Corporate and commercial levels have shrunk in proportion to all [3]

It's important not to have too many managers [6]

Proportion of management to clinical staff. They were weighted heavily at the management end [7]

It downsizes-actually right sizes-the organisation. There are fewer managers, greater accountability; multi-skilling [35]

Decreasing numbers

2 (3.27%) participants commented decreasing staff numbers:

When staff have left they haven't been replaced [19]

There is considerable pressure on keeping staff numbers down and I think that is counter productive [61]

Plant and equipment

The computers are breaking down all the time. We need computers and we need them to work [5]

Duplication

7 (11.47%) participants commented on duplication:

There are issues around the division into services e.g. how to get a helicopter view, the duplication of resources and things falling through the gaps [17]

It leads to a lot of duplication and also no cross fertilisation [26]

Much greater probability of re-duplication of effort because it is so de-centralised [44]

Lots of duplication of everything [47]

Duplication. If you look at it overall it's the same. Different names tweaked differently. More bureaucracy [59]

Developed a silo effect where every service is responsible for its budget and their dollars and won't share [58]

Geography

3 (4.91%) participants commented on the influence of geography:

Geography markedly influences structure and in turn costs [9]

There are resource implications in having multiple sites [18]

It requires additional travel [43]

Remaining

We're still going through the process. There was a sort of added bureaucracy [1]

I find it unwieldy. Unless we do something about it [a problem with medications] ourselves it doesn't get resolved [22]

Personally the resource implications are phenomenal. The structure creates an enormous workload [27]

It's important not to overload managers [52]

Huge implications. It's not that people don't try. It's because they're not sure perhaps of what they should be doing [53]

1 participant felt there were no resource (staff) implications-None [54]

Some answers were irrelevant e.g. *I think the RHA and such like are a waste of money*, or compromised anonymity.

Only one participant made reference to strategy.

Other comments made by participants

Other comments by participants which were not specifically answers to the previous questions but which include reference to the structure include:

Workforce related comments

6 (9.83%) participants made workforce related comments:

There are fundamental issues that have to be addressed with nursing workforce. The clinical people have very little management experience [2]

My role is sort of constantly changing [31]

I discovered a couple of weeks ago that I am not actually under her [manager]

There's been so many changes [33]

I don't report to anybody. No-one. I suppose in theory I report to her but we work as a team [37]

You feel so very vulnerable in middle management. You're sort of between a rock and a hard place [38]

In between restructuring they don't actually allow people to actually express how they feel [48]

Time related comments

5 (8.19%) participants made time related comments:

It took three months to get the structure into place [3]

I don't think anyone wants to quantify the time spent in focus group interviews, the meetings, the questionnaires [7]

It's taken time for people to define and I guess grow into jobs [30]

Over the years I can see we have evolved back to a charge nurse situation [in the wards] [32]

They change monthly. You can't keep up with it. They [managers] all go home on Friday night [36]

The influence of contracts

3 (4.91%) participants commented on the influence of contracts:

I rather suspect that the method of purchasing is starting to dictate how services are provided and that's not always in the best interests of care. Its absolute death to innovation in terms of services modelling [2]

Our's [service] is pretty much guided by our contract with the RHA [23]

The structure doesn't fit the contracts which go across services [52]

Practical problems

2 (3.27%) participants commented on practical problems:

If we have an unresolved problem that crosses services it gets lost in the system [21]

I have a budget but I'm dependent on others [outside their control] doing their job well to balance my budget [42]

Other

I don't believe any restructuring that has gone on has actually altered the way the work gets done [7]

I think we are losing the good with the bad in this constant revamping. I don't think we are taking adequate time for analysis [29]

The implementation has been appalling [44]

It has become very fragmented and people are inclined to forget how inter linked services have to be [47]

We had the impression that there was no structure at all. It [old structure] was completely decimated [61]

Financial imperatives and the problem of duplication are clearly identified. [It should however be remembered that at the time of the interviews service management with its inherent duplication of resources predominated. Since that time duplication has been generally recognised as a significant problem.]

With some exceptions (travel and some concern about the supply of appropriate staff) the downstream consequences of putting a particular structure in place do not appear to be appreciated. With the exception of the comment about computers there is no reference made to plant or equipment. The failure of participants to clearly identify the resource implications of implementing a particular structure is important in light of current staff shortages.

The structure of a CHE has significant implications for patient care, efficient and effective staffing, managing the budget and the maintenance and purchasing of plant and equipment. The structure must mesh with health personnel legal and career

requirements and be congruent with contract requirements and health sector education structures. Many CHE services operate 24 hours a day 7 days a week and a number of CHE services are provided at a distance from the main CHE base. These and other factors make the design, implementation and evaluation of the CHE structure a difficult and complex task.

Chapter themes

The following themes emerge from participants' answers to questions about the organisational structure.

Form was separated from function.

Organisational structure was treated as a self-contained entity and seen to operate independently from professional and educational structures and organisational, professional and educational processes.

Restructuring was used as a tool for solving organisational problems.

Pre and post evaluation of the effects of a structural change on patient care did not occur.

There was not a systematic and comprehensive approach to the resource implications of implementing a particular structure.

The organisation was not the primary frame of reference for 18.03% of senior staff.

Chapter six

Patient Care Delivery System (PCDS)

As Hawking (1988, p.13) observed “ever since the dawn of civilization, people have not been content to see events as unconnected and inexplicable. They have craved an understanding of the underlying order in the world.” Ironically, in tandem with this craving came specialisation. As classic disciplines fragmented and new disciplines for, example psychology and cybernetics, evolved the quest for a general system theory; the ‘theory of everything’ that would provide a common lens through which to view diverse entities continued. The theory proved elusive until Bertalanffy’s 1950 publication in the American journal *Science* of his seminal work on general system theory. Echoing Smuts who half a century before challenged the dominant reductionist viewpoint with his concept of holism, Bertalanffy saw general system theory as a “general science of wholeness” (Bertalanffy, 1968, p.37).

Bertalanffy summarized general system theory in his 1968 book on the subject.

There exists models, principles, and laws that apply to generalized systems or their subclasses, irrespective of their particular kind, the nature of their component elements and the relations or ‘forces’ between them. It seems legitimate to ask for a theory, not of systems of a more or less special kind, but of the universal principles applying to systems in general. In this way we postulate a new discipline called ‘General System Theory’. Its subject matter is the formulation and derivation of those principles that are valid for ‘systems’ in general. (1968, p. 32)

General system theory had at its core Bertalanffy’s idea that it can be applied to all phenomena, material and non-material. This may be the case but in the health sector the non-material is often unidentifiable, always poorly understood and only occasionally measurable. General system theory is also predicated on the idea of functional unity; the idea that an entity has a single function. In the health sector in spite of an abundance of organisational mission statements it is doubtful if there is functional unity. At the very least professional and management functions with their

different focus on the individual and the whole organisation would seem to be functionally separate.

Bertalanffy was a contemporary of Norbert Wiener, physicist and Arturo Rosenblueth a physician, who in 1947 coined the term 'cybernetics' and their influence can be seen in his work. As a transdisciplinary subject, cybernetic theory, like general system theory, was seen by its advocates as a unifying theory. (Bullock, & Stallybrass, 1977)

Contemporaneous with these developments at The Tavistock Institute for Human Relations in London the concept of socio-technical systems was being developed and refined by Trist and his colleagues (Katz, & Khan, 1966). They recognised any production system has two interrelated dimensions, the technical system and the social psychological system. This work was also important because for the first time work redesign focussed on the 'autonomous group' not the individual. "The Tavistock's open systems model of organization suggested wider factors, like culture and the management of group boundary conditions, have to be taken into account if changes are to be sustained" (Fincham, & Rhodes, 1999, p.301).

Bertalanffy's 1950 publication was shortly followed by Boulding's (1956) article in *Management Science* describing General Systems Theory as:

The skeleton of science in the sense that it aims to provide a framework or structure of systems on which to hang the flesh and blood of particular disciplines and particular subject matters in an orderly and coherent corpus of knowledge. (p. 208)

Boulding in the same article suggested a hierarchy of systems—an interesting idea as it is of necessity reductionist in its approach. Adapted and summarised by Ashmos and Huber (1987) it is a hierarchy of relative complexity in which the range of disciplines Boulding envisaged could be encompassed by general systems theory.

COMPLEX SYSTEMS

9. Transcendental systems-Complex systems not yet imagined.
8. Social organizations-Collections of individuals acting in concert (e.g. human groups).
7. Symbol processing systems-Systems conscious of themselves (e.g. humans).
6. Differentiated systems-Internal image systems with detailed awareness of the environment (e.g. animals).
5. Blueprinted growth systems-Systems with a division of labour among cells (e.g. plants).
4. Open systems-Self maintaining structures in which life differentiates from non life (e.g. cells).
3. Control systems-Cybernetic systems which maintain any given equilibrium within limits (e.g. thermostats).
2. Clockworks-Simple dynamic systems with predetermined necessary motions (e.g. levers and pulleys).
1. Frameworks-Static structures (e.g. employee roster).

SIMPLE SYSTEMS

Ashmos and Huber (1987, p. 608)

Closed systems (level 1 & 2 and occasionally level 3) are by definition closed to their environments. Open systems (generally level 3 and above) are open to their environments. All health care systems are open systems. Most large health care organisations encompass all the systems in the hierarchy.

In his comprehensive and respected publication *Living Systems* Miller (1978, p.595), identified organisations as “concrete living systems with components that are also concrete living systems rather than abstracted systems” and further argued that “organisations are subsystems, components or sub components of societies ”.

In 1966 Katz and Khan published their highly influential book *The Social Psychology of Organisations* which built on the work of Bertalanffy, Parsons, (1951), Miller (1955), Likert, (1961) and Allport (1962). In this book they comprehensively explored what they labelled the 'open system approach' to organisations. Today it is this work that often underpins much discussion and many management textbook entries on systems theory (e.g. Griffin, 1990; Ivancevich, & Matteson, 1996) and systems perspective (Robbins, 2000).

Katz and Khan (1966) identified nine characteristics that define all open systems:

- Importation of energy. (p.19) No social system is self sufficient or self contained.
- The throughput. (p.20) The organization provides a service.
- The output. (p.20) Open systems export some product into the environment.
- Systems as cycles of events. (p.20) The product exported into the environment furnishes the source of energy for the repetition of the cycle of activities. The energy reinforcing the cycle of activities can come from some exchange in the external world or from the activity itself.
- Negative entropy. (p.21) To survive open systems must move to arrest the entropic process; they must acquire negative energy. The entropic process is a universal law of nature in which all forms of organisation move towards death.
- Information input, negative feedback, and coding process. (p.22) If there is no corrective device to get the system back on course it will expend too much energy or it will ingest too much energetic input and no longer continue as a system.
- The steady state and dynamic homeostasis. (p.23) In adapting to their environment social systems will attempt to cope with external forces by ingesting or acquiring control over them.
- Differentiation. (p.25) Open systems move in the direction of differentiation and elaboration. In the United States today medical specialists now outnumber general practitioners.

- Equifinality. (p.25) This is a principle suggested by Bertalanffy in 1940. According to it, a system can reach the same final state from differing internal conditions by a variety of paths... As open systems move toward regulation to control their operations, the amount of equifinality may be reduced.

Using a systems approach these characteristics are considered when planning change in a complex organisation. When a systems approach is not used failure to recognise the following characteristics often results in problems arising as a consequence of the changes made. Structural reform implemented without consideration for these characteristics is likely to trigger more structural reform in an attempt to remedy arising problems.

- The need for ongoing input into the system.
- The need for ongoing and appropriate feedback.
- The magnitude of the forces exerted by the systems needed to maintain stability.
- That change is triggered within the system by changes in the external environment.
- That there may be more than one way to produce a given output, and most importantly.
- That health systems are open systems.

Abstract or concrete, systems have been defined, identified and studied many times. System analysis has become an accepted procedure and systems analyst a career choice. The names of the component parts of a system, whether it be a biological, social or management system namely; input, process, output and feedback, are familiar to managers and health professionals. The names of subsystems often labelled services in the health context are generally recognised in Western societies, not the least because of the prevalence of television dramas and documentaries set in a hospital. In 1972 the importance of the systems approach to management was highlighted by the *Academy of Management* devoting a theme issue to the topic

In tandem with the emergence of systems theories came increasing interest in developments in what Boulding (1956 p.199) referred to as the “multisexual’

interdisciplines.” Emerging and hybrid disciplines they initially utilised and interwove material from a number of disciplines. He identified the complex parentage of cybernetics as being electrical engineering, neurophysiology, physics and biology and that of organisation theory as being “economics, sociology, engineering, and physiology” and he believed “Management Science” to be “an equally multidisciplinary product”(p. 199). Nursing is another example of an inter-discipline with its obscure ancestry being lost in time, but including witchcraft, medicine, herbalism , philosophy and religion. For the emerging disciplines general system/s theorists belief that “it is possible to represent all forms of animate and inanimate matter as systems which have common properties, though present in different forms” (McKay, 1969, p.395) offered a common platform for communication and development in the new discipline.

As the interdisciplines developed and sought to become academically respectable the academic imperative to publish quality scientific papers promoted the reductionist scientific approach to research at the expense of the more holistic systems approach to research. At the same time increased health professional specialisation, increasing sophistication and cost of health care technologies and pharmacology combined to push further specialisation. This reached its ultimate complexity in the development of specialist hospitals serving large and often widespread communities. The view of the hospital as a complex system open on many fronts to the outside environment gave way to the creation of the hospital as a unit of management in an artificially bounded system designed to make the organisation manageable and a competitive system of public health care viable.

Specialisation in health was accompanied by specialisation in many sectors. The American and Russian ‘space race’ of the 1960s spawned new technologies and new information systems that in turn enhanced the complexity of health care. Management of health care, once the domain health professionals supported by administrators, slowly and steadily became the domain of the professionally prepared manager. For organisations founded in biological and technical systems, general systems theory offered a complementary focus for management. Its attraction was

that it offered an acceptable and readily understood change from previous “overly simple mechanical models in the theory of organization and control” (Boulding, 1956, p. 207). The systems approach fostered the emergence of the generalist health care manager employed to manage the total health care organisation and the specialties within it. Organisation wide financial and information systems became the domain of management and assumed a separate and artificially bounded identity as health sector systems. Slowly the whole organisation was fenced by such boundaries and identified as a self-contained entity.

In public sector organisations these boundaries were initially geographic as illustrated by their titles for example Wellington Hospital, Wellington Hospital Board; Auckland Hospital and Auckland Hospital Board. Later with corporatisation new boundaries were established and new names adopted for example, ‘Capital Coast Health’ and ‘Hutt Valley Health’. Regardless of name each organisation endeavoured to set recognisable boundaries to its enterprise. The health reforms created the need for health care organisations to have a definable and bounded structure and a definable product. Creating a definable organisational structure is, relative to defining the product of a public health service, much easier to achieve because peoples’ view of what constitutes a satisfactory product is highly subjective.

The 1970s proved to be the peak of the popularity of an overtly open systems approach to health sector management. During the 1980s the approach continued to be used especially in the areas of financial, plant and equipment and some aspects of staff management. In the late 1980s while the systems paradigm as a framework for health research languished (Ashmos, & Huber, 1987) the systems approach to management was resuscitated by Peter Senge’s ideas published in his influential book *The Fifth Discipline* in 1990. In this he argued that dynamic and complex environments where information overload is a constant challenge can be managed using what he called ‘systems thinking’ which he describes as “a conceptual framework, a body of knowledge and tools that has been developed over the last fifty years, to make the full patterns clearer, and to see how to change them effectively.”

(Senge, 1990, p.7) In Senge's view systems thinking was needed because "we have become overwhelmed by complexity" (p.69). He argued:

Perhaps for the first time in history, humankind has the capacity to create far more information than anyone can absorb, to foster greater interdependency than anyone can manage and to accelerate change faster than anyone can keep pace. Certainly the scale of complexity is without precedent. (Senge, 1990, p.69).

It was Senge's clear articulation of the overwhelming complexity of modern systems, his recognition that "reality is made up of circles but we see in straight lines" (Senge, 1990, p.73) and the limitations this imposes on our ability to conceptualise whole systems that struck a chord with his readers and ultimately led some managers to pursue his vision of the 'learning organisation'. That is "an organisation that is continually expanding its capacity to create its future"(p.14) and develop a new appreciation of the systems approach to looking at the health system.

The primary advantage of a systems approach to management is that it provides a framework for thinking about organisations (Bowditch, & Buono, 1997). It enables the behaviour of an organisation, internally and externally to be described (Ivancevich, & Matteson, 1996) and it provides management with a tool to visualise a set of things and their inter-relationships as a system (Hoffer, George, & Valacich , 1996).

The primary limitation of the systems approach to large, complex and dynamic organisations like hospitals is the paradoxical need to reduce the system to manageable parts by the imposition of boundaries which structure the organisation while at the same time recognising that the boundaries are porous enabling inputs from and outputs to other systems. Another limitation is the disparity that may occur between formal and informal boundaries. An executive's view of system boundaries may be quite different from a medical practitioner's or orderly's view or, as happened in the initial stages of the New Zealand reforms, contractual boundaries may not fit with formal or informal boundaries. In spite of these problems unifying

theories still have much to offer the health sector particularly in the area of effectiveness.

An effective health service will ensure the best possible outcome for its patients. Assessment of effectiveness requires the ability to track patient/s progress through the service. Patient centred care and case management are overseas models that were introduced into some CHEs in an attempt to improve care and horizontally integrate the organisation. While the adoption of these models has probably resulted in a greater appreciation of complex internal CHE systems they foundered on contractual obligations and the structural determinants of the organisation, health professional education and health research. The resulting systems of care delivery may be an improvement on previous systems but until it is possible to measure effectiveness across the health service this remains unproven. The Labour/Alliance coalition government's Health Strategy (King, 2000) may have as a focus improved effectiveness but its approach is structural and at the moment it seems doubtful if the new District Health Boards will be able to transcend this and take a systems approach. DHBs will however contain Board members with a variety of backgrounds and skill bases. It may be that these Boards and the new organisations they govern will prove to be a mechanism for achieving a productive balance between structural reform and system redesign.

In New Zealand with its competitive market in health, an emphasis on structural change as a tool to improve efficiency and the appointment of CEOs each responsible for legally defined company the use of a systems approach to management, as will be demonstrated later in this study, was not favoured. This is unfortunate because as Muchinsky (2000, p. 244) observes "modern organizational theorists believe that an understanding of something as complex as an organization requires the type of conceptualizations offered by systems theory."

In the late 1990s when the integration of services or subsystems became a management imperative systems theory was revisited and re-emerged in the health professional literature (Aikman, Andress, Goodfellow, LaBelle, & Porter-O'Grady,

1998; Collins, Green, & Hunter, 1999); as health professionals considered new ways of integrating services and in emerging management literature on 'soft' (as opposed to hard cybernetic) systems.

Recently chaos theory and complexity theory (or complex system theory) have emerged as new unifying theories. Chaos theory, like systems theory, cannot be proven or disproven. "They simply are developed for the purpose of predicting, explaining or describing the current reality" (McGuire, 1999, p.8). Theorists in these schools believe the whole is greater than the sum of its parts; a holistic view as opposed to the reductionist view that the whole can be understood if you understand its parts (Anderla, Dunning, & Forge, 1997). They also argue that complex systems are self organising and self protective. Coppa (1993,) in her article suggesting chaos theory as a new paradigm for nursing service notes "complex systems display patterns which repeat at every level in the system, but in an unpredictable manner". (p.987). In chaotic systems, such as hospitals...seemingly insignificant changes can lead to large changes in the system"(p.988). More recently Lett (2001, p.14) has noted that "nursing practice involves complex dynamic systems and it can be argued that it would be amenable to analysis using the methods of chaos theory."

What is becoming clear is that that senior staff instigating, implementing and evaluating changes in the DHBs will need to have a good understanding of the patient care delivery system and its nursing care delivery sub system. Currently these are elusive concepts that lack definition. Indeed it may be that they cannot be precisely defined. Even if this proves to be the case a systems approach to management of patient and nursing care delivery is the one most likely to meet the state sector's requirement for both:

Organisational capability-the capability of any single agency to do its job now and in the future-and *system capability*-the means whereby several agencies can address complex issues, and provide advice and delivery services in a co-ordinated and effective way. (Wintringham 1998, p. 11)

Concrete or abstract, 'the health system', 'the healthcare system' 'patient care delivery system', 'nursing care delivery system' are concepts used in the health literature. Each appears to have a meaning acceptable to the reader for only rarely is an attempt made to define them. Many attempts have however been made by authors in diverse disciplines to define a system.

Thompson (1995, p. 1415) offers a useful definition "a complex whole; a set of connected things or parts; an organised body of material or immaterial things." Sykttner (1996, p.35) offers Boulding's now very modern view that "a system is anything that is not chaos" together with Weiss's definition that "a system is anything unitary enough to deserve a name" and Churchman's view that "a system is a structure that has organised components." Sykttner's own view (p.35) is that a system is a subjective creation:

Not something presented to the observer but it is something recognised by him. Most often the word does not refer to existing things in the real world but to a way of organizing our thoughts about the real world.

Reisman (1979, p.1) in his book about systems analysis in health care offers Affel's definition of a system as "a set of operations organized to satisfy a definable user requirement" and, his own suggestion that a system is "a set of resources-personnel, materials, facilities and and/or information organised to perform designated functions in order to achieve desired results." (p.2)

Putt (1978, p.2) in her book on general systems theory applied in nursing chose the Klir's definition of a system as "an arrangement of component parts so interrelated as to form a whole" and the definition of Hall and Fagan who described a system as "a set of relationships between objects and their properties or attributes".

Later writers offer similar definitions. Hoffer, et al. (1996, p.81) defined a system as an "inter-related set of components with an identifiable boundary, working together for some purpose." Dettmer (1997, p.4) discussing the work of Goldratt whose primary focus is the constraints on a system and who likens systems to chains,

vulnerable at the weakest link, defines a system as “a collection of inter-related, interdependent components or processes that act in concert to turn inputs into outputs in pursuit of some kind of a goal.” To these Lewis in 1998 added a definition that is reminiscent of Smut’s holistic view almost a century before; “a system is the sum total of the parts and their relationships to each other. Being dynamic it is defined by the relationships among its parts more than by parts alone.”

These definitions demonstrate the difficulty of determining a commonly agreed definition. There are however some generally agreed components. These are:

- The existence of an entity that can be defined as a single system.
- The inter-related and interdependent nature of the component parts; and
- A common purpose.

The patient care delivery system and its sub system, the nursing care delivery system, meet these criteria. They can each be defined as a single system, their component parts are interrelated and interconnected and they have the common purpose of meeting patient need.

For many patients progress through the health system is not a linear progression, rather it is marked by detours and transfers into substantial subsystems and related systems. In the same way patients within the CHE became inputs into often complex sub systems. Within the CHEs information, money, supplies, equipment and buildings needed to be aligned with appropriate staffing to deliver timely and effective care. Dozens of mini systems, each with their own input, process, output and allied systems were required to coalesce into a single CHE based PCDS. The chaplain, the pilot, the police and the travel agent all provide services to a busy hospital. Each was part of the CHE system. Each was also part of the much larger, complex and separate patient and nursing care delivery systems with their own inputs, processes and outputs.

The complexity of a hospital’s delivery systems is illustrated by an unpublished study undertaken by Hamilton (1986) at Gisborne Hospital. In this study registered nurses recorded their colleagues’ interaction with other people during an 8-hour shift.

Those with whom the nurse interacted were then categorised into groups for example patients, relatives, social workers, telephonists, orderlies. One charge nurse had dealings with 46 different categories of people in a single shift. The least interactions occurred in a unit on night duty where the nurse interacted with only 7 categories of people. These results were congruent with the results of a New Zealand study completed a decade before by Kinross and Joblin (1974) and with a British study by Hawley, Stillwell, Robinson and Bond (1995) a decade later.

Emerging approaches to patient care delivery

In a 1993 discussion paper for the Canadian Nurses Association Haines identified decentralisation as the defining feature of most organisational restructuring. She then outlined three emerging approaches to patient care delivery:

Programme Management

Clinical units are grouped into programmes, each with its own budget and often headed by a programme management team consisting of a physician chief, a nursing director and an administrator. Sometimes programme management is superimposed on traditional structures creating a matrix organisation, more often discipline specific infrastructures and line authority are eliminated and the disciplines absorbed into the programme structure.

Service management, still widely used in New Zealand, is a form of programme management.

Patient Centred Care

Haines (1993, p.14) lists the basic tenets of 'Patient-Centred Care' as:

- Decentralised services moving closer to the bedside.
- Cross training to create multi-skilled workers.
- Work redesign.
- Grouping of similar patient populations.

Patient Centred Care (sometimes called Patient Focused Care) is newly introduced to New Zealand. It is currently being implemented in a number of health sector organisations.

Managed Care

Haines promotes a view of managed care as a continuum that ranges from a few managed care approaches to complex and sophisticated managed care systems. In managed care the financing and delivery of comprehensive services for a defined group are combined to achieve cost containment and quality care. Health Maintenance Organisations (HMOs) which have as their foundation the concepts of capitation and competition are an example of a managed care delivery system. Case management which “aims to track a patient through the system and oversees the critical path he or she must follow to achieve a desired and timely outcome” (Haines, 1993, p.14) is a managed care approach.

These emerging approaches to patient care delivery and the integrated delivery system approach “which is a process of pulling the entire continuum of care into one system to provide cost-effective health-care services in the most appropriate setting.” (Stahl, 1995, p. 20) underpin recent approaches to nursing care delivery.

Although the terms patient care delivery system and nursing care delivery system occur in the literature they are not terms in general use in New Zealand, in part because of the dearth of systems based research. In the absence of any viable alternative the researcher chose to use these terms when posing her questions. Her rationale for this was:

- Participants are senior staff members.
- The phrase ‘patient care delivery’ is in common use as is ‘system’.
- The answers, what ever they were, would provide useful and valid information.

Findings (Patient care delivery system)

Question 2 Describe the present patient care delivery system

Did not answer the question

1 (1.63%) participant did not answer the question.

Service

14 (22.95%) participants – all nurses – answered explicitly in terms of a service within the CHE.

System

15 (24.59%) participants made comments about a/the system.

Complete system

3 (4.91%) participant's descriptions could be related to a complete system of care delivery:

The whole episode of care, that you know, that you get when you first become ill, so I guess it goes from the GP right through to – from your bed at home to your bed at home [1]

Patient gets sick comes into services; It's care or cure or both (or lay them out) and get them home. It's a pretty vague definition but it's the guts of what's happening. [8]
It's a total system. Everything from the cafeteria feeding the staff in order that they are fit and healthy to look after patients... The dietician who checks the nutritional value, the orderly who delivers it and the nurse who serves it and who ever cleans up the mess afterwards and the state of the patient themselves [53]

No system

However having described the system, the same person went on to say:

There appears to be no system [53]

This view was endorsed by 3 (4.91%) other participants

I don't know whether actually, we necessarily have any formal patient care delivery system at this stage. [2]

There isn't a system or no-one really understands the system Patient care delivery system there isn't one [13]

Essentially we don't have one. Everything's separate and getting more so [19]

Multiple systems

5 (8.19%) participants felt there were multiple systems:

Each service is pretty much responsible for its own little entity. It will create and develop its own patient care delivery system [13]

I don't believe we have one system right through the CHE [18]

I guess you could say we've got lots and lots of patient care delivery systems. We've got mental health, public health [48]

There are mini systems [50]

It's my understanding that we have multiple systems [56]

General terms

3 (4.91%) participants described the system in general terms:

We've got a very generic system [4]

We have an eclectic system of patient care [11]

It's just an empiric system of delivery [52]

Historical

6 (9.83%) participants felt it was historical:

It's very, very little changed since I started 40 years ago [5]

In some areas it's historical [18]

It's fairly traditional having evolved not enormously from that which has been practised in the past [30]

I don't think the system has changed all that much [37]

I guess we have the one that has been within the organisation for a long time [41]

It's fairly traditional at the moment. To my knowledge that system has existed for 40 years [44]

I think it's something that just happened and it's grown over the years rightly or wrongly [46]

Medical practice

6 (9.83%) participants felt system is built around medical practice:

I still think it's organised on an individual basis by [medical] clinicians who decide who's in and who's out in terms of the care spectrum [2]

Patients are grouped according to their, not so much their disease process but sort of by discipline of medical staff [14]

The traditional thing of being assigned to a medical person. I think our patient care delivery system is focused around professionals [16]

How patients receive their care is based around the demands of the medical people.

At the moment the planning of care is very based on the individual disciplines [28]

It's fairly traditional at the moment in that patients with a particular diagnosis come under a particular clinical team [44].

One thing that has become very clear is the splitting up of the care delivery process around medical teams [57]

Medical influence

3 (4.91%) participants believed there was strong medical influence:

At present it is still very medical [10]

The medical staff dominate the system [27]

Well I think it's a medical model [51]

Future plans

9 (14.75%) participants referred to a future plans:

Moving towards patient focused care

4 (6.55%) participants believed the organisation was moving towards patient focused care:

Focused patient care and case management [22]

We have to move increasingly to a patient focused care delivery model [30]

Moving to care that has the patient as its focus...trying to create a continuous episode of care and they don't perceive any bumps [40]

We have a project which is focusing on putting the patient in the centre and straightening the path for the patient [41]

Moving towards integrated care

3 (4.91%) participants believed the organisation was moving towards integrated care:

We are trying to move into planned integrated care right from primary referral to the community services [2]

Trying to get an integrated delivery system [55]

We tried to set it up as a service based model. We're very much trying to focus on services. There's a lot of work being done in determining clinical pathways and to integrate the services that are provided so they are seamless for the patient [9]

Moving towards critical pathways

2 (2.37%) participants believed the organisation was moving towards patient focused care:

We're moving to a more multi-disciplinary approach and to critical pathways [10]

We're progressively moving to clinical pathways [22]

Moving towards a greater emphasis on health

1 (1.63%) believed there was a move towards a greater emphasis on health:

We're trying to put more emphasis on health rather than an institutional basis [52]

Remaining

I don't think it is a fixed static system I think the system keeps changing [18]

1 participant couldn't describe it *because it is too fragmented [59]*

The phrase 'patient care delivery system' does not have a universally accepted definition.

It is however a phrase well known to the researcher and one that is used in the literature. Participants who asked the researcher 'what is a patient care delivery system?' were asked to determine this for themselves.

Used within a general systems frame of reference it could be expected that participants would describe CHE system inputs, process, outputs and feedback loops. Used less formally it could describe a patient's pathway through the system. In either

case essential to the description of a system is information about the various components and their interrelationships.

It was expected that participants would recognise the centrality of the patient and describe in some way patient inputs and outputs e.g. patients in need as an input and treated, referred or deceased patients as an output. An unexpected finding was that only 3 (4.91%) participants acknowledged the importance of patient need as a primary input. It is now apparent that the majority of participants could not readily conceive of an entity they could label as a PCDS.

14 (22.95%) participants answered in terms of a service. Given that a service is a subsystem of the PCDS answers to subsequent questions do provide relevant information. If for example the subsystem is not evaluated the PCDS is not evaluated.

Participants who referred to integrated systems and/or patient focused care and/or critical pathways indicated a change in their frame of reference. Instead of structure and efficiency dominating business of the organisation effective patient care and health professional clinical education were becoming central to planning.

The influence of medical structures and decision-making processes was commented on by 10 (16.39%) participants but a link was not made to future plans.

Question 2a. Who chose this system?

Did not answer the question

Given the answers to the previous question it is not surprising that 34 (55.73%) participants did not answer the question.

1 (1.63%) participant chose to 'pass' and with one exception the remaining 25 (40.98%) answers offered little relevant information. The exception was the participant who suggested:

It's being driven from above and probably outside the organisation has a lot of impact on it [48]

Question 2b. What are the advantages and disadvantages of this system?

Did not answer the question

28 (45.90%) participants did not answer the question.

Advantages

Patients

6 (9.83%) participants felt there were advantages for the patient/s:

The whole idea is that the person gets everything they need in the sequence they need it and get it at the time they need to have it and that is appropriate [the reference is to a future system] [9]

In a lot of ways the patients like it. They want to come and have the doctor as a kind of kingpin in it all [10]

[Patients] have faith in the system and a degree of comfort that the doctor is all knowing. There is security in system they know and is predictable [28]

The advantage is that there is at least a recognised route for being plugged into the system [31]

The process is much more focused around services going to the patient [40]

The advantage is that you've got a good throughput of patients [45]

Staff

6 (9.83%) participants felt there were advantages for staff:

The advantage is that there are clear boundaries for most people working within it.

I'm sure there are advantages to professionals in the system [16]

The advantage is that it creates a platform for potentially developing an interdisciplinary approach to care [27]

The advantage is that some people like things the way they've been [41]

The advantage is primarily to the clinicians [44]

You know this is our contract so this is what we deliver [48]

There is a clear line of authority and accountability [51]

Other advantages

4 (6.55%) believed there were other advantages:

The advantages are obvious because the focus is very much on managementwe've been financially very effective [26]

The advantage is that the people who oversee and are held accountable for certain practises are close to where the service is delivered [35]

I think the biggest advantage is that it is well known to everybody – even the public know how hospitals work [38]

The advantage is that it has worked to date [45]

Disadvantages

Patients

5 (8.19%) participants felt there were disadvantages for patients:

Patients are being dealt with vertically. We seem to get this territorial/ specialty type of thing [11]

I think the key disadvantage is to patients [16]

The disadvantage is that the patient is missing out on having some control over their journey and are often missing out on having input from other carers and professionals [28]

The disadvantage are quite often if people have to access services outside the clinical services there are delays because they are dependent on the resources and availability of other services [44]

The disadvantage is that our patient care delivery system doesn't revolve around the patient. It revolves around the staff [45]

Staff

4 (6.55%) participants felt that there were disadvantages for staff:

The disadvantage is that the multi-disciplinary input isn't great and doesn't get recognised like it should. The other disadvantage is that other people who have an equal contribution to make are disempowered [10]

The biggest disadvantage is that there never seems to be enough people [38]

The disadvantage is that it challenges professional boundaries and territories [The reference is to a future system] [40]

The disadvantage is that you have some frustrated nurses because they feel they don't count [51]

Separation/duplication

3 (4.91%) participants commented on duplication within the system/service:

The disadvantage is that they are separate business units [6]

It has a lot of duplication in it [22]

The disadvantage is that it had created poorly, vertical segregations [27]

Haphazard

2 (3.27%) participants believed the system/s had become haphazard:

The disadvantage is that it is financially haphazard now. Systems aren't tracked [4]

It's very unplanned and haphazard and characterised by a large amount of waiting [14]

Remaining

There are a lot of components about the delivery of practice to keep a handle on [7]

It continues to be modified from within the individual service [15]

They forget all about the support services like IT and HR [53]

It is not clear from the context if one participant was indicating an advantage or a disadvantage:

The focus has been around employee needs [41]

In answer to this question 6 (9.83%) participants identified advantages and 5 (8.19%) disadvantages for patients. Of these only 1 (1.63%) participant [45] identified an advantage and a disadvantage. It would appear from answers to this question that although participants had difficulty describing the patient care delivery system the concept had some meaning for participants who answered this question.

Question 2c. When was this system put in place?

Did not answer the question

40 (65.5%) participants did not answer the question.

Did not know the answer

3 (4.91%) participants indicated they did not know the answer.

Considerable length of time

The remaining 18 (29.50%) participants gave answers designed to indicate a considerable length of time e.g.

About 200 years ago [10]

It's probably been in place forever [27]

It might not always meet the need of individual patients. I think sometimes people get lost just through the bureaucracy of administering the system [31]

At least 40 years [44]

Question 2d. How is this system evaluated?

Did not answer the question

32 (52.45%) participants did not answer the question

Planned evaluation

With precise timetable

1 (1.63%) participant spoke of a precise timetable for evaluation:

The new plan will be evaluated five years down the track [41]

Ongoing

1 (1.63%) participant felt review was a constant process in the organisation:

It's a constant ongoing review [20]

Evaluation/ review

Full

1 (1.63%) participant was confident that the whole of present system has been assessed:

It has been assessed in its totality [50]

Limited

6 (9.83%) participants mentioned a partial review:

I've got my own procedures that tell me I'm comfortable [11]

I think the biggest evaluation is the statistics we collect and are passed on through various government agencies. And whether or not we stay within budget of course [38]

Some of the evaluation has been done by the RHA and some happens with our three monthly quarterly reports [7]

Our current review is the amount of evaluation that is going on at present and that would be more than has ever gone on before. That's being driven by having to rethink how our resources are used and what roles we need [10]

We had a review recently. I can't think who they were. It was done for the Board [44]

We've really tried to look at the continuum of care and what our place is in the continuum of care...what part of the service needs to be melded together and what relates to what [57]

Not evaluated

Formal /adequate evaluation not in place

4 (6.55%) believed the system had not been fully evaluated:

There really isn't an adequate evaluation at the moment [4]

I'm not sure there has been a formal evaluation of the system [6]

I don't think there is any formal evaluation of the care delivery systems that we've got in place at the moment. We have a number of projects underway. We've just done a huge data collection [14]

The system is not evaluated effectively and is only evaluated when there is a crisis [27]

Probably not evaluated

4 (6.55%) participants indicated that the system was probably not evaluated:

Personal evaluation. It's based on the question of what outcome or added value will result from that particular system [15]

Well I don't think anyone has said in this place 'lets go and evaluate the patient care delivery system'. What we have done is evaluate components of it. I think people don't, haven't sat back and looked at the system [16]

The only way it is evaluated is if the patients complain about, or compliment the service [25]

I suppose from crisis to crisis. There is b.. all at clinical level. At the contracting level all the energy is put in there [31]

Uncertain

4 (6.55%) participants were uncertain:

I have to say I don't know how to answer that effectively [9]

I suppose it's evaluated when external or internal plans force it. I don't know that there is a formal evaluation [40]

I don't know that it's evaluated. I guess it has been because of our whole re-organisation [46]

I'm not sure if evaluating that [service] system is a formal process or not [52]

Remaining

We've just had a huge data collection to analyse the current system and processes in X service [14]

The driver for evaluation has actually been that a new system is needed [28]

A necessary prelude to satisfactory evaluation is the determination of the entity being assessed and the criteria to be used to evaluate it. When the system to be evaluated is something as complex as the PCDS and establishing the criteria requires health professional and management agreement about what constitutes safe, effective, patient care, evaluation of care delivery systems is very difficult.

Question 2e. What are the resource implications of implementing this particular system?

Did not answer the question

24 (39.34%) participants did not answer the question.

Information

3 (4.91%) participants made reference to information:

I think a multidisciplinary system with the patient at the centre and linking that with IT is absolutely crucial [10]

With every new system there comes a new set of information and reporting requirements [31]

One of the problems we have struck going into the new system is that we don't have any baseline data [49]

Finance

11 (18.03%) participants referred to financial matters.

Limited or no financial return

5 (8.19%) participants answered in terms of a financial return:

It will be slightly more expensive [2]

It's costly [16]

It's certainly no cheaper [40]

We're not going to save a lot of money on this [49]

Very costly when faced with facilities redesign and multi-skilling [41]

Effect of structure

2 (3.27%) participants answered in terms of structure

The funding structure fragments the service... I don't want to start something unless I know I have the funding for it [8]

It's the cost they [medical staff] drive in terms of drugs and technology [10]

Other

It's run as close to the bone financially as it is possible to do [5]

The logical conclusion is that it does require sophisticated financial systems we haven't got the ability to meet [9]

We're not going to save a lot of money out of this. I don't believe in the next 2-3 years, but down the track it will be massive [49]

Plant and equipment

Except for reference to *facilities redesign* [41] and *technology* [10] there is not a specific reference to plant and/or equipment

Staff

13 (21.13%) participants made staff related comments

As the service reduces in size it may be an opportune time to shift people [2]

A lot of the wards are too busy for the nurses to leave the wards for meals [5]

Within the business units staff stay working in one area. There isn't the crossover between units so it's not so easy to manage [6]

A lot of health resource has been put in place to report to the RHA and to the health authorities. We have to pull people out from actual delivery of services to spend time in meetings and formulating quite detailed reports [7]

The present system is very resource heavy especially in terms of senior medical staff [10]

It's a sad fact that we have to use more resources for few people [patients] because they [health professionals] want to be territorial [11]

We don't use a lot of support or health care assistant staff [14]

The next thing that is being looked at is multiskilling...breaking down some occupational boundaries [18]

By assigning a person, one person to manage care they get a better quality of care and consistency [22]

Previously nurses with management qualifications have moved into management positions which adds a degree of tension [25]

There seem to be four times the amount of work with the same people [38]

Accessing consultancy input from other specialties can be a problem [45]

There is tremendous amount of pressure out there and the acuteness of the place is coinciding with a lack of manpower-of skilled manpower [60]

Geography and demography

Demographics and geography pose particular problems [9]

Geography and demography strongly affect resource use [33]

Remaining

I think it's quite indulgent, certainly indulgent in lengths of stay [4]

The educational preparation of nurses in particular roles isn't necessarily understood [25]

Probably the utilisation of staff could be improved with a better system [46]

There are major barriers to changing the structure and systems because of professional education needs. It seems to me that the tail is wagging the dog [57]

Only 5 (8.19%) participants appeared to recognise the importance of factors external to the organisation namely patient acuity, the availability of a skilled workforce, geography and demography and education.

Seedhouse's comment on health systems is equally pertinent to the PCDS and the NCDS.

Given that there is so much confusion about the extent, nature and purpose of health systems it may seem pointless to address this.... But it is not, for in doing so the magnitude of the problem facing health reformers becomes clearer still.
(Seedhouse, 1990, p.3)

The central purpose of a CHE and its successors is the delivery of safe, effective care to patients. Patient need and to some extent patient demand are met through the PCDS. The largest and usually the most expensive subsystem of the patient care delivery system is the nursing care delivery system. Executives' and senior nurses' knowledge and understanding of these systems is essential to the delivery and

evaluation of patient care. That this not the case is evident from answers to this question.

The following themes emerge from participants' answers to questions about the patient care delivery system.

Chapter themes

The delivery of safe, effective patient care was not the primary focus of CHE executives and senior nurses.

The majority of participants (95.08%) did not describe a system of patient care delivery.

The organisation was not the primary frame of reference for 22.95% of senior staff.

Systematic and ongoing evaluation of the patient care was not a priority.

There was not a systematic and comprehensive approach to assessing resource implications.

Chapter seven

Nursing Care Delivery System (NCDS)

Introduction

While the nursing care delivery system may be generally understood to be the system by which nursing care is provided to patients there have been few attempts to define it. In part, this is because internationally there have been few attempts to research it. Madeline Wake (1990, p. 47) from Wisconsin, USA defined it as “an interacting set of structural elements which control the way care is provided”. Wake identified the seven elements of the nursing care delivery system as governance, patient assignment, differentiation of registered nurse practice, research utilization, documentation system, admission assessment format and nursing diagnosis. While Wake’s is not a definitive definition of the NCDS it does indicate the complex nature of the NCDS. Each of the elements she identifies has an effect on the nursing care delivery.

Governance of the New Zealand public sector nursing service is an issue of ongoing concern to New Zealand nurses (Keith, 2000). As this research demonstrates, governance of local public sector nursing care delivery systems has been little understood and poorly researched. It is an issue that needs to be urgently and comprehensively addressed especially as it seems likely that New Zealand is similar to the UK in that “organizational structures appear to be having an impact both on the overall development of the profession and the development of new roles” (Cameron, & Masterson, 2000, p.1083). In the absence of a body of research about the impact of the health reforms on nursing care delivery in New Zealand conclusions are somewhat conjectural. It does however seem from anecdotal evidence that Bradshaw’s (1995) commentary on the situation in the UK also has relevance to New Zealand.

There is reasonable certainty that nursing is ceasing to have its former identity and independence as it comes increasingly under the control of general managers. Nursing is losing control of its own work content. Professional tasks are being routinized in two ways. Firstly, these are being routinized and passed on to others

who cost the NHS less and who are able to produce results acceptable to management (Harrison, & Pollitt, 1994). Secondly, as the quality of the skill mix declines, the diminishing number of qualified nurses who remain are now required to take on more low-level medical tasks in addition to their usual duties (Bradshaw, 1995, p.978).

Carryer (2001), writing about the New Zealand nursing workforce, noted “the contract culture has altered nursing to a commodity.” She goes on to argue that:

The continued fragmentation and piecemeal solutions to nursing configurations is wasteful of time and energy. We need a national model for professional practice organisation in hospitals and we need a national development unit to develop primary care nursing in the district health board environment (Carryer, 2001, p.12).

Throughout the 1990s in New Zealand public sector nursing services were being variously restructured with the common denominator being the employment and management of nurses by managers some of whom may have been nurses. Titles and structures varied from CHE to CHE. The CEO approved nursing education and nursing research conducted within the CHE. Professional disciplinary matters initially, the sole province of the Nursing Council of New Zealand, now passed first to the Health and Disability Commissioner with the introduction of the Health and Disability Commissioner Act (1994). New Zealand nursing governance structures post 1990 have more in common with the UK than the USA where the competitive model is entrenched and management of nurses generally remains in the hands of nurses.

Partly as a consequence of North American nursing education being located in educational institutions much longer than in New Zealand, nursing research and publication imperatives have resulted in the majority of respected English language nursing publications in general, and refereed publications in particular, being USA based. It is this platform that has enabled North American nurse academics to convey their ideas and theories to an international audience. In the UK and New Zealand,

where the number of senior nurses in the public practice sector has been reduced, the ability to critique, utilise, adapt or discard these ideas and theories has been compromised.

Related to the issue of governance is the issue of documentation. Wake (1990) who believed “the data base for the nursing care of an individual patient is set by the admission assessment format” (p.50) was influenced by the limitations of data generated by a medical or body systems approach to determine a nursing diagnosis. The concept of a formal nursing diagnosis has not found great support in New Zealand. Until late 1980s the documentation of nursing care was generally entered into an independent system of nursing records, but is often now integrated into a single multidisciplinary patient record. This clinical record contains information about the staff giving care, the care given and the patient’s progress. It is however more than a patient-record. It also contains key information about nursing care delivery, for example the variance between the planned and actual care. In New Zealand where access to patient records is strictly controlled by the provisions of the Privacy Act (1993) and there is seldom a nurse with responsibility for the whole NCDS the potential of aggregated information from patient records to contribute to the evaluation of nursing effectiveness is compromised.

In New Zealand patient classification systems (also known as patient acuity systems) which measure the severity of a patient’s illness as an efficient and effective predictor of nursing care requirements has, in the researcher’s experience and anecdotally, even with computerised systems, been less effective than originally hoped. There are a number of reasons for this; the time lag between collecting the information and the allocation of nurses, the size and nature of the unit, safety issues, the availability of staff, and remuneration packages for staff among them. When resources are limited classification systems may assist with the allocation of those resources. When resources are severely stretched they may simply add to nurses’ frustration by making evident the gap between the ideal and the real and result in nurses “redefining their work responsibilities”(Bowers, Lauring, & Jacobsen, 2001, p. 489).

In 1990, as New Zealand was in the process of changing from nurse executive management of nursing services to general executive management of nursing services and competitive, commercially driven CHEs, Wake (1990) advised that “national data on the status of hospital nursing care delivery system elements are essential for planning nursing development nationally and in individual institutions” (p. 47), a point of view supported by Neidlinger and Miller (1990, p.43) who observed that “to design nursing systems for the provision of patient care, one must understand nursing”. Unfortunately Wake’s advice appears to have been ignored in New Zealand. The Nursing Council of New Zealand has regularly collected national data on nurses from annual practising certificates, for the Ministry of Health. Financial information relating to the provision of nursing services is increasingly sophisticated but information about nurses and finance is not information about the system of delivering nursing care or nursing work. National and local information about nursing education, nursing research, practice models, skill mix and the inter-relationships between these is also needed in order that executives and nurses may understand and evaluate nursing care delivery.

In Wake’s (1990) study questionnaires were mailed to 3400 nurse executives, with the final sample being 987 chief nurse executives working in hospitals ranging in size from 15 to 1513 beds in the District of Columbia. Hospitals were a mix of profit and non profit, urban and rural, the majority being non profit and urban. The low response rate is in part attributable to some recipients of the questionnaire not being eligible to complete it because they were not chief nurse executives.

Wake’s study, conducted over six months in 1989, provided a snapshot of chief nurse executive’s perceptions of the NCDS in some hospitals in the District of Columbia. The results demonstrated rapid and ongoing change in all the elements of the NCDS. In the District of Columbia the NCDS remained in the hands of nurses who could be expected to have had an intimate knowledge of it and the ability to direct change within it. In New Zealand the control of CHE nursing care delivery was divided between nurses and executives. An understanding of the NCDS in place and a shared language to describe it were therefore essential prerequisites to

implementing and evaluating changes to nursing care delivery in a CHE. Such understanding derives from education and experience and is built on by evaluation and research. Achieving a shared understanding of nursing care delivery requires an organisational structure and an executive and nursing leadership that enables clear and thoughtful communication between executives and nurses.

Guild, Ledwin, Sanford and Winter (1994) believe that “in the reform of health care lies its renaissance”. They argue that:

Innovative care delivery systems developed to complement creative facility designs, will provide an approach to health-care that promotes administrative efficiency, patient care giver [nurse] satisfaction and cost effective use of resources. (Guild, Ledwin, Sanford, & Winter, 1994, p.23)

The authors then go on to chronicle the development of a [nursing] care delivery system for obstetric nursing in one institution. In the process of developing the system an outline /mapping wheel was used. This wheel has 12 spokes. Each spoke represents an element of the NCDS. Attached to these spokes are connected elements. The elements mapped on the wheel are:

- Philosophy.
- Physical layout.
- Education.
- Nursing care models.
- Use of staff.
- Use of resources.
- Patient education.
- Continuity of care.
- Nurse satisfaction/retention.
- Flow of patients.
- Marketing.
- Documentation /communication system.

The emphasis Guild et al. (1994) give to facilities design is echoed by Rutherford (1997, p. 21) who writing about the use of patient care models in New Zealand noted

“many care models are developed on the assumption that single rooms with ensuite bathrooms are desirable” and went on to challenge the assumption. Work done by Nawalaneic (1999) on the isolation of staff caring for demented elderly patients in locked units suggests that this is an area that would benefit from further research. As well as having an effect on patients and staff wellbeing facilities design affects the delivery of nursing care. Isolated units and wards often require increased staffing levels to ensure the safety of patients and staff.

Recently marketing, an element of the NCDS and a feature of the competitive American health care system, has also become a feature of New Zealand nursing as agencies endeavour remedy the latest shortage of nurses.

Various strategies to redesign nursing care delivery processes have been reported. Most initiatives include one or more of the following six components.

- Flattening of management layers.
- Altering the make up of the care delivery team.
- Cross training to provide multiskilled personnel.
- Decentralizing services to unit or patient room level.
- Architecturally reconfiguring the physical environment; and
- Augmenting information technology (e.g. the use of bedside computers) to enhance care and documentation. (Havens, & Aiken, 1999, p.14)

Unfortunately as the authors go on to observe “published evaluations of these initiatives are sparse and consist mainly of single-site evaluations (Havens, & Aiken, 1999, p.15).” This observation is reminiscent of earlier observations by Shamian and Gerlach (1997, p.5) who hypothesized [contemporary with the interviews for this study] that “current decision making was more consistent with opinion than with science”. These authors suggested that there were several factors that lend support to their hypothesis.

- There is an abundance of descriptive reports supporting these changes in the trade literature.

- Consultants and leading institutions have adopted these approaches, leading to widespread change.
- Those in decision-making positions have had little opportunity to train in critical reading and research utilization skills. (Shamian, & Gerlach, p.6)

Shamian and Gerlach (1997) noted the rarity of longitudinal studies and the consequent lack of published follow up studies and the scarcity of multi-site studies, both features of New Zealand nursing research at that time. They argue that “without comparison across time and institutions the decision maker has little information on which to base their planning” (Shamian, & Gerlach, p.9).

There is no “one best model of care delivery” (Porter O’Grady, 1993, p.8) or “single best structural and functional design for hospital nursing services” (Joel, 1994, p. 224). Each organisation needs to develop models and systems best suited to meet the needs of its patients. However in a small country like New Zealand with a limited pool of specialist and experienced registered nurses it is important that the models and systems developed locally can be integrated into a smoothly functioning national system of nursing care delivery. As the New Zealand health service is presently structured the development and evaluation of new models and systems of nursing care delivery at national and local levels requires the collaboration of executives and nurses. Fundamental to productive collaboration is a shared understanding of nursing care delivery and a systems approach; the latter being necessary to understanding and evaluating the patient and nursing care delivery systems.

Two complaints recurred during the interviews for this study. The common complaint of nurses in community health and on night duty was ‘they [executives] don’t care’ [about the patient] while the executives most commonly complained ‘they [nurses] don’t understand [the business]’. When one group [nurses] focuses primarily on individual patient care and the other [executives] on the business of the organisation as a whole the potential for a poorly designed and implemented NCDS is considerable. When nurses themselves are not clear about the nature of nursing models and delivery systems it is inevitable.

Nursing care delivery is underpinned by nurses' understanding of nursing theories, models, systems and conceptual frameworks. As a prerequisite to planned change this needs to be overt and clearly articulated.

Theory, model and system

In 1969 McKay, a nurse academic with an interest in the development of nursing theory noted the need to distinguish between theories, models and systems in nursing. Her article was timely given nurses' push to establish nursing as a profession with its own body of knowledge, and the emerging systems literature.

McKay (1969) pointed out that defining theory in the physical sciences, where a theory derives from a hypothesis and is tested by observation, is by comparison with defining theory in a practice discipline, relatively easy. Writing before the increase in, and the greater acceptance of, qualitative nursing research that was to occur in the latter part of the century she recognised that nursing might use the word theory "in a rather modest sense" (McKay, 1969, p.394). Noting that "[nursing] knowledge comes from science and the methods of practice...[and] from the subtleties of interpersonal interaction" (McKay, p.393) she went on to argue "in a complex applied area such as nursing it is unrealistic to demand acceptance of a single proposal that will be acceptable to all researchers and practitioners" (McKay, p.393).

McKay's words were prophetic. In the ensuing years the generation of nursing theories/models accelerated as nurses sought to define nursing and codify nursing knowledge. In 1974 Riehl and Roy published their influential *Conceptual Models for Nursing Practice*. In this book they defined theory as "a scientifically acceptable general principle which governs practice or is proposed to explain observed facts (Riehl, & Roy, 1974, p.3). They also argued that a theory is a "deeper level of reality representation than a model is and provides the working insides of a model" (p.3). While this at first glance is congruent with McKay's (1969, p.394) view that "models are symbolic representations of perceptual phenomena" the author's reference to the development of "conceptual models in nursing" (Riehl, & Roy p.xiii) and their suggestion that the nursing models in existence at that time could be classified into

system models; developmental models and interaction models (Riehl, & Roy, p.xiv,, xv) hinted at the confusion of terminology that has dogged the nursing literature.

In 1990 Manthey created the following set of a set of definitions as a prelude to describing her new staffing system “Partners-in-Practice” (Manthey 1990, p.210):

Model

- Anything of a particular form, shape size, quality or construction intended for imitation.
- A person or thing considered as a standard of excellence to be imitated. (Manthey, 1990, p.201)

System

- A set or arrangement of things so related or connected as to form a unity or organic whole, such as a solar system, irrigation system, supply system, or delivery system.
- A set of facts, principles, rules and so on, classified to show the links between the various parts (p.201).

Theory

- Originally a mental viewing; contemplation.
- That branch of an art or science consisting of knowledge of its principles and methods (as opposed to a practical application of the art or science); pure as opposed to applied science. (Manthey, p.202)

Nursing delivery system

A nursing delivery system is a set of concepts defining four basic organizational elements. The definitions of these elements are based on principles that are in turn based on fundamental values.... The four fundamental elements are:

- Clinical decision making.
- Work allocation.
- Communication.
- Management. (Manthey, p.203)

A year later Manthey (1991) noted:

Given the plethora of concepts and ambiguity of language in the literature these days I find myself wandering about wondering how this 'model' of nursing delivery related to that practice 'concept' and becoming progressively confused. Despite 20 years of examining and studying how organizations influence care delivery, I still don't fathom the differences [sic] and similarities among the various models, systems, roles and practices which the latest (and greatest) nursing shortage has sparked (p. 28).

In 1992 Manthey's concerns were echoed by Martha Rogers (cited in Randall, 1992) an internationally renowned nurse scholar, to whom it seemed evident that lack of clarity was posing significant problems for nursing. In Rogers' view:

We have gotten into a lot of jargon about theories, a lot about words not theories. Theory is an abstraction of course, but we get caught up, I think, in terms like practice theories and middle level theories, and I get confused. There is no such thing as a practice theory. Practice does not have theories in any field. (Randall, p.176)

Nor was this type of criticism new. A decade earlier before Hardy working in the UK, but with previous experience in Canada, had strongly criticised the use of nursing models. His conclusion was that:

The beginning nurse researcher is left floundering in this sea of myths and, far from giving direction, existing models appear to encourage a narrow perspective, an elitist preoccupation with higher thoughts on research for the sake of knowledge rather than the reality of practice. (Hardy, 1982, p.451)

Eight years later Fernandez and Wheeler (1990, p.63) observed:

Often the term's *model* and *theory* are used interchangeably. This is confusing and prevents the precision that science seeks to attain. Although a model primarily expresses structure, theory provides substance in addition to structure. Theory is a conceptual system. A set of interrelated constructs (concepts), definitions, and

propositions that present a systematic view of phenomena by specifying relations among variables.

Concerns were not confined to the USA and UK. Canadian authors Kristjanson, Tamblyn and Kuypers (1987, p.524) observed that:

The literature to date, mixes and sometimes confuses use of the word 'theory'. Beyond semantic looseness of such words as 'theory' 'framework' and model there is a serious problem with the intended and realistic use of different levels of theory abstraction.

The authors also noted "unfortunately conceptual models developed in the academic sector of the profession have been inappropriately labelled as theories of nursing, with implicit and explicit pressure to apply them to clinical practice" (Kristjanson, et al., 1987, p.524). They go on to observe that "many nursing theories are so all purpose, so all inclusive and so abstract that in trying to explain everything they explain nothing." (Kristjanson, et al., p.525)

To further add to the confusion, as noted by Swedish and Norwegian authors Lundh, Söder, and Waerness, nurses failed to distinguish between the nursing process model described as "a description of the actual work of nursing" and the nursing system "in which the actual work of nursing took place" (Lundh, et al., 1988, p.36). It is argued that the failure to clearly identify what constitutes a model in the nursing context has had long term repercussions as practitioners fail to appreciate that a model of nursing practice is not the same as a system of nursing care delivery.

In 1992 Jan Morse, a New Zealander working in North America and an influential nurse academic, was blunt in her criticism of the way in which theoretical frameworks and models were being used in nursing education.

Theories, theoretical frameworks, and models have been taught to students as *fact* and as dogma. Students have been examined on the material, graded, and instructed to somehow use these theories in practice. What they have *not* been taught is that theories are only *tools*; that theories are means for organizing data,

for making sense of and explaining reality, so that confusion is rendered comprehensible and predictable. Students have not been taught that theories are merely someone's best guess about the nature of reality-given the available information-and as such, must be tested, modified and tested again.... Accepting theory-someone's conjecture-as 'fact' is extremely risky, and when the attitude prevails within a discipline that a theory is 'right' it should cause much consternation. (Morse, 1992, pp. 259-260).

These criticisms seem to have had little effect, possibly because they coincided with nurses' need to establish the nature and extent of nursing in an increasingly constrained economic climate.

Some authors in need of appropriate single definitions created their own, for example:

Nursing model

A nursing model is therefore a conceptual model, constructed for the specific purpose of conceptualising the phenomena of nursing.... A nursing model is quite different from a nursing theory, which is said to be less abstract and more precise in describing causal relationships between concepts and the predictability of such relationships. (van der, Peet 1991, p.71)

Conceptual framework

A conceptual framework is a network of interrelated concepts, constructs and definitions relevant to the discipline. A nursing conceptual framework for work redesign must address guiding themes for all major areas related to structure, practice, relationships, care delivery, resources, development and research. (Robinson, 1995, p.17)

Theory based practice model

A theory-based practice model for nursing provides the structure for understanding all the practice components for nursing service delivery. The model lays the foundation for nursing practice by providing a framework that organizes

knowledge and the delivery of care based on that knowledge, thus creating a bridge between nursing theory and nursing practice. (Fernandez, Hebert, & Riggs, 1996, p. 210)

In the UK authors Pearson, Vaughan and Fitzgerald (1996), writing about models for nursing practice, provided definitions a number of terms in common use, namely:

Model

[Models] are “things which are not the real thing but which match or represent reality as closely as possible” (Pearson, et al., 1996, p.2).

Nursing model

“A nursing model is a picture or representation of what nursing actually is” (p.22).

Practice model

“Practice models are abstract models. They provide “a descriptive picture of practice which adequately represents the real thing” (p.2).

Theory

“Theories are proposals which give a reasonable explanation to an event. They are ideas about how or why something happens” (p.12).

Concept

A concept of a particular subject is the way in which it is viewed. It is a classification system applied to a particular area (p.10). The most commonly identified concepts which have been discussed in relationship to nursing are those concerned with beliefs about people, society, the environment, health and nursing itself (Pearson, et al., p.11).

Conceptual model

Conceptual models “attempt to describe nursing as it is” (p. 13).

Care delivery systems

The choice of [care delivery systems]... is also influenced by the model of practice. Traditionally nursing work was allocated by task.... Over the past

decade nurses and others have become more and more dissatisfied with this approach to work and have gradually moved along a continuum from patient allocation through team nursing to primary nursing. (Pearson, et al., p.23)

The nursing process

“The process itself [assessment, planning, implementation and evaluation] says nothing about the content and is not specific to nursing” (p. 22).

While it may be practical for authors to define terms or select what they believe to be the most appropriate terms for the purposes of publication and research in the practice arena, clear and consistent definition is essential if there is to be shared understanding between nurse and nurse, and executive and nurse, and adequate evaluation of changes implemented.

One solution to the problem of defining nursing theory is the suggestion by Higgins and Moore (2000, p.179) that:

The terms theory, theoretical (or conceptual model), theoretical framework, theoretical system are often used to distinguish different types of theory. This practice has created confusion among scholars and practitioners, and we believe a more useful approach to understanding theory is to consider all of the aforementioned terms as parallel synonyms. Each can be used interchangeably, but each terms also further specification through an adjective, modifier such as ‘grand’ or ‘middle range’ that describes its fit with other theoretical work.

The absence of clear, consistent and universally accepted definitions of nursing systems and models created difficulty developing the questions for this study. Eventually it was decided that in the absence of such definitions it was necessary to begin by examining executives’ and nurses’ understanding of what constitutes the patient and nursing care delivery systems. A pragmatic classification system that is consistent with the general use of terms in the nursing literature has been adopted to facilitate discussion. Theories and theoretical or conceptual models are grouped together under the catchall category of ‘theory/models’ and distinguished by being

referred to by the theorist's name. Those without a recognised nurse theorist's name attached are viewed and labelled as practice/nursing care delivery models i.e. models describing forms of nursing practice, for example nurse case management; team nursing; primary nursing. Nursing theory/ models and nursing practice/nursing care delivery models are nursing specific. They have as their central focus the delivery of nursing care by nurses. They are in effect isolationist and could, in spite of health and environmental components, be interpreted as supporting what is in effect a closed system of nursing care delivery.

Managed care and patient centred or patient focused care in the context of this research relate to the patient care delivery system. As part of this system they impact on the nursing care delivery system but unlike nursing theory/models and nursing practice models their implementation and evaluation is not exclusively nursing focused. Because so many nurses interpreted nursing care delivery system in term of nursing models a brief explanation of theory/models and practice/care delivery models that have influenced nursing care delivery in use in New Zealand follows.

Theory/models

Of the twenty-four nurse theorists listed by Hilton (1997, p.1212) only a limited number found favour in New Zealand. One reason for this is the failure to link nursing theories taught primarily in the education sector to practice; another the dearth of research and publication. Explicated nursing theory has to all intents and purposes been primarily the responsibility and prerogative of students and lecturers in education sector. Six theory/models that have had some impact in New Zealand are Nightingale's (1859); Peplau's (1952) interpersonal relations; Leininger's (1978) transcultural nursing; Watson's (1985) human caring; Benner's novice to expert (1984) and Christensen's (1990) nursing partnership, theory/models.

Nightingale

Florence Nightingale noted in 1859 that nursing was not limited to the administration of medicines and the application of poultices but "ought to signify the proper use of fresh air, light, warmth, cleanliness, quiet and proper selection and administration of diet-all at the least expense of vital power to the patient" (Nightingale, 1970, p.6).

This viewpoint was accompanied by her thoughts on petty management namely that, “all the results of good nursing... may be spoiled or utterly negated by one defect, viz.; ...by not knowing how to manage that what you do when you are there, shall be done when you are not there” (Nightingale, p.20). Her opinion on the function of nursing was to put “the patient in the best condition for nature to act on him” (Nightingale p.75). For many years these important ideas have been submerged by the opinions of those who felt her rejection of the germ theory of disease, her promotion of nursing as woman’s work and her perception of nursing as subordinate to medicine were outdated concepts that hindered the advancement of nursing as a profession. Generally recognised in the West as the first nurse theorist (Hilton, 1997; Higgins & Moore, 2000), Nightingale’s contribution to nursing theory and practice has largely been ignored. Latterly as nursing seeks to expand its domain into all aspects of health, as distinct from disease care, Nightingale’s work is being revisited. Her emphasis on the importance of the environment, the reparative processes of nature and health promotion are all congruent with modern developments in health care.

Early schools of nursing in North America and Commonwealth countries were modelled on the Nightingale secular model of nurse training first established in St Thomas’s Hospital London in the period 1859-1861. Young women undertook a training programme that was a combination of supervised clinical practice and classes in the basic elements of patient care. Nightingale’s religious background and military experiences were reflected in the apprentice based system of training that was the core of nursing education in New Zealand until the 1970s.

An important consequence of introducing the apprentice-based system of training was that trainee nurses became the largest component of the training hospital’s nursing workforce. Trained (registered) nurses working under the direction of medical staff, assumed expert nurse clinician, nurse manager and nurse educator roles in the hospitals. They developed and communicated to trainee nurses the structures, process and content of ‘correct’ nursing practice. This system, designed to make the best use of the available knowledge and expertise, also increased the

professional dominance of patient and hospital services. The number of trained nurses required using this system of nursing care delivery was limited.

Peplau

While Hildegard Peplau's work, with its focus on interpersonal relations found only limited favour among general hospital staff who perceived it as excluding physical care, in the psychiatric/mental health arena her work was and is, still well received in New Zealand.

Leininger

Madeleine Leininger's transcultural work on transcultural nursing has been to the fore in New Zealand as part of the debate regarding the nature and practice of cultural safety in nursing (Leininger, 1997).

Watson

Jean Watson has been a regular visitor to New Zealand. Her work on human caring has generally been well received but it is more a nursing philosophy than a blue print for practice.

Benner

Patricia Benner who also has visited New Zealand has had a considerable influence. Her visit and her book from *Novice to Expert* laid the foundations for the development of clinical career paths/ladders in New Zealand.

Christensen

The only indigenous theory/model is Judith Christensen's.

As conceptualised by Christensen (1990, p.27):

A person embarks on a passage which is characterised by the giving and receiving of nursing in order for the person, as patient, to make optimal progress through a health-related experience such as surgery. Within this passage the patient is the passenger-the person who is undergoing the experience-and the nurse is the agent-the instrument through which nursing is translated into action.

In Christensen's model nurse and patient journey together, each contributing to the partnership.

Of all these theory/models it is Nightingale's that, until recently, has had the greatest influence in New Zealand.

Nursing theory/models are not overt drivers of nursing practice in New Zealand. (They do of course exist in some form as covert drivers for practice but their nature and the extent of their use is not known.) One reason published theory/models have not been an overt driver in New Zealand is the difficulties encountered by those who have tried to utilise these in the practice context. As Fernandez, et al., (1996, p.210) observe "implementing a conceptual model often creates some difficulties because of the incoherence of hospital systems, medical models superimposed on nursing practice, and a lack of understanding of the phenomena of nursing".

Anecdotal evidence suggests another reason is the perception of many nurses that theory/models lack relevance to nursing practice in general and nursing practice in the reformed New Zealand health care environment in particular.

Practising nurses in the New Zealand public sector health are usually part of the community in which they work. They and/or their relatives are often known to their patients and/or patient's relatives. They have some appreciation of the cultural needs of patients and an individualised approach to care. Subject to regulation since 1901 they are part of a well-regarded group in society. These and other as yet unknown factors influence the way in which New Zealand nurses conceptualise nursing. There is a need for the explication of which nursing theory/models are in use and the development of new models relevant to New Zealand.

Nursing Practice/ care delivery models

Nursing practice/ care delivery models are more readily understood and utilised. The most common, task/functional nursing, patient assignment and team nursing are well known and commonly utilised frameworks for work allocation. Primary nursing and case management are familiar, if variously interpreted nursing practice/care delivery models.

Case method practice/care delivery model

The case method was an early model of nursing care delivery. Utilising this model the nurse, at the behest of a patient and/or the patient's doctor, undertook the full nursing care of a patient in a hospital or in a patient's home. This usually included care of the sick room, catering for the patient's nutritional needs and meeting the patient's comfort needs. If care was required for a length of time a night nurse or night attendant may have been employed to relieve this nurse in order for her to be able to rest and attend to personal matters.

Today use of the case nursing practice/care delivery model is still seen in modified form in district nursing, intensive therapy units, infectious disease units and private duty nursing. A resource intensive model the case model is now most often used by family members taking responsibility for delivering 24 hour care to a family member.

Task (functional) practice/care delivery model

As medical diagnosis and care became increasingly complex nurses were required to take on a delegated medical tasks e.g. taking blood pressures and assisting with surgery. As the tasks became more complex so the expertise and knowledge hierarchy of nursing was extended. The increasing complexity of care led to the development of new specialities such radiography and laboratory technology. As well as nursing and delegated medical tasks nurses assumed the newly required job of co-ordinating of care. Utilising the task (or functional) model a senior nurse, or in some circumstances a doctor, allocated tasks to the ward or unit nurses. Each nurse was responsible for completing the tasks (or functions) allocated to them. There was an implicit hierarchy of tasks with the most menial being allocated to the least experienced or most junior nurse.

Now frowned upon by many nurses because it fragments care and does not cater for individual needs task nursing is nevertheless the model likely to be used when there is a marked inequality in the knowledge and experience of those providing care and/or when resources are scarce.

Patient Assignment (also known as patient allocation) practice/care delivery model

Patient assignment is a modification of the case method. Using this model the most senior nurse on duty allocates to a particular nurse the care of small number of patients for the duration of that nurse's shift. Ideally the care required by the patient is matched to the nurse's level of knowledge and experience. Often allocation is geographically based with a nurse being allocated patients in one section of the ward. Nurses unable to give all the care required to their allotted patients may need to seek assistance from their more experienced colleagues. Some tasks, for example medication rounds may be allocated to particular nurses.

Team Nursing practice/care delivery model

Team nursing emerged as a solution to the problem created by fragmenting patient care. Using this model small teams of nurses with varying levels of knowledge and expertise are allocated a group of patients. Together under the guidance of a nominated 'team leader' they provide all nursing care for the patients allocated to their team. Except in the generally better staffed intensive therapy units this model of care is seldom used on the lesser resourced night shift. However, the team nursing approach is frequently used in a modified form when nurses on a duty negotiate work assignment among themselves and work as a team to deliver the care required.

Nursing care delivery based on these practice/care delivery models is designed to cater for fundamental inequalities of education, knowledge and experience in an increasingly complex patient care environment. These classic practice care delivery models are all in operation today.

When the classic practice/care delivery models were introduced the traditional model of health service management was in place. Managed by the Medical Superintendent, Matron and Secretary to the Board in various guises and ranking, the model was hierarchical. The normal practice was for the most senior nurse in the organisation to be responsible for the structure, process and content of the nursing services within their organisation.

Primary Nursing practice/nursing care delivery model

Requiring the employment of well qualified (usually to Masters degree level) nurses to plan the 24-hour delivery of care this nursing practice/care delivery model most closely resembles the case nursing practice/care delivery model of care. Primary nursing has evolved over the years into a variety of formats. A primary nurse is allocated a caseload of patients. S/he assumes full responsibility for the planning and delivery of nursing care to these patients. Primary nursing requires close integration of medical and nursing care plans. In its ideal form it is resource intensive. Modified forms of primary nursing provide the foundation for some 'new' practice/care delivery models.

Introduced into New Zealand in the late 1970s the primary nursing practice/care delivery model required often drastic modification for New Zealand conditions. A form of care based on the primary nursing model is still practised in some New Zealand hospitals. In its most common format patients are allocated a primary nurse who attends to all their needs during the time that s/he is on duty. Nursing practice care/delivery models designed for the provision of personalised and comprehensive nursing care by a small number of well qualified nurses over a series of duties are inappropriate if qualified staff are not available to plan and deliver care and/or when the allocated primary nurse is not available to consult with medical and nursing colleagues about the care of 'their' patient/s.

Functional, patient assignment and team nursing practice/care delivery models are ward or unit based. Their implementation is nurse controlled and delivered. As classic models they are a given and their selection and use is seldom evaluated. Nursing practice/care delivery models are structural models that are in a reciprocal relationship with the organisation's structure and the medical care delivery structure. For this reason understanding and evaluation of their utilisation is an essential prerequisite to planned change of either the nursing care delivery system or the organisation's structure. That said evaluation of the use of nursing practice/care delivery models is a difficult process. It must encompass a variety of shifts, unit/ward environments, skill mix, employment conditions and patient acuity. Added

to this is the difficulty of ascertaining exactly which model or mix of models is being used and where this model intersects with other health professional models in use at the same time. These difficulties are one reason why classic nursing practice/delivery models escaped comprehensive evaluation in New Zealand. Another reason is that these unit/ward based nursing practice/care delivery models are familiar from long use. They are compatible with the implementation of service based structures and the medical structure and the decimation of national and local senior nursing structures removed the people most likely to question the selection and use of a particular model.

CHE CEOs faced with constrained resources sought new patient care delivery models. Slowly service based planning and development gave way to hospital wide planning and development. Managed care and patient centred care delivery models were explored and in some cases implemented. Nurse case management, a nursing/practice care delivery model that was developed in the USA appeared to offer new clinical career opportunities for nurses.

Nurse Case Management

In 1992 Fralic (p.13) identified the nurse case manager as “the pre-eminent role for the next decade.” Nurse case management at first glance appears to have the potential to significantly improve New Zealand patients’ outcomes within available resources. Unfortunately the situation is less clear than Fralic indicates. A lack of clarity about the nature and scope of nurse case management is rife. The degree of confusion that exists about the term ‘case management’ is well illustrated by Lyon’s (1993 p.163) comment that:

Case management is a popular term used to describe a wide variety of nursing care programs in acute hospitals and community settings. However confusion exists about what programs and services compose case management and how case management differs from nursing care delivery models.

Lyon then goes on to distinguish between client centred case management, designed to assist the patient through a complex fragmented system, and system centred case management designed to fill a rationing and priority setting function that targets

those people in a larger group or population who could most benefit from specific services.

Marquis and Huston (1994) in their definition equate managed care with case management. They suggest that:

Managed care or case management is the latest form of structuring activities to meet patient needs. Managed care is similar to primary nursing, in that one individual nurse is responsible for co-ordinating the activities and care of the patient. (Marquis, & Huston, 1994, p.145)

This nursing definition stands in contrast with a New Zealand definition of managed care as “arrangements which give an organisation responsibility for ensuring that a given population receives a defined set of services in a co-ordinated fashion” (MOH, p 1). given in a 1996 joint publication by the Ministry of Health and the four Regional Health Authorities .

Fralic (1992) made explicit what she perceived to be the dual clinical and financial component of the case manager role. In her view the financial component is integral to nurse case management, the purpose of which is to manage a patient’s continuum of care either within institutional boundaries or across the institution and community boundary in the most cost effective manner possible.

Case management is most often associated with capitated funding systems and is usually seen in combination with managed care initiatives. The exact nature of the case manager role varies from institution to institution. Because case management crosses services and disciplines it is a component of the patient care delivery system. Case managers may come from any health-related discipline. The case management patient care delivery model is generally considered to be a resource model based on a predetermined norm (for example a critical pathway, care map, or care guidelines) variations from which are cost inefficient. How this relates case management as a nursing practice/care delivery model is unclear.

It can be argued that in New Zealand, system centred case management (to use Lyon's (1993) terminology) effectively remains in the hands of the medical practitioners. It is they who exert the greatest control over admissions, care pathway and length of stay. Nurses support this process by co-ordinating clinical care (client centred case management in Lyon's terminology). In some areas this role is formalised with nurse case co-ordinators being appointed (sometimes with title 'nurse case manager').

In addition to the task nursing, patient assignment, team nursing and primary nursing a number of institution specific nursing practice/care delivery models had come into being. In August 1988 the Robert Wood Johnson Foundation and The Pew Charitable Trust challenged American nurse leaders and their executive colleagues to take a risk, to shift their paradigms, and use their imaginations to create a vision for the future. The SHNP (Strengthening Hospital Nursing Program) was developed in response to the challenge (Flarey, 1995). Older models of care delivery were redeveloped and new models uniquely designed around an individual organisation's mission and philosophy were created. Since then models have proliferated and nurses have sought to find the most effective and efficient nursing care delivery system. To illustrate this, just prior to the interviews for this study the USA journal *Nursing Management* published articles on five community health models; the Carondelet model community nursing (Ethridge, 1997); the University of Rochester school based health centre (Walker, & Chiverton, 1997); the Vanderbilt University community health models (Spitzer, 1997); the community nursing centre model, developed at the University of Wisconsin-Milwaukee (Lundeen, 1997) and the Community Nursing Organisation(CNO) model at the Carle Clinic (Shraeder & Britt, 1997).

Over time nurses' goal of delivering comprehensive nursing care to patients has given way to the goal of delivering the best care possible within the resources available (Stevens Barnum, 1994). The RN will work with a variety of nursing care delivery models. The same nursing unit might potentially have a different care delivery model for different shifts, times of day or week or month. The RN will work

on the same unit using different models of care and must learn to be very flexible. (McLaughlin, Thomas, & Barter, 1995, p.45).

This pattern was confirmed by Ebersole who also noted the impossibility of replicating a model and the consequences of not being able to do so.

Care delivery models:

The structural designs or patterns put forth to be emulated, are built on the basis of assumptions or hypotheses of predicted and desirable outcomes... Although the model can never be precisely replicated, each variation signifies potential for outcome variations. (Ebersole, 1998, p.6)

The flexibility inherent in the 'pick and mix' approach to nursing practice/care delivery models, combined with patient centred care approaches, has resulted in nurses participating in the development in multidisciplinary, collaborative, and integrative care approaches. Most recently evidence based practice where "the combined results from clinically relevant research, clinical expertise and patient preferences produces the best evidence for ensuring effective individualized care" (Rosswurm & Larrabee, 1999, p.317) is being promoted by nurses and other health professionals as a tool for ensuring quality care and enhanced interdisciplinary practice.

In 1990 Mayer, Madden and Lawrenz published *Patient Care Delivery Models*. The aim of this book was to bring together "operational models for restructuring patient care and the support systems that underly them (p.xi)" and expressed a hope that "these models will offer us [nurses] a common language for exchanging ideas and growing" (p.2). From the information provided evaluation of these models was limited, output/outcome and/or opinion oriented, and cross sectional, a pattern that is repeated in later literature.

Contrary to the impression conveyed by the existence of a the considerable nursing literature on the introduction of new models for the delivery of nursing care there is a dearth of research in general and longitudinal research in particular related to planning, implementing an evaluating nursing practice/ care delivery models. The

effect of implementing new or modified nursing practice care delivery models on the wider organisation appears to be known only to a few (if any) nurses and executives within the system.

In addition to the community health models previously mentioned there are many other models in use. Among them are the following models:

Abbott, Young, Haxton and Van Dyke, (1994) (Collaborative care model); Gibson, Martin, Johnson, Blue and Miller (1994); McHenry, (1994) (Self directed teams); Donlevy and Pietruch, (1996) (Connection delivery model); Massaro, et.al, (1996) (Professional Practice Model (PPO)); Brown, Deckers, Magallanes, Quimas and Deschner (1996); Rawsky, 1996; Geary and Smeltzer (1997); Bushy (1997) (Case management) Bachman and Malloch (1998) (Common nursing practice model) and Green (2000).

The situation was well summed up by Hoover who in 1998 reiterated and supported Giovanetti's (1986) view that a "lack of research skills, experience and valid instruments" (Hoover, 1998, p.10) has been a barrier to investigating outcomes in relation to nursing practice/care delivery models. Hoover also expressed concern that organizational or managerial theories and models are used rarely in the nursing redesign literature and there is a lack of care delivery evaluation models. When this combined with the difficulty of clearly defining new models and an erratic labelling system, whereby the same model is given more than one name, the barriers to clear and easy communication between nurses and executives is considerable.

Where the nursing service is an autonomous service new models of nursing care delivery may be trialed, used and evaluated within an identifiable NCDS system. In New Zealand where public sector nursing services are seldom autonomous, changes in the utilisation of nursing practice care/delivery models and in the nursing care delivery system usually occur within the wider executive-managed, PCDS. For this to occur efficiently and effectively the complexity of the nursing care delivery and nursing work needs to be appreciated by nurses and executives. Changes in organisational structure, shift times, skill mix, documentation, physical layout,

education, regulation, admission and discharge policies and technology will all directly impact on and be impacted upon by the NCDS. Financial structures and policies operating outside the hospital will influence the nature and number of admissions as will community and government expectations. Education structures and policies will influence the nature and number of staff available.

In 2001 Taft and Stearns' (1991) assessment that "although nursing is central to most efforts at changing U.S. hospitals and care delivery systems, little is known within the profession about participating in large system-total hospital-change" (p. 12) and "most reports of innovations in nursing focus primarily on nursing, not on the organization as a whole, and do not have a systems viewpoint" (p. 19), could equally well be applied to New Zealand.

Roy (2000, p.119) a noted nurse theorist, recently observed that "nursing care systems, past, and future are shaped by issues, trends and visions that are both visible and invisible". She then went on to identify trends she feels will determine nursing's future. These are:

- The emergence of the information age.
- Changing demographics (in particular an aging population, increasing ethnic diversity and income gap disparity).
- Continued health care reform. (Roy lists unresolved issues relating to reform; the continued high cost of health care; both consumers' and providers' questions whether or not care is being compromised; an unprecedented 'backlash' by angry and suspicious consumers and many health care providers, nurses among them an increasingly enlightened public).
- Technological advances (in particular genetic research and application) (Roy, 2000).

In New Zealand these and other factors are driving the push by executives and nurses for new models of nursing care delivery appropriate to New Zealand. It is suggested that the most potent factors in the New Zealand context are likely to be the:

- Blurring of traditional health professional boundaries.

- Changing organisational structures.
- Globalisation of health care issues and problems.
- Increasing amount, scope and portability and cost of new medically related technologies.
- Increasing diversity and complexity of nursing practice,
- Increasing use of alternative and complementary therapies.
- Maori systems of health care.
- Needs of older citizens.
- Proliferation of new nursing practice/care delivery models overseas.
- Promotion of a self-help, self-responsibility ethic of care by the government.
- Resource constraints.
- Separation of nursing practice and nursing education.
- Scarcity of research evaluating effectiveness.

In December 2000 the Chief Advisor (Nursing) [Ministry of Health] wrote in the *Nursing Sector Update* :

Models of care delivery are changing and therefore the nursing workforce needs to develop new sets of competencies. There are trends both towards specialisation, for example specialist nursing roles, in conjunction with nurses within a population focus working across conventional boundaries (Hughes, 2000, p.3).

A necessary preliminary to planning a new models and/or systems is an understanding of the old. The successful development and adoption of new nursing practice/care delivery models and systems within the New Zealand public sector health service requires careful consideration to be given to evaluating the utilization of present nursing practice/care delivery models. “Ultimately the model must provide a mechanism to cost out that which is uniquely defined as the practice of nursing” (Fernandez, & Wheeler, 1990, p.82).

Prior to evaluating the model’s utilisation nurses need to distinguish the characteristics of the various nursing practice/care delivery models (Mark, 1992).

Until this is done adequate evaluation of a model's efficiency and effectiveness is not possible. In addition there is a need to distinguish between nursing care theory/models, nursing practice/care delivery models and the nursing care delivery system. When a nursing practice/care delivery model is identified as the care delivery system the relationship between nursing practice and other parts of the system is lost. Identifying nursing practice/care delivery models as nursing care delivery systems promotes nursing as an isolated activity.

Findings

Nursing Care Delivery System (NCDS)

Nursing care delivery is the core of this research. The organisational structure and patient care delivery system provide the context for nursing care delivery. Nursing research is an essential input into professional nursing practice and information about the nursing knowledge, skills and expertise are required for workforce planning, education and development. These components are artificially separated and bounded for the purposes of this research. In reality they and the NCDS are interrelated and overlapping.

Question 3. Please describe the present nursing care delivery system

Did not answer the question

2 (3.27%) participants did not answer the question.

Single service

3 (4.91%) participants answered in terms of a single [within CHE] service [7, 20, 33].

2 (3.27%) participants answers had the potential to identify the CHE.

Nursing practice/care delivery model

34 (55.73%) participants answered in terms of nursing practice model/s of care delivery.

Primary nursing

16 (26.22%) participants gave an answer related to primary nursing:

Do not have primary nursing

1 (1. 63%) participant spontaneously commented *We don't have a primary nursing model at all* [6]

Using a version of primary nursing

8 (13. 11%) participants indicated that a version of primary nursing was in use:

My understanding of primary care [nursing] and what they actually do is quite different [3]

We're trying to do a primary nursing role for want of a better word [12]

The service not so long ago introduced primary nursing to better facilitate the continuum of care [13]

I think we have, like most places in New Zealand a hybrid of that thing called primary nursing. We've never had true primary nursing in New Zealand [16]

Right now nurses practice a form of primary nursing. It's not true primary nursing [43]

There are concepts of primary nursing but they're not, you know, true primary nursing [48]

It isn't primary nursing in its correct or true sense [51]

Well I think it's supposed to be primary nursing. When I say it's supposed to be I don't know it works with the present mix of staff [54]

Lack of resources

3 (4.91%) participants commented on a lack of resources available to implement primary nursing:

It [primary nursing] didn't work. In an ideal world it would but we didn't have the resources and we haven't got the staff to do it [36]

When primary nursing was in vogue I guess we grabbed it with both hands saying team nursing is no longer appropriate and we like everyone else had an adapted version of primary nursing but we never had the resources to do it in the pure sense [41]

I don't think we could afford to have that [primary nursing] [43]

Primary nursing preferred

3 (4.91%) had primary nursing as the preferred practice/care delivery model:

More and more using a primary [nursing] style [10]

We have primary nursing in its various interpretations [26]

Well ideally it's primary nursing [37]

Other

With primary nursing there is this pressure to know all the answers. [27]

[The system is] this is the patients we have. This is their acuity. You take this group.

I'll take this group [43]

I think primary nursing is unworkable, You need a lot more staff [61]

It would be a very strong Charge Nurse who could implement a true primary care [nursing] model [28]

Very modified form of primary nursing. It's pretty much driven by the nurse in charge of the area and how compliant or innovative they are. [34]

Mix/hybrid

10 (16.39%) participants felt a mix or hybrid of different nursing practice/care delivery model/s was used:

It's a mixture of different things in different areas [13]

It depends on the individual Charge Nurse. Can have two wards that which operate quite differently next to each other [28]

I suppose we would deliver a sort of hybrid of task, team and patient allocation. It varies slightly in each clinical area [31]

As I understand it currently there is a mix of primary nursing and team nursing and maybe some of the wards are trying other systems [46]

It's primary nursing except that sometimes the wards are so busy—as soon as the nurse in charge goes home—things sometimes change depending on the nursing situation, into task [45]

A mixture really. It would be task nursing but sometimes mostly team nursing I would say with primary nursing mixed with it. A real hotch potch. Whatever fits. Some wards work teams, some of them pairs, some of them work in rooms [nurses are allocated a number of rooms and care for all the patients in those rooms]. Total patient care, you know one nurse to one patient doesn't exist because of the shortage of manpower and it was how can you survive and get work done at the same time [47].

I know some areas, dare I say it, practise primary nursing, some practice team and some are doing task [54]

The care delivery in one ward is quite different from the care delivery in another ward. By patient assignment or by room assignment or we also do it by patient acuity now [looking at introducing a new system] [59]

Some wards do cubicle [nurses are assigned all the patients in a cubicles or cubicles] nursing [61]

Task

9 (14.75%) participants felt the task nursing practice/care delivery model was used *Realistically the strain on resources is starting to show and we are moving rather rapidly back to task nursing [2]*

See there are certain aspects of tasks and even team nursing in one of the wards [3]

Endeavouring to work in teams but not really doing so. Totally task based [22]

The system is a team nursing care approach. We have gone beyond the physical but I'm not sure we have gone beyond the task. There are tasks rather than strategies [27]

Going back to tasks [47]

Reverts to task and team nursing in a crisis [59]

We've gone back to tasks [X]

Patient allocation/assignment

11 (18.03%) participants felt the patient assignment/allocation nursing practice/care delivery model was used:

I think there are all sorts of pockets of sorts of patient focused delivery where you have the nurse attributed to certain patient groups [4]

I think in the main we have a patient allocation service and a named nurse service in some way [6]

The patients are assigned a nurse or vice versa [11]

It's mainly patient assignment but we are trying team nursing in some of the wards [17]

Patient assignment [24]

Day shift is patient assignment [32]

We still do patient allocation but it's really directive in task when you actually analyse it. There's not one particular system [42]

The hospital moved from cubicle or task assignment to patient assignment and that's where we are [44]

It depends on the staffing... Where there's wards with enough nurses they will assign patients otherwise everybody looks after the ward [21]

Well mainly it's patient allocation [48]

Well actually it's an ad hoc mixture of systems. I would best describe it as patient assignment [51]

Team

5 (8.19%) participants felt the team nursing practice/care delivery model was used:

Well. We have a mixture... I'd say team. We have a team nursing system. [10]

It may be that some versions of team nursing are going on [16]

I couldn't say we had one in particular. It's team really. Well it's patient assigned [36]

In a perfect world it [primary nursing] would work beautifully but basically I see it as team nursing, task oriented because that's the only way you can do the work and I see it going more that way [37]

The old system has been starting to fall down a bit and so in some areas patient assignment has been modified into a type of team nursing [48]

Night

Primary nursing

[X] unit works on a primary nursing system but often by the time you get to the night shift it's gone [10]

I think the primary nursing side of it maybe they can implement that moderately well on morning shift and even on afternoon shift but on night it just falls back to task [29]

Mixture

At night it is a mixture. I don't know how they do it... but somehow it gets done [51]

Task

Night is more task type. They work as a team but it is not team nursing [32]

They still have a task system because they have 20-30 patients every night and they are acute [X]

Other

If it's 2 registered nurses they divide the ward. If its an RN and an EN [Enrolled Nurse] they sort of muck in together. Sometimes the allocations are unfair because if there's an agency nurse or a junior nurse, the senior nurse tends to say 'you look after X and I'll do the rest' [X]

At night I'd say it's not a particular model [60]

Remaining

Acuity and dependency of different patients ultimately impacts on the type [model/care delivery system] of nursing care [34]

I think they work in the traditional way. A lot of crisis management stuff [29]

It varies enormously across the CHE. It's still probably fairly medically driven.

Need to go to larger [hospital] if they have a special interest. I don't think one nursing care delivery model will meet all needs. Every area will be different [31]

I think we are still sort of somewhat stuck in the team nursing mould. The nursing care delivery system is based on primary nursing still [60]

We are looking at self directed or self managing teams [X]

It is not evident why so many participants answered in terms of a nursing practice care/delivery model. While ostensibly about the delivery of nursing care to patients these models are predominantly concerned with the allocation and organisation of nursing work and the control of nursing practice. Selection and use of a particular model, while theoretically related to patient need, in reality depends on the availability of suitably qualified staff to operationalise a particular model in a particular environment.

The availability and employment of nursing staff was, prior to the introduction of general management, the domain of Chief Nurses who had an understanding of nursing practice/care delivery models and a measure of control over their use. With advent of general management nurses lost control over the employment of nurses but not their control over the selection and use of nursing practice/care delivery models to frame the way in which work was allocated and distributed among the available nurses. At the time of the interviews the organisation of nursing work was firmly controlled by nurses. New patient care delivery models were being introduced but had not at that time seriously challenged nurses' ability to distribute and allocate nursing work as they wished.

When resources were limited nurses defaulted to task nursing or patient assignment/allocation. Initiative, flexibility and adaptability enabled the nurses to get the work done using *whatever* [nursing practice/care delivery model] *fits* [61] the situation.

That the majority of participants answered in terms of a nursing practice/care delivery model does not detract from the usefulness of the results. The importance of understanding the evolution and use of a model, who chose it, and why it was chosen and the resource and evaluation issues remains pertinent. The implications of using task nursing as an acceptable default model was not raised. As far as could be ascertained there are no recent New Zealand studies of how nurses operationalise nursing practice models over a variety of shifts and specialities. Possibly the reason for this lies in one participant's observation that *I don't know how they do it...but*

somehow it [the work] gets done [51]. When efficiency is the primary criteria getting the work done using available resources and without exposing the organisation to risks can be seen as a satisfactory situation and as such does not trigger an investigation of the methods used to achieve the desired goal.

When patient safety and effectiveness are the primary criteria executives and senior nurses need to know how the work gets done and if the way in which it is done provides the best care and the best use of resources possible. It is suggested that this can only be determined by executives and senior nurses who understand the nursing care delivery system, its interfaces with the organisational structure, and the rest of the patient care delivery system and the education and research components.

System

8 (13.11%) Participants answered in terms of the system but only two of these clearly identified a nursing care delivery system as a component of a larger system [39, 40].

1 (1.63%) participant felt there was a variety of nursing care delivery systems. [28]

The nursing care delivery system is integrated into each patient care delivery system [service] so they will be different in different places. I'm not wedded to a particular model or approach [15]

I think we will see a whole change in the system [NCDS]. The development of the nurse practitioner where the registered nurse will be moving out of the more traditional role and into taking more accountability and practising more technical skills [18]

We have a variety of nursing care delivery systems. Moving to a more multidisciplinary approach. Nurses are unable to drive through care and the patient process. They've never really been involved in decision making to enough extent [28]
I'm not sure there has been an enormous amount of change in the system from which there has been in the past. I sense there is still a tendency to look for hierarchy, rule or structure in an environment that doesn't want to provide that [30]

We need to look at the whole nursing care delivery system as an entity in itself and how it contributes to the whole multidisciplinary system. We have a variety of models at present and it's time we stood back and really looked closely at that [39]

You could argue that we're in the process of moving from what was probably a more traditional centralised system to a multidisciplinary system. The patient care delivery system is a total system and nursing is one part of it [40]

It's in the process of change. It's not fixed across the organisation. I'd like to see ways in which nursing can become more part of the organisation; ways in which this critical workforce can become more integrated [50]

I'm aware we have a variety, particularly in the wards, of ways we manage patients. At one extreme we have adapted the nursing care delivery system to meet the need of the patients we are seeing but in med/surg we have a traditional delivery and that sort of revolves around resources and ward configuration [52]

Our delivery system is very patient centred [58]

Remaining

I think sometimes it depends on who the particular nurses are on at the time and their way of working [6]

It's ad hoc. It's just as required. There are no models. It's very loosely based on say the nursing process [8]

We are a medical model. We don't have a model of nursing that we use. We talk a lot about case management but for that to work there needs to be major moves forward in medical systems and care delivery systems [23]

My knowledge would be general rather than specific. I don't know how work is allocated. Related to nurses' work practices, work requirements and skill mix [9]

We think we have a holistic approach [19]

Structured along the lines of clinical leadership. I am concerned that nurses have embraced an industrial model of task driven nursing practice [35]

It hasn't changed fundamentally but new things have been bought in. You know basic nursing things are not done so much as they were and there's new things like IV certificates [38]

It's about making the nurses' job just concentrate on nursing [49]

The priority has been getting a nursing infrastructure that will support professional development. Some sort of practical merging of primary nursing and case management concepts in the future [58]

Question 3a. Who chose this system?

In the main answers to this question were not illuminating

Did not answer the question

23 (37.70%) participants did not answer the question

Did not know

3 (4.91%) participants did not know who chose the system

Historical

9 (14.75%) participants felt that the system was historical/traditional [14, 17, 18, 22, 23, 24, 25, 46, 47]

Contract

4 (4.91%) participants believed the system derived from the [RHA] contract [7, 8, 9, 20]

Person who chose system

Only 5 (8.19%) participants indicated a person who chose the system:

I think nurses chose the system [16]

I think Florence Nightingale chose this system [25]

Very much directed by the previous [unit] Charge Nurse [28]

System was chosen by [X] [35]

Some point in the 1990s when an enthusiast returned from doing her diploma and introduced primary nursing [44]

Others referred to a particular nursing practice/care delivery model e. g. *Well, patient assignment has been with us I think, forever [17]*

Not specific

A number of answers were not specific:

It's evolved [5]

A good question [32]

Definitely a medical model [51]

Others indicated that the system had evolved of its own accord:

I'm not sure there was any structured thinking about what system there should be in terms of nursing care delivery [6]

No one actively chose a system [27]

Question 3b. What are the advantages and disadvantages of this system?

Answers to this question give insight into the many faceted nature of the NCDS. Some of these facets are workforce, leadership, generalist versus specialist experience, retention and turnover, culture, workload and patient acuity, skill mix, hours of work, building structure, RHA contracts, documentation and the physical nature of nursing.

2 (3.27%) participants' replies had the potential to identify the CHE and these are omitted.

Advantages**Patients**

Only 1 (1.63%) answered in term of direct advantages for patients

The advantage is that it focuses very strongly on patient care [23]

Staff

5 (8.19%) participants answered in terms of advantages for staff:

I'm sure there is advantages for professionals in the system [16]

The advantage is that the nurse feels she/he has autonomy over their practice [17]

The advantage of a team approach is that you get an opportunity, and it's not seen as a failure, to say I've got this patient... anyone got an idea? [27]

We can give really brilliant general experience [31]

When you're planning it as a team you are actually taking into account all the people that are going to contribute to it [39]

Other

The advantage is that it is a stable workforce [11]

We don't suffer a lot from retention problems [15]

You have some pockets of nurses saying come on let's be leaders. Let's move it [18]

We've got a large part time workforce and they stay [59]

Disadvantages

Patients

3 (4.91%) participants identified patient related disadvantages:

The key disadvantage is to patients. In the new system it won't be like that. One of the downsides of a service-based structure is that specialisation nurses are scared to move [16]

It's fragmented. The patients don't get to see the same person every day, or even every second day [25]

The disadvantage of the system was that there was a lot of ownership of patients [45]

Staff

8 (13.11%) participants identified staff related disadvantages

The thing that really upsets the skill mix per shift is when you suddenly get a higher acuity, or 2 or 3, and your skilled nurses are directed there [10]

Physically it's very demanding. There are some things that are changing continually now [20]

The disadvantage is that the teams are never big enough and there is an imbalance between senior and experienced nurses and junior nurses [27]

It's hard to perceive any real advantages... It's so very dependent on what else is going [44]

There's not enough time and not enough people that's the biggest disadvantage [38]

We found casual nurses were just given a workload and told to get on with it [48]

With a very high workload separate teams start to break down. It's difficult to provide cover [57]

We all lost our jobs sort of, and then there's one constant change after another and the wards are just so stressed [58]

Workforce

8 (13.11%) participants gave workforce related answers:

The disadvantage is that it is a maturing conservative workforce [11]

It's an ongoing balancing act all the time and much of it is driven by trying to get the right mix and balance [15]

The disadvantages are when that nurse does not have quite the experience she/he needs and the workloads we have at the moment is not able to access other peoples experiences except at a [X] weekly team meeting [17]

The disadvantage is the lack of staff numbers. We haven't got a lot of experienced nurses we just can't seem to retain them [36]

There's a belief by registered nurses and doctors and everyone else that a nurse is a nurse is a nurse [42]

Big turnover with beginning practitioners do their 18 months then go overseas. We've got a mature workforce and they get tired quicker [59]

We have a very high turnover and the bulk of that comes from nurses working 2-3 years then go. A lot do return [X]

We have a very large casual and part time workforce [X]

Human Resource

7 (11.47%) participants gave human resource related answers:

Countered by low turnover and difficulties embedded in a culture with medical dominance [2]

Little incentive to change. There's an issue of covering [leave]. Lack of accountability. Unable to get a view of what's actually happening [3]

They don't care what it costs [4]

The fears of nurses in terms of change. Nursing groups that have difficulty looking at change and want to stick to the old ways of practice or protect the sacred cows [18]

You've got this antagonism between the wards and sort of competition and then on top of that you've got it between the different shifts [37]

I think you've always got a problem when you've got people reporting to more than one other professional [40]

I don't think linking remuneration to the nursing practice framework [clinical ladders/career path] is useful [50]

Contracts

5 (8.19%) participants made comments related to the contracting process:

there's various ways of interpreting what that [the contract] means [7]

They only get a contract for [X] months [19]

The contracts for the RHA fragment services. One contract can impinge on others. Unanticipated emergencies cause problems because staffing is only available for contract and when expertise is limited its not easy to contract others in an emergency [24]

We went through a system of community development which is a lot about working with people and responding to their needs. Then suddenly its about meeting contracts that the RHA has set that are quite prescriptive and you've got to meet [X] So it's a whole new philosophy that a lot struggle with in terms of what we would really like. But our job is to deliver a range of services within a set [contract] scope [X]

Night

5 (8.19%) answers related to night duty:

We've always maintained a strong after hours [night] management system by linking these people into the service is really quite difficult. It's dependent upon people really being aware of what in fact are the priorities of the strategic directions and not just maintaining the status quo [26]

They say it has got visions but we never get there because we are ground down by the work , the constant change. It's not safe for staff to be left by themselves. Meal breaks and education are issues on night duty [X]

The library closes at 8pm. It's really hard and people don't let you know what changes are and you can't keep up. The managers are off home at 4.30 and they don't make provision for the other 16 hours [X]

And one reason [we have gone back to tasks] is because of the huge change in how fast the hospital moves now. There is no ward that is never not full. It's still very much the case that people don't think anything happens at night There is little recognition that people admitted after 8pm are acutely ill [X]

The over riding problem is the night/day relationship and communication and joint problem solving are not helped by the use of up to three casuals on the wards some days and inadequate documentation. Had three titles for fundamentally the same job –and it's about to change again [X].

Fragmentation

4 (6.55%) participants commented on fragmentation of the organisation and /or care:

The biggest disadvantage is the fragmentation of services. [8]

They run like discrete little units. Nursing care here is really reactive to doctors' orders [13]

If you could get some integrated family care instead of it all being fragmented [19]

It's become very fragmented now [33]

Geography/structure

3 (4.91%) participants commented on geography/structure:

There are also issues relating to geography [8]

Some of our units are really quite small [31]

When you've got the traditional 4 bed units it sort of dictates the way you deliver the system [52]

Remaining

Provides potential for change. Better integration of hospital and community [2]

The senior clinical staff all want their 'bits' back [12]

One of the traps I fell into was with [X] development project. They kept saying we will do nursing next but I now know you can't do that. It has to be part of it [14]

The concern is how we blend the old and the new [23]

It's become very a lot of bureaucratic processes, very hierarchical. Nurses don't know about where all the other parts of the sector are at, funding and support and political [30]

Whether we like it or not we have been indoctrinated into the medical model developed huge infrastructures and systems to support that [34]

One of the reasons it's difficult to articulate nursing is that it's changing [41]

If you don't manage your unit managers and get them to change things, and buy into things they will stop it, no matter how hard you try. [42]

I think there is a culture in nursing that is very black and white [50]

My job hasn't changed all that much. Basically I practice crisis management-the rest of it is trying to make sure the skill mix is OK [54]

We're moving to [X] system. What I want to know if it's so great why aren't more hospitals doing it because if it was so successful everybody would be doing it [60]

We've been unfortunate because we have suffered so many changes in such a short period of time [61]

As O'Grady (1993, p8) points out "nursing is strongly defined by its relationship to the patient rather than by what it does". With the patient so central to nursing practice it was at first surprising to the researcher that only 4 (6.55%) participants commented on the advantages and disadvantages of either the NCDS or the nursing practice /care delivery model for patients. On reflection the emphasis given to the particular nursing practice/care delivery models suggests that it is nurses and their work that is the focus of executives and senior nurses not the patient and their needs.

Many factors influence the care delivery process. Participants' answers demonstrate influence of the contracting process, the need to provide 24 hour coverage and demographic and geographic constraints.

Question 3c. When was this system put in place?

As with all answers to the questions about the date a system or structure was put in place the answer is contingent upon the participant's definition of the structure or system.

Did not answer the question

17 (27.86%) participants did not answer the question.

Period of time

11 (18.03%) participants gave a period of time but 3 answers referred to structural change:

The system, if we have got this system, I think has probably been in place for 2 years

Well probably about 200 years ago [10]

2 plus years. [11]

We've had structural changes in the last 2 years but query as to what changes to nursing care delivery in that time [13]

This area has been restructured twice since 199X [15]

Was it sort of in the 70s? [16]

Its changed over the last 10 years [20]

No one was really interested in the nursing care delivery system until about the last 18 months [26]

The system [structure] was chosen by X before I got here [35]

Some point in the 1990s when an enthusiast returned from doing her diploma and introduced primary nursing [44]

I guess I need to go back to the 1960s. Current system has probably been in place a couple of years [46]

Changed the last couple of years [structure] [54]

Historical/traditional

8 (13.11 %) participants agreed that the system was traditional or historical [7, 8, 18, 22, 23, 24, 25, 34, 48, 58]. 2 (3.27%) of these participants [7 & 8] felt the

foundations were traditional but these were now in tension with the requirements of the RHA contract.

No identifiable point

6 (9.83%) participants felt that there was not an identifiable point at which the system began.

I'm not sure there was a specific event or specific time a decision was made.

I imagine in the last few years its just been. It's evolved into how that's been [6]

I would say it's evolved without anyone feeling they have a choice in that regard [27]

It's evolved [30]

In my experience nothing ever really changes [21]

The basic system of nursing care hasn't changed fundamentally but so many new things have been bought in [38]

Nothing's changed [42]

At time of change in mode of delivery

2 (3.27%) participants linked commencement to a change in the mode of nursing care delivery:

When was primary nursing in vogue? [41]

Years and years ago we were all primary nursing now primary nursing has gone [36]

Medical influence

2 (3.27%) participants commented on medical influence:

Pretty influenced by medical people working in the Charge Nurse's area [28]

It was a medically based service structure [40]

Remaining

About 20 years ago. I've just introduced this new model this year [12]

At the stage where we have just re-advertised the [X] positions with a view to getting people into key positions [2]

Question 3d. How is this system evaluated?

Some answers were not relevant e.g. *the problem is even getting nurses time to read the notes.*

4 (6.55%) participants' answers related to performance appraisal [5, 29, 32, 60].

2 (3.27%) participants made reference to specific audits (documentation and IV). [17, 21] and 1 (1.63%) to peer review [3].

1 participant stated there was *no review* [25]

Non committal

7 (11.47%) participants gave non committal answers:

It's an interesting phenomena about that. I expect [X] might get round to doing that in due course [2]

I think in general most things get evaluated formally or informally and some things definitely get formally evaluated [9]

Well it's probably something we, we're looking at through the leading edge, you know 2000 project in terms of this... I'd say we haven't formally evaluated in the past [10]

There's probably no major all encompassing evaluation. There's been evaluation in individual areas. We're looking at the whole delivery of nursing care and making recommendations how things might be done differently [16]

I think health care has to re-evaluate how nursing is practising at the moment [35]

I think it's time we stood back and looked closely at that [39]

For each professional group you've got to respect their particular needs. We need to keep evaluation alive and well [40]

Work done or being done

6 (9.83%) participants commented on work done or being done:

A number of studies have looked at activity analysis-in parts. Tracked patient processes, patient flow [Other regular activities listed but not nursing specific] [14]

Now there's a constant ongoing review [of the service, including nursing]. *We know structurally the whole system will change with the redesign project* [20]

We're looking to see if the nursing acuity system matches the reality on a practical basis [sees NCDS as part of PCDS so no separate evaluation] [15]

Using the new information system which is focussed on giving good information about what nurses do, where they do it, and that sort of thing [50]

There was a huge study. My information is that it showed more resources were needed and never got off the ground [51]

We've now got all the promised policies and standards and they are up and running [59]

Answers indicated that participants did not consider planned, systematic and ongoing evaluation of the NCDS [however this is interpreted] a priority. Participants did not appear to clearly distinguish between reviewing, auditing, monitoring and evaluation.

Not evaluated

7 (11.47%) participants believed it was not evaluated or evaluated against the contract:

Bigger all at the clinical level. At the contracting level all the energy is being put in there [31]

Only evaluated against the contract [33]

The system has never been evaluated [44]

They've never sat down to say 'What are you actually doing?' [45]

Not nursing. But nurses have been evaluated. But the structure of nursing, the processes involved with nursing, no [8]

We haven't put in the system yet so we haven't got an evaluation plan. Some is being evaluated by the RHA [7]

There's not a regular system for evaluating nursing care. It's ad hoc, as necessary [23]

Reviews/audits

5 (8.19%) participants mentioned audits or reviews

We had an outside expert come and look at [review] our system [41]

We had a messy review... and we still have the scars [42]

We're just starting to set up some formal audits of care plans, patient satisfaction surveys [46]

There's been a major review [48]

The auditor is auditing everybody. He asks questions like "why is there six of you"? ... "Why don't you just get at team of relievers" [37]

Problems identified

6 (9.83%) participants identified problems:

Nurses always do informal checking [26]

It's just being evaluated basically on a crisis point-but again I make the point that evaluation is really about how we use resources...and there is a big problem with nurses not wanting to see that wider issue [27]

It's all financially driven [43] and Evaluation is financially based [22]

Each year is evaluated separately so you have no idea if you are dealing with the same people [patients] or not [19]

As for the nurses I set objectives but you don't actually know if it's being effective or not [19]

Remaining

They're fairly traditional in the way they do things and they need to be a bit more critical [3]

That's what most nurses would consider the usual way of doing things so they just fit in without questioning if it is best or not [6]

We're evaluating all the resource issues but I refuse to evaluate practice issues until we are a little further down the track. But we need to. We need to do a piece of research and see what happened. They leaped to evaluate it very quickly because it [new structure] created a lot of resource issues [12]

We've come a fair way in shaking the tree and seeing what falls out [13]

The answers of 4 participants offer some insight into the reasons for the lack of planned, systematic and ongoing evaluation.

No-one seems to know if recent [last 2 years] structural changes to nursing have resulted in changes in nursing delivery [X]

Structural change was not linked to nursing care delivery.

As moving to a new system beginning to recognise that a great deal is not known about how nurses actually work. [X].

A new system was put in place without being preceded by evaluation of the old.

My attitude is that it's really up to the nurses to decide what overall philosophy they want to adopt and how they want to go about things [X]

This CEO participant had not delegated authority and responsibility for the nursing service to a nurse executive.

No-one's spoken to me. No, that's not right one consultant did speak to me [X]

This nurse was the most senior staff member on duty at night in a busy hospital.

All participants were senior staff members. It could be expected that all would have a significant role to play in the ongoing evaluation of the care delivery. That they did not supports the view that, at the time of the interviews, nurses and executives did not see the need to work together to evaluate the effectiveness of care delivery. Nor do they seem to have perceived a need to establish a baseline effectiveness of present systems before introducing changes.

Question 3e. What are the resource implications of implementing this particular system?

Patients

5 (8.19%) participants made patient related comments

We must decrease the length of stay. We've have no choice in that. Any health care system in the world stands or falls on how well they can deliver for reducing revenue [4]

Because of the more acute nature of the clientele... you need the expertise of the registered nurse to make assessments and decisions [24]

I think because patient length of stay is decreasing so rapidly and because acuity and the needs of the patients they are getting in the system are changing so rapidly

everything is being compacted into 2-3 days. Compounded by increasing technologies [34]

On the whole patients are a lot sicker than they used to be [36]

The issue for us at the moment is how are we going to reduce our average length of stay [50]

Information

4 (6.55%) participants made reference to information

One of the things we need here in New Zealand is a reliable dependency system [17]

Lots of computer work and paper work coming in [21]

The power user of information systems is going to be a major influence in any unit.

There's an issue of the availability of highly skilled people for advice and that goes back to care delivery design [57]

I can't get them to see if it takes 20 minutes to enter the data and you have 4 patients that's one and a half hours they are not available to be with patients [59]

Information is a primary resource for executives and health care professionals. In a CHE where some health professional staff members may be absent from work for days or weeks at a time and much of the information is confidential the collection, management and transfer of patient, organisation and profession related information poses a significant challenge. That only 7 (11.47%) participants made a comment directly related to information suggests that the information was not seem as an integral part of the care delivery.

Finance

6 (9.83%) participants referred to financial matters:

Part of it is economic [3]

I believe a lot of what they are introducing is going to cost more. They have fragment services greatly and are being encouraged by the RHA to be task focused [8]

Well it's really the only one we can afford. We can't afford primary nursing any more. We just don't have enough people. Historically we have a skill mix problem...

And so we are talking lead nurse and all that business and that increases resources [10]

Resource implications are actually important as one of the ways to get nursing staff to stay here is to pay them more. You're paying a premium for certain skills but you have to lose it somewhere else and that affects service provision. [31]

It's a sad fact that we have to use more [financial] resources on same or fewer people because they [nurses] want to be territorial [X]

There's absolutely no need for a nurse with a masters degree to be cleaning wards, making beds or delivering meals. We've got over priced people making us totally uncompetitive. [X]

The resource implications for me are that we can't actually do anything different without putting in huge [financial] resources [42]

Plant and equipment

Only 2 (3.27%) participants commented on plant or equipment

Beds decreased in response to purchase of less cases [2]

Resource implications to do with equipment and physical layout [40]

The two most capital intensive items of plant and equipment in the CHE context were buildings and medical technology. Both have significant resource implications terms of capital expenditure, ongoing maintenance and staffing. Physical layout and the nursing care delivery system are interrelated. Building structures and the placement within the building of some medical technology influence nursing care delivery, as does the presence or absence of electronic monitoring and call systems.

At the time of the interviews some CHEs were considering a move to patient focused or patient centred care. With the patient as the focus of care building layout would where possible, be changed to facilitate care delivery. So little known about the way nurses are working that the full impact of building layout and medical and communication technologies, particularly after hours, is yet to be fully explored. Because nursing is not generally associated with expensive equipment and the

adaptability of nurses assists them to cope in a variety of environments, plant and equipment may not be readily seen to be a critical resource.

Staff

Safety

Only 4 (6.55%) participants raised safety issues

Well there's always a minimum number isn't there in a lot of areas because of safety [6]

You have to consider the safety of the nurses [25]

They've got to be spot on after hours because resources are less and it takes longer to get assistance so assessment and planning skills have to be really good [51] and [39]

Safety of patients and staff is an important consideration in any public health care organisation. In terms of the patient and nursing care delivery systems safety is of paramount importance. All health professionals have a duty to give safe care. CEOs have responsibility for ensuring a safe environment for patients and staff. The NCDS should ensure the provision of safe, effective nursing care to patients. Staff is the major component of any nursing care delivery systems. Adequate and appropriate staffing is therefore central to the effective and efficient delivery of nursing care.

19 (31.14 %) participants made staff related comments:

Workforce

16 (26.22%) participants made workforce related comments:

People are likely to leave within 5-10 years of each other [aging workforce] [2]

I'm told the funding is there if I need to call extra people.... That's fine but where do I find them? Where's the young ones coming through? [5]

The demands and requirements within the service [nursing] the dynamics of it, the technology and the changing clinical practice, the huge requirement to manage public expectation is driving us to a more highly sophisticated nursing workforce

rather than a less skilled nursing workforce. We are looking at some of the resource implications because nursing is [\$X] over budget [15]

Resource implications are in terms of skills and nurses maintaining their skills [19]

We're expecting all our general nurses to be specialists [20]

Problem with expert nurses taken out to cover in other areas where they're being overwhelmed and not in their area of expertise anyway [26]

One of the significant issues within this organisation is the lack of skill, education and professional maturity of the nursing workforce [28]

Difficulties employing new grads in specialist areas [29]

We have a problem getting staff to study days [37]

An issue for us is getting skilled registered staff [41]

Biggest problem is attracting new grads [43]

Expertise is something that experience gives you to some degree [27]

It's difficult to break the mould when people [staff] have become institutionalised [30]

We're short of nurses particularly nurses with experience. There's resource implications with getting enough trainers. [Nurses] need to be more up to date, better trained, more refreshed all the time on practice [40]

There are a number of nurses [registered] who like a low level of responsibility and who do not want to take more responsibility [52]

Need experienced registered nurses on every unit, especially at night [55]

Casual staff

3 (4.91%) participants commented on the use of casual staff

Once again it gets down to personnel. Use lots of casuals [21]

I try to push for permanent [as opposed to casual] staff. I think it's safer and more practical [32]

Recently we have been filling the gaps with casual staff which is a worry [54]

While these participants recognised some important staff resource issues they did not follow through to discuss the implications of these, for example the implications of an aging workforce, the expectation that every nurse be a specialist, or 'filling the

gaps' with casual staff. The important interface with the education sector as the provider of new graduates does not appear to be appreciated. The source of experienced nurse/s who join the CHE and destination of nurses who leave the CHE is not mentioned.

Future

4 (6.55%) participants commented on future plans

We have a sort of clearly mapped out path in terms of people resource implications and there are pressures on the organisation in terms of resources. In each ward you need a wide range of skills [9]

In future we will need to look at the whole concept of multi and interdisciplinary teams... Looking at multi-skilling and cross-skilling [14]

The next step being looked at here is multi-skilling. We've got an aging workforce. The question is how can you get the most out of any particular resource delivering your system? This means you are constantly challenged in terms of innovative ways of doing this [18]

I believe you employ staff for their day to day abilities, for their operational abilities and their ability to deliver safe care but also to think further than that. You want them to think the future and see how it's going to impact on their practice [39]

Geography

3 (4.91%) participants commented on the implications of geography

Part of it is geographic [3]

Geography has a bit to do with what happened as well [16]

The physical component [geography] has to be considered [33]

Changing roles

2 (2.37%) participants commented on changing roles for nurses

Nurses are trying to take over or assume some of the responsibilities that were medical and the reason I assume is that nurses want to earn money and so perceive that by getting further skills and logically degree skills are the ones people gather to make themselves more valuable and more attractive packages [22]

Who is going to take on the nursing work off nurses if you're going to ask them to pick up medical work? [48]

Remaining

We're just implementing new acuity system... to match nurses with demand I don't believe you can always measure or quantify what nursing is all about [6]

The resource implications of primary nursing were considerable and I don't know that we made the best use of nurses' time talent or skills [16]

The resource implications are huge. I think we waste a lot of health dollars protecting what we have always done [23]

With new grads having to develop them. We are having increasing difficulties employing nurses [31]

Most of the nurses have been born and brought up here. The days are gone when you can visit a little old person because you know they are lonely [38]

Ideally we would like a generalist but I appreciate that's not what a lot of people want for themselves [52]

The thing that saddens me the most is the lack of understanding that if you invest in staff you get returns in the long run [53]

I find sometimes you give nurse a specialty, she learns it all then hangs on to it and won't share it [58]

The nature of the beast has changed and we have become a heap more technical [61]

Answered question in term of a system

3 (4.91%) answered the question in terms of a system:

We get major pre-occupation with what they [nurses] can do and can't do and we're right back into divvying up nurses work into tasks. The resource implications of implementing this particular system have never been evaluated [44]

People have changed the system of doing things from desperation. Like this is not working for us anymore. How are we going to survive? [47]

The amount of double work I've seen people doing under this system... I've observed that they spend an awful lot of time doing non nurse things [60]

Answered question in terms of a model

1 (1.63%) participant answered in terms of a model but seemed to be indicating a system:

The new model turned out to have problems with continuity. They felt they could staff this well enough to prevent this [lack of continuity] but it didn't happen and it turned to custard [12]

The NCDS is a major subsystem of the PCDS. Its primary function is the delivery of safe, effective nursing care to patients within available resources. Participants' answers to the questions about the NCDS are time and context specific. Together they indicate a NCDS that is not well understood by senior staff members. They also indicate a lack of sophisticated resource management and evaluation skills.

Chapter themes (NCDS)

The following themes emerge from participants' answers to questions about the nursing care delivery system.

For the majority senior staff (55.73%) the nursing practice/care delivery model, not the system of care delivery was the primary frame of reference.

The nursing care delivery system is not well understood by senior staff.

The effect and influence of other systems on the nursing care delivery system was not well understood.

Systematic and ongoing evaluation of the nursing work was not a priority.

There was very little known about how nursing work was being done.

There was not a systematic and comprehensive approach to assessing resource implications.

NOTE

The typographical error in the numbering the questions (the number 4 is omitted) was not noticed by the researcher until some interviews had been completed. The questionnaire therefore not corrected. Although all participants were given a copy of the questions and used them as a prompt for answering the questions none commented on the error which no direct bearing on the content of interviews.

Chapter eight

Knowledge, skills and expertise

Introduction

Participants in this study are senior executives and nurses. Together they made significant decisions about nursing in the CHE. Information about the knowledge, skills and expertise required of each category of nurse and nurse's assistant is a prerequisite to informed decision making. Without this information major changes in the New Zealand nursing care delivery system for example, the de facto collapse of the enrolled nurse programme and the institution of caregivers¹ as the primary assistant to the registered nurse, are an outcome of market forces, not a planned strategy. When this process is accompanied by a dislocation of the education/practice relationship and inadequate research, workforce planning becomes short term or non-existent. In a geographically small, isolated country, with a mobile population, an internationally attractive workforce and unique social, geographic and economic environment national nursing workforce planning is essential.

National workforce planning was the responsibility of the Department of Health. It surveyed the nursing workforce annually and published the results biennially. In the last decade nurse workforce planning has become a public, local health agency responsibility. Nursing is however an international, not a local commodity and New Zealand follows the international trends in the availability of nurses. Peach in her (1999) commentary on nurse workforce planning in New Zealand noted serious impediments to the ongoing and appropriate supply of nurses:

Acquiring information about the national situation is extremely difficult. A 1998 survey undertaken by Nurse Executives of New Zealand (NENZ) to gather basic workforce information identified that most public health providers did not have

¹ In this thesis caregiver/s is used as a generic term. It encompasses all paid, unqualified assistants to registered nurses working in a CHE e.g. hospital aides, care assistants. At the time of the interviews care assistant was being used on occasions to distinguish hospital based from home based caregivers. Sometimes an employee 'caregiver' is distinguished from the family 'care giver'.

consistent databases or systems for gathering and analysing workforce issues within their own organisation, let alone contributing to a national or international picture. The Ministry of Education and individual schools of nursing decide the supply of new graduate nurses without input from employers (Peach, 1999, pp. 22-23). The market focus is narrow and crisis-oriented not strategic. Our ability to provide new services in the future will be impaired if a wider perspective is not taken (p. 24).

Effective strategic thinking and planning is grounded in a good understanding of the present situation and trends in nursing and health care. Internationally (including New Zealand²) the nursing workforce is aging and in some countries there is a decline in the number of enrolments into nursing (Warr, 1999). The employment of part time and casual staff gives greater flexibility in the employment of nurses. 10-12 hour shifts may give improved continuity of care, but the long-term effects of this and casualisation on the recruitment and retention of knowledgeable, skilled and experienced nurses is not known.

The Nurses Act 1977 and its amendments govern the work of qualified [registered and enrolled] nurses. Review of the Act has been in process for the last decade. The Act is outdated and lacks currency. Problems resulting from this include the:

- Enrolled nurse becoming a less attractive employee because of the requirement that a registered nurse supervise the work of an enrolled nurse.
- Lack of clarity about what constitutes supervision.
- Lack of clarity about the limits of a qualified nurse's responsibility for their practice when they do not control resources and patient input.
- Lack of clarity about the registered nurse's responsibility for caregivers' work.
- Limited opportunity for innovative, undergraduate education curricula.

² In 1998 the main workforce was female, aged between 25 and 54 with declining numbers in the 45-60 age group. 48.7% worked 40 hours, 38,7% worked part time and 11.3% worked casually (Peach, 1999, p.23)

Presumably the Nursing Council of New Zealand would not have commissioned the current KPMG strategic review of undergraduate nursing education if it did not have an expectation that the findings would result in changes to the Act.

The objective of that review is to:

Provide detailed recommendations to the Council on the preparation of nurses to meet health sector requirements in the year 2010. Specifically these recommendations will include:

- The skills competencies and knowledge required for registration;
- The standards and quality specifications that the Nursing Council should set for programmes for preparation of nurses in New Zealand, including consideration of the relationships between the undergraduate programme and the first year of practice and post graduate education; and
- The length of the programme (KPMG, 2000a, p.2).

As the final report is not yet available it would seem that an early change to the Act is unlikely.

In 1989 the Review of the Preparation and Employment of Nurses: National Action group (NAG) (Walton, 1989), with assistance from the Health Workforce Development Fund, published the results of a national study designed to describe the nature and organisation of nurses' practice within hospital settings. Unfortunately this study, the results of which invited further research, proved to be the last before the health reforms precluded further national research in this subject area.

The NAG research is important because it was carried out in the pre-health sector reform environment and the results were publicly available. As such it is one of the few public records of hospital nursing immediately prior to the 1990s health reforms. It is also one of the few pieces of publicly available research to canvas a wide variety of nursing related factors and yield quantitative data.

The NAG research questionnaire incorporating multi-choice and open ended questions was developed after review of job descriptions and performance appraisal

forms from general, psychopaedic³ and psychiatric hospitals around New Zealand and interviews with a small number of nurses ranging from enrolled nurses to principal nurses.

Three groups of participants were involved: These were:

Staff nurses who volunteered in response to an advertisement

Participants sought by Chief Nurses and,

Principal nurses randomly selected.

36 nurses or midwives were interviewed and 633 questionnaires were correctly completed—a response rate of 62% (Walton, 1989)

The results yielded information on public/private hospital employment [61% of staff nurses were employed in the public sector.] The results included information about

- Gender [92.6% were female]
- Type of registration and year of registration.
- Years of experience [3-5 years 10.3%, 10-20 years 40.1% , more than 20years 12.9%]
- Hours of work per week[32-39 17.5%, 40 or more 61.9%]
- Shifts worked and clinical area of practice [categorised into 15 categories].
- Post basic education⁴ [7 nurse had degrees, 106 registered nurses and 39 enrolled nurse had completed specialist clinical courses] (Walton, 1989)

Systems of nursing care were identified as primary nursing (23.5%); team nursing (26.7%); patient allocation (42.3%) and task allocation (7.5%). Each system of care was defined and respondents were asked to pick which one best described the main organisation of their work.

Primary nursing means one nurse is chiefly responsible for a number of clients throughout their *entire* hospital stay. Associate nurses work with primary nurses and generally follow a plan of care set out by the primary nurse.... In team

³ A New Zealand term. Hospitals for people with an intellectual disability.

⁴ This research predates the granting of degrees by polytechnics and community colleges.

nursing a group of nurses takes on the care of a group of clients.... In patient allocation or patient assignment a senior nurse, often the charge nurse, decides which nurse will care for which patients/clients on any one day... In task allocation the ward work is divided up by the senior nurse on duty and nurses are assigned jobs to do on the day. (Walton, 1989 p.14)

Other questions included questions related to drug administration and documentation. Information about teaching functions (teaching patients and relatives) management and administration ('acting up' to run a ward or unit in the absence of more senior staff), both important activities often ignored by researchers, was obtained.

Information on work content yielded 16 important elements of work content namely: Care, safety, hygiene/comfort, education, quality of life, promoting independence, communication, technical, nurse-patient relationship, assessment, helping, management, advocacy, liaison with other staff, documentation and environment and percentage comparisons were made between the work of the registered nurse and the enrolled nurse (Walton, 1989).

Participants were asked what they understood by the term 'basic nursing care'. They identified ten codes. These are meeting needs, comfort, technical, psychosocial, helping with daily activities, safety, education, care, health and unskilled work. (Walton, 1989).

Work which is not 'basic nursing care' was identified as housekeeping, high tech care (technical skills and expertise which involves a high degree of knowledge and skill), clerical duties, restocking (checking and ordering and replacement of supplies) meals (serving meals, collecting and washing dishes) organising other staff, voluntary extras (shopping, washing clothes), documentation (including nursing records and plans), relatives (the care of), delegated medical care (for example ECGs and venepuncture), attending to social/spiritual/sexual/psychological needs, teaching

(of clients, staff and relatives), porter duties, and plans/meetings (writing nursing care plans and attending meetings). (Walton, 1989).

Whether this care was regarded as work that should be carried out by someone other than a nurse or non basic (specialised) nursing work was not made explicit. A few nurses believed that “all the nursing activities they carry out in a usual day are basic nursing care” (Walton, 1989, p. 31).

Participants’ views on work climate and career aspirations were also canvassed. An examination of organisational, attitudinal or other changes which would enable nurses to perform better indicated that education, especially inservice education, was the most desired change. Results also indicated nurses’ dissatisfaction with attitudes of senior staff and a desire for improved communications.

The NAG research, like the greater part of recent, publicly documented New Zealand nursing research is opinion based. Carried out at a time when nurses had de facto control of nursing work it demonstrates an understanding of the complexity of nursing practice while at the same time indicating a separatist focus and an expectation that nurses would continue to control nursing work.

However nurses no longer had full control over nursing and what control did remain was being weakened. This was evidenced by the establishment in 1989 of a Joint Working Party comprising representatives of Area Health Board General Managers (CEOs), the State Services Commission, NZ Nurses’ Association, the New Zealand Public Health Association and the Department of Health to look at nurses’ terms and conditions of employment and career options. The examination of employment and work conditions (including career paths) divorced from the education, research and practice components of nursing signalled the beginning of the fragmented, resource driven and/or opinion based approach that has come to dominate research about nurses and nursing practice for the next decade.

The NAG research report clearly indicated three important issues that required New Zealand specific solutions. The first of these is the specialist generalist⁵ nurse, the second and related issue is advanced nursing practice and the third is the assistant to the registered nurse.

The medical career path is well established and, in spite of some challenges by management which controls access to clinical experience, well entrenched and under medical control. Nurses recognising the advantage to be gained from stable and nationally recognised career signposts attempted to develop their own. The New Zealand Nurses Organisation (NZNO) [previously the New Zealand Nurses' Association) developed a system whereby appropriately qualified nurses can apply to NZNO to be recognised as nurse consultants, nurse specialists or nurse clinicians. The College of Nurses followed a similar process awarding successful applicants a College fellowship. Neither system has achieved universal recognition.

In addition to the confusion caused by having different systems for the NZNO and the College of Nurses, the situation is aggravated by the award of a bachelor degree to nurses completing a 3 year pre-registration polytechnic programme and nurses completing a 3year post registration university degree. To further complicate the situation, students completing the three year pre registration course prior to polytechnics awarding degrees, students completing, the one year Post Graduate School (later SANS) course, students completing the 2 year post registration course at Massey University and students completing some post graduate university courses were all awarded a diploma. At the same time certificates were awarded by CHEs, polytechnics and universities for courses lasting from a weekend to a year.

When education mix is accompanied by a locally, but not necessarily nationally, recognised job descriptions and titles and the system of education controlled by non nurses and the nurses' disciplinary body (the Nursing Council of New Zealand) it is

⁵ In the absence of term to designate generalist nursing as a nursing specialty this term was coined by the researcher and colleagues and has been used by the researcher for more than a decade.

not surprising that today there is little agreement with regard to the specialist generalist, advanced nursing practice and caregiver issues. Recently the related issue of nurse prescribing has served to highlight the need for these issues to be resolved and added a new dimension to debates on post graduate nursing practice.

Advanced nursing practice

If the nurse specialist/nurse prescriber role does echo the medical specialist role who is to be the specialist or specialist generalist in nursing? What constitutes advanced nursing practice?

That some nurses are uncertain about the nature of advanced nursing practice can be seen from the titles of some nursing journal articles:

“Will the nurse practitioner [nurse specialist] be a mini doctor or a maxi nurse?” (Castledine, 1995, p. 938); “Is advanced nursing practice a role or a concept?” (Murray & Thomas, 1996, p.4); “With nurse practitioners who needs house officers?” (Dowling, Barrett & West, 1995, p.309); “What good are advanced practitioners if nobody at the top knows their value?” (Simpson, 1997, p.91) and “A specialist nurse: an identified professional role or a personal agenda?” (Hunt, 1999, p. 704).

In the USA advanced practice nurses have “been a diverse group in terms of titles, education, credentials and roles” (Berger et.al.1995 p. 251). Roles have included nurse anaesthetists, nurse practitioner and clinical nurse specialist roles (Fitzgerald & Wood, 1997). Advanced practice nursing is seen as being different from medicine (Smith, 1995) and while it may have some similarities with the physician role it is much wider its focus encompassing disease prevention, education and health care (Fitzpatrick, 1998).

In the United Kingdom the advanced nursing practice debate has occurred within a timeframe similar to that in New Zealand and the role is currently being developed. As in New Zealand it is a complex process. A major factor in this process is identified by Woods (1999) who undertook a longitudinal study [2 year] of a small

number of graduates from a master's degree programme who became Advanced Practice Nurses (APNs). Woods argues strongly that the:

Multiple interpretations of the concept of advanced practice which are socially constructed by dominant stakeholders within the organization, shape both the conditions and the context for role transition. In other words it was found the way in which APNs reconstructed their roles and practice was primarily a 'contingent' process and accounted for why individual APNs developed their practice and role in different ways (Woods, 1999 p. 122)

Wood's conclusions seem to be supported by Litchfield's (1998, p.16) observation that:

Nursing is directed more by a services/system/professionals orientation in health care than by a health need orientation. Advancement in nursing practice is towards medical practice but subsumed within health system management. Nurses' [registered] work is shaped by the effectiveness and efficiency of the service and is increasingly removed from direct personal care that is responsive to the immediate unique client need.

If major changes in nursing practice are primarily reactive and driven by factors external to nursing, for example resource allocations which limit the employment of registered nurses, organisational structures which fragment nursing care, government enthusiasms for such things as nurse prescribing and little longitudinal and quantitative nursing research, the future of nursing in New Zealand would seem to lie in hands other than nursing. If this the case, the current debate among nurses about titles, scope of and qualifications for advanced practice in public sector health agencies may be ineffectual for as Christensen (1999, p.10) observed "it is a characteristic of advanced practice that the nurse, responsible to the patient/client within a purposive relationship, is fully responsible and accountable for every aspect of that practice". Independent nursing practice with registered nurses in that practice having prescribing rights would currently appear to offer the best opportunity for nurses wishing to undertake an advanced nursing practice role.

Findings (Knowledge, skills and expertise)

Answers to question 5, 6 and 7 are time and location specific. As in other chapters no distinction is made between the answers given by executives and the answers given by nurses. It is the combined executives and nurses knowledge and understanding of the knowledge, skills and expertise that is required for optimum nursing care delivery.

Question 5. What knowledge, skills and expertise do you think registered nurses require to best work in the present system?

Did not answer the question

2 (3.27%) participants did not answer the question.

1 (1.63%) participant gave a list of skills that are required to work in a particular area [25]

The following categories are indicative only. Where a participant's intent is not clear comments are categorised under 'other'. For example *must be up to date* and *practical skills* are likely to refer to clinical nursing but this is not specified or made clear by the context of these statements.

Patient/client

3 (4.91%) participants answers related to the patients:

Flexibility in terms of working in the hospital or community setting. RNs who can take on significantly more important roles in patients' lives [3]

Nurses have to shift their focus 10 degrees. They need to be focused on empowering the patient. They need to be patient focused; support focused. Nurses are in that groove any way that's why I say it's just a matter of repositioning ten degrees [4]

To do their home work. More client focused. To know how the support systems work and function and how the system functions [48]

This question specifically refers to the knowledge, skill and expertise of nurses and caregivers so a focus on patients was not expected.

Personal qualities

22 (36.06 %) participants answered in terms of personal qualities

Adaptable

3 (4.91%) felt registered nurses needed to be flexible/adaptable.

Able to adapt quickly [31]

Flexible, adaptable [42]

Flexible. Adaptable to change. Non traditionalists and able to cope with change [54]

Work autonomously

3 (4.91%) participants believed that registered nurses should be able to work autonomously:

Able to practise autonomously [23]

Work autonomously [45]

Able to work autonomously and independently [51]

Able to make judgements

2 (3.27%) participants felt registered nurses should be able to make judgements:

A learning nurse. Not task driven. Educated and able to think. Able to exercise judgement [35]

Able to work as a member of a team. Able to function individually. Make professional judgements [40]

Other

To be able to look at what they are doing critically [3]

An ability to say no. The ability to handle difficult situations [8]

Confident in the assessment area [10]

A commitment to involve the patient in care and making decisions [14]

It starts with being competent and willing to maintain that competence. Willing to have external review and audit or peer review; keen to improve and develop themselves in a dynamic sector [15]

Attitude and aptitude.... Relevant to where they are heading [22]

Initiative [24]

Able to see ahead and get the big picture. Professional and interpersonal judgement [26]

Able to speak well [27]

Have a good understanding of how to assert themselves, communicate and question, think critically about a situation, problem solve and critically read the literature [28]

Has perception. Able to set priorities [32]

Accepts accountability for safe practice [44]

Comfortable with themselves. Able to say 'I don't know'. Able to tolerate stress
Know when they need help [47]

Aware of the environment they are working in and immediate professional issues [50]

Willing to go and do further education and inservice training [58]

Knowledge skills and expertise

Clinical

18 (29.50%) participants commented on clinical skills and expertise. 1(1.63%) participant felt *broad clinical knowledge* [30] was important.

Assessment

Good assessment skills are the key thing [8]

Really good patient assessment skill [13]

Good assessment skills [14]

Assessment skills at the highest level [18]

Assessment skills [31] & [51]

Very astute assessment skill [34]

Clinical assessment [55]

Skills/competence

Demonstrated [clinical] skills [12]

We need nurses who are clinically competent [14]

Clinical skills at a high level [32]

Lots more clinical skills [46]

Clinical skills [55]

Specific clinical skills

Good care planning skills and an ability to evaluate patient's progress against these [14]

Diagnostic skills. Able to plan and do treatments [18]

Observation expertise [27]

They need to be able to recognise there is a [clinical] problem [32]

They need to be able to pick up very quickly what the needs of individual are going to be [34]

Much better at discharge planning. Have a really good understanding of the patient's needs [48]

Management

15 (24.59%) participants commented on the management skills and expertise. 1 (1.63%) participant commented on the need for *good management knowledge* [30]

General

Management expertise [1]

Competence in delegating [14]

Time management skills [31] & [36] & [51]

Problem solving ability [49]

Leadership qualities [50]

Planning skills [51]

Decision making

Leadership and team building skills [9]

Confidence in decision making [10]

Good decision making skills [20]

Able to make decisions [23]

Able to make decisions and act on them [32]

Other

They have to be able to manage a case load. They have to be able to make decisions autonomously and then at the various levels of care they are responsible for [2]

Independent nurse practitioners will need ability to strategic plan and manage a contract [34]

Technical

7 (11.47%) participants noted a need for technical skills and expertise.

1 (1.63%) participant noted a need for *knowledge of new technology and new systems* [1].

More technological skills [8]

We need nurses who are technically competent [14] & *Technically competent* [48]

Comfortable with technology [20]

Technical skills [46] & [26]

Better technical skills [42]

People

6 (9.83%) participants emphasised the need for people skills:

Good interpersonal skills [9] & [30]

Skilled people managers [26]

Able to relate to people [36]

Other stuff [people skills] [46]

Able to establish relationship [51]

Communication

3 (4.91%) indicated a need for communication skills/expertise:

Communication expertise [27]

Communication skills are important [8]

High levels of communication [20]

Communication skills [17]

Practical skills

3 (4.91%) participants indicated a need for practical skills [the reference is specific to nursing]:

Really good practical skills [20]

Must have some basic level of practical skill [28]

Practical skills [51]

Legal

2 (3.27%) participants noted a need for an understanding of legal matters:

[Understands] *issues like litigation* [1]

Understands their legal and professional responsibility [44]

Specific topics-excluding those otherwise listed

Knowledge required

2 (3.27%) participants commented on knowledge required:

Good knowledge base including people management, quality improvement. infection control, CPR, pain management, fire safety. Patient handling [non physical] skills [42]

Knowledge of the services out there to tap into [60]

Other

Patient care advocacy. Nursing expertise [1]

Computerisation and counselling skills [8]

Symptom management and grief counselling [20]

Good understanding of the health service. Good understanding of other cultures [24]

Sound basis in economics. Sound knowledge of physiology, anatomy and pharmacy [27]

Pharmacology [32]

Aware of moves in the biosciences [59]

Experience

11 (18.03%) participants commented on a need for experience.

Non nursing

Life experience [19]

Community experience not necessarily related to nursing [24]

Need some life skill [59]

Clinical

To have had some experience [2]

Clinical experience in the area they are working in [9]

Experience... relevant to where they are heading [22]

They have to have years of experience [12]

We need a good proportion of nurses with an experience base-a broad base [31]

Experienced [32]

A lot more clinical experience [36]

At least 2-3 years post basic Med/surg/midwifery [service specific answer] [38]

Experienced practitioners [service specific] [58]

Qualifications/education

9 (14.75%) commented on qualification/s or education:

Tertiary education [12]

If they have a tertiary [post basic] qualification we think that's pretty good [19]

Qualification... relevant to where they are heading [22]

Need strong educational component. Strong staff development component. Clinical masters preparation [26]

Academically well bedded down [27]

In one area they need basic training and at least an advanced nursing course in their area of speciality. The need to continue their education. In another area they have to be expert practitioners well grounded in all areas of nursing and able to work autonomously [29]

Need to be graduates [32]

Need to know why certain things are done and why certain medications. I honestly think nurses need degrees to be a nurse [38]

A degree and post graduate certificate in specialty nursing [59]

Multi/broadly skilled

4 (6.55%) participants commented on the need for staff to be multi or broadly skilled

Multi-skilled [54] and [61] & Multi-skilled; sort of encroaching on medical model type expertise. Linked into nurse practitioner accredited programmes [56]

Broad range of skills. I would like to see a lot more staff... getting all round skills before they specialise [61]

Remaining

General

I want nurses to be thinking and questioning. I'd like them to think about what they are doing and reflect on it and learn from what their colleagues have done. And if they read, think about it and put it into practice [6]

Understands complementary relationships between professionals [27]

Pro-active in taking advantage of what is available [42]

Everything that impacts on the product impacts on that person [56]

You can't separate the staff person from the product because they are the product.

They are one and the same [57]

An understanding of the total ward. Not just drugs and whatever. Able to see the total. And if the ceiling falls down and the wards need cleaning do something about it [53]

Nursing

A good [nursing] knowledge base [32]

An ability to change other nurses' practice [12]

They need a good grounding. A good theoretical base [17]

We need a variety. We need a mix and range of knowledge. We want people with advanced skills [23]

Expert [26]

There is scope for degrees within it. It is difficult to go from being basic to expert in most areas. There are steps along the way [30]

I support the difference between novice and expert. Have the particular skills and competencies at a clinical level to be recognised, but can contribute company wide [39]

Must be up to date [40]

Good basic background skills in the area they are in [45]

Accepts accountability. Safe practice. The knowledge and skills required to work competently in an area [44]

Expertise [47]

Totally competent. Anticipating skills [51]

Participants' answers emphasise the importance of personal qualities and skills. That so few participants' answers included information about knowledge required is not surprising in light of the wide range of work undertaken by nurses and the limited amount of information available about that work. Nursing work encompassing as it does acute care, community health, mental, paediatric, occupational health, oncology and gerontology nursing (among others) requires a set of skills and expertise, many of which are noted by participants, and set of specialist skills and expertise. The range and level of the specialist knowledge, skills and expertise required vary with environment in which the nurse is practising. Nurses working in tertiary intensive therapy units for example neo-natal and transplant units require in depth specialist knowledge, skills and expertise related to the specific work of the unit. Patients once treated the tertiary sector may return to that sector for follow up of their treatment or they may be followed up in secondary and primary sectors. If they present in the secondary and primary sectors with an unrelated complaint nurses in these sectors need to have enough specialist knowledge to ensure that the nursing care given is safe and appropriate. For nurses working in the mental health, paediatric and gerontology areas there is a need for specialist knowledge related to the area of practice as well as specialist knowledge of the nursing care required.

The specialist or generalist registered nurse

There was not a question specific to this issue in the questionnaire however 40 [65.5%] participants did comment about this. Their comments revealed a preference for what the researcher has, with the agreement of participants, labelled 'specialist generalist' nurses; that is nurses who specialise in being generalists. For New Zealand with its small population base and geographic obstacles that add to travel time this is an important issue.

Specialist generalist

We need specialist generalists [2]

I believe we absolutely need specialist generalist people. People who are specialists at being generalists [6]

We need specialists in community health [clarified to specialist generalists] [12]

Specialised generalists [service specific] [23]

Our speciality has to be a generalist ability [42]

And more specialist generalist nurses who can go in and help in any area [23]

I think we can become too specialised. There is a need for a specialist generalist [39]

Generalist

Need to be a good generalist [7]

Looking for an expert generalist. It's almost an in-house GP sort of thing [30]

Leads you to think you do need more generalists than perhaps we have at the moment although the proponents of specialisation may argue otherwise [49]

Well practised generalists who also have got some specialist skills [16]

They're all generalists [58]

and mid range generalists [14]

Two levels of advanced clinical generalist nurse who looks after everything for the client on a sort of higher level. The other level would do the routine nursing things we consider nursing today. E.g. dressing, flushing IVs etc. [43]

Here we are generic nurses [clarified to generalist] [8]

Wide range of skills required

They will need to have expertise in everything [3]

Have to have a wide range of [service specific] skills [19]

Really wide range of skills [19]

A little bit about a lot of things [32]

I like to see them with multiple subjects; medical, surgical, obstetrics- everything we can get [33]

A multi-function person [59]

Size/nature of organisation

We would not have the opportunity for a true specialist nurse in one area because we are too small [43]

I think we are not a specialist place [28]

The role in a provincial area is quite different to a lot of the nursing in a major metropolitan area. A more generalised area [50]

Changing trend

They sort of seem to want to be generalist again although I see the rest of the world is going towards specialisation [45]

As there's increasing specialisation it becomes harder to keep up with that when really we are giving a generalist service [31]

I feel there is too much specialisation going on at the moment [61]

Specialist

Require a small number of specialist nurses [23]

Specialists to provide advice and support to other nurses [14]

Specialist in a way. They retain a generalist workload [13]

Clinical nurse specialists and generalised nurse specialists [22]

Over the last 2-3 years we have definitely specialised. Now we need more flexible adaptable staff [service specific] [41]

Specific specialities

Those who specifically identified specialist nurses designated them by location or medical condition:

We have a number of specialist nurses e.g. diabetic nurse [15]

We need good nurses, then we can talk about good cardio-vascular; good theatre nurses [35].

The specialist generalist issue is an important one for New Zealand. The specialist generalist role which fits well with New Zealand's unique geography and demographics does not seem likely to fit comfortably with nurse prescribing. Although categories currently designated for nurse prescribing rights are the child and family and the elderly, ultimately they are likely to be medically determined categories for example diabetic, ostomy, asthma, Parkinson's, multiple sclerosis, nurses. The specialist generalist fit with advanced nursing practice is equally unclear.

1 (1.6.3%) participant offered a radically different viewpoint from the majority of participants *I am of the view that people in beds don't give a shit who is caring for them as long as they are cared for by people with are kindly in nature* [11]. While at first glance this may appear to be an inappropriate response to the question it raises three important issues namely the:

- the importance of making explicit the variety, range and content of nursing practice
- importance of interpersonal skills in nursing
- value of patient satisfaction surveys in determining if the care given was safe and effective.

1 (1.63%) participant's comments seemed to sum up the situation at the time of the interviews

We need to work out what nurses are and what nurses actually do and what we can expect of them in the future [17]

Enrolled nursing

Wood's (1999) view of the contingent nature of advanced nursing practice would appear to apply equally well to enrolled nursing in New Zealand but in its case the major stakeholder seems to be registered nurses. It is registered nurses who dominate the Nursing Council of New Zealand which controlled enrolled nurse training (discontinued in 1993), controls entry to the Roll and interprets the requirements of the Nurses Act 1977 with respect to enrolled nurses. It is registered nurses who are most articulate in the increasingly unproductive dispute between the NZNO and the College of Nurses about the ongoing relevance of the enrolled nurse (O'Connor, 2000; Carryer, 2001). This unfortunate situation may be regarded as the inevitable outcome of subverting the original role to serve a new purpose.

As initially conceived and as indicated by the title Registered Community Nurse (RCN) these nurses were, after completing an 18 month training which contained a 4 week introductory period and 15 study days in the first year, to give nursing care in

the community. This did not occur and the majority of RCNs were employed in hospitals as registered nurses. This led to role confusion and 11 years after its inception the training of RCNs ceased and with it the original community focus. It was replaced by an enrolled nurse [EN] training of similar length and content in 1977. This later became a one year programme. Through this metamorphosis training remained hospital based. With the loss of registration came an increasing emphasis on role of the enrolled nurse as a 'second level' nurse and the implicit assumption that there are 'levels' of nursing work, a concept further refined and developed in the concept of clinical career paths or ladders. In this manner a community focus was lost and a new nursing hierarchy created.

As hospital budgets tightened two factors hindered the employment of enrolled nurses in public hospitals. Pay scales, in balance when all were registered nurses and few RCNs had achieved automatic promotion to the higher salary scales, were perceived of as being out of kilter when the cost of a senior enrolled became comparable to the cost of junior registered nurse. Secondly the requirement that an enrolled nurse be supervised by a registered nurse or medical practitioner reduced the attractiveness of enrolled nurses as employees, a situation compounded by reduced post basic training opportunities that occurred with the discontinuation of nationally recognised enrolled nurse endorsement programmes.

At present the future of the enrolled nurse is not clear. A number of factors, most outside the control of enrolled nurses, and until recently, a lack positive action with regard to the future of enrolled nursing have resulted in a decline in enrolled nurse power and numbers in public sector health services. Ironically it is likely that the enrolled nurses replacement by caregivers that is the factor most likely to ensure the future of the enrolled nurse (or its replacement) as experienced caregivers increasingly indicate their wish for a nationally recognised qualification.

Findings

Question 6. What knowledge, skills and expertise do you think enrolled nurses require to best work in the present system?

Did not answer the question

7 (11.47%) participants did not give any answer to question 6.

1 (1.63%) participant's answer could identify the CHE and is therefore not quoted.

The participant is generally supportive of enrolled nursing.

No participants answered the research question. Participants instead commented on the enrolled nurse. Answers reveal the market model in operation. Nursing has been incrementally restructured at CHE level without national research into consequent changes in the nursing care delivery, legal and education systems. Reference to reputable research related to the role of the enrolled nurse was made by only one participant.

Supportive of enrolled nursing/nurses

15 (24.59%) participants indicated their support for enrolled nurses

I'm very sorry to see the EN go [5]

They should be active members of the team and they should be part of discussing how care is delivered [7]

I believe there should be a second level. There's talk of registering caregivers [9]

And enrolled nurses are real good value [13]

We see if enrolled nurses are still available there will be a role for the EN [14]

I can't speak highly enough of the enrolled nurse. The ENs we have here are just so good [21]

I'd like to see the enrolled nurse stay with us [25]

They fit in very well. I hope they don't ever go [33]

I think they have role to play [35]

They're actually very good. They actually, probably extend their boundaries. They tend to be the permanent staff [45]

Got rid of most enrolled nurses. We are now using agency and casual staff. Enrolled nurse have the most continuity of any groups. There is a place for them [51]

I think enrolled nurses are ideally placed for promotion and prevention aspects of care. I think there is a niche there [52]

They are a tremendously experienced resource who do have a role to play [57]

They [enrolled nurses] do have their place [61]

We use them as an associate nurses [X]

Not supportive of enrolled nursing/nurses

8 (13.11) participants did not support the employment of enrolled nurses:

In a particular area

Enrolled nurses in the long term don't fit here [10] & Enrolled nurses don't fit here [18]

We shouldn't have enrolled nurses here... they're very limited in what they can do [service specific answer] [44]

It's unsafe to have enrolled nurses on here because of the acuity of the place [61]

In general

With decreased numbers [of staff] it's expertise they need. Enrolled nurses have to be guided by RNs [24]

I don't think we need enrolled nurses [31]

I've noticed many problems with enrolled nurses over the last few years. There's no such thing as basic nursing [32]

I see us going back to the old ways, one RN and a whole lot of enrolled nurses. That would be a real sad thing [37]

Reduced employment of enrolled nurses

10 (16.39%) participants noted the reduced employment of enrolled nurses. 1 participant noting *we replaced an enrolled nurse with a caregiver because we*

couldn't get any enrolled nurses [46] indicated one longer term effect of the move to reduce the numbers of enrolled nurses employed in the public sector.

I know there has been a move not to employ enrolled nurses [1]

We have a kind of unwritten policy not to recruit enrolled nurses [8]

We made a conscious choice not to employ enrolled nurses [12]

By attrition enrolled nurses will go [48]

We are not actively continuing [to employ ENs] [57]

Unfortunately I think enrolled nurses are a dying breed. I feel sorry for the ENs because they have been batted about for years [16]

They probably will fade away by attrition. It's a price and cost issue [34]

A lot of them left in the last 6-12months [were not replaced] [36]

A lot had been here for a long time and developed a lot of skills. We don't have many left [54]

We use them as an associate nurses [X]

Supervision issues

4 (6.55%) participants noted supervision issues

Worked in quite a lot of other parts of the service but they weren't prepared to supervise her practice [3]

Enrolled nurses should be more autonomous [8]

The reality is that in this medico-legal climate the RNs are still responsible for the practice of enrolled nurses [17]

Very limited amount they can do. Require RN supervision [58]

Reduced scope for employment

3 (4.91%) participants commented on the reduced scope for employment of enrolled nurses

They've [ENs] obviously seen their practice getting more and more restricted as time has gone on [23]

I'm not sure what the role of the enrolled nurse is any more. I do know they haven't got the formal training to work in acute area [40]

We've outlived them in the acute setting I think it's cruel and I think the council [Nursing Council of New Zealand] has done enrolled nurses a disservice [47]

Lack of clarity about role needs resolution

4 (6.55%) believed the lack of present clarity about the role needs resolving

Need to know if there is a role for that sort of person [9]

Enrolled nursing has become so woolly [26]

It's time the whole level of nursing issue in terms of enrolled nurses got resolved. I think largely we will see registered nurses and caregivers [39]

If enrolled nurses are to be trained they need to be trained to a higher level [60]

Remaining

Nursing could end up in the hands of another group of people who are perhaps less skilled but more hands on [4]

There have been occasions when we have put enrolled nurses off when they became registered nurses [22]

They've probably been affected by reviews more than any other group of nurses.

The reality is for a lot of them that they are in midlife and settled in an area [in reference to bridging programmes [29]

I think we will see cyclical behaviour [34]

Each nurse should be able to do what she feels capable of and what she feels she is able to do [38]

We're not short of RNs so there's no need to employ enrolled nurses [48]

It's not an issue about whether we have enrolled nurses or not its about how to get a more holistic approach to nursing [50]

I'd like to see enrolled nurses bridging to degree. I'd be looking for an all registered nurse workforce in the future [59]

'Second level' nurse [a qualified nurse who is not a registered nurse]

6 (9.83%) participants raised the issue of the 'second level' nurse:

There's always a place for a second level nurse. I don't necessarily think that has to be an EN [2]

We need second level nurses [5]

I do think there is role for a second tier nurse [27]

I think there is always going to be a role for the second level nurse [42]

We need to have another [second] level [43]

Need a multi-skilled second level nurse that bridges between nursing, physio etc. [56]

While these results are context and time dependent they reveal the covert and piecemeal decision making, including the decision not to make a decision, that has surrounded the continued education and employment of the enrolled nurse.

The enrolled nurse or the 'second level nurse' is employed to undertake nursing work. Determining the nature and definition of that work is contingent upon knowing the nature and definition of nursing work in all the environments in which it is practised and on all the shifts during which it is practised. At the very least an independent assessment of enrolled nursing education and practice and in a reformed health sector would seem to be a necessary prelude to investigating the competencies of a new 'second level nurse'.

Caregivers

Caregivers are employed in public and private hospitals, private homes, private rest homes to give personal care services. The scope of these services varies with the parameters being set by the Code of Health and Disability Consumer's Rights which stipulate a:

- Right to services of an appropriate standard, which includes reasonable skill and care and complies with relevant legal and professional standards (p.274)
- Right to be fully informed, and a
- Right to make an informed choice and give informed consent (Stent, 1998 p.275).

What constitutes the limits of service that may be given by a caregiver is currently untested as are the limits of responsibility of a registered nurse working with caregivers. When patients and families at home manage intravenous lines, and administer medication to their relatives, diabetics test and record their blood sugar levels and children self catheterise these tasks can no longer be deemed exclusively nursing tasks.

Caregivers may also perform a variety of other tasks.

One (US) classification of associate [caregiver] roles indicates the range and variety of tasks that may be carried out by caregivers:

- Service associates combine housekeeper, patient transport, dietary aide and supply technician...
- Administrative associates handle routine unit clerk activities as well as pieces of medical records work and do on unit patient registration...
- Care partners are nurse extenders prepared by the hospital to carry out semi-skilled patient-care tasks, such as simple dressing changes and assisting with activities of daily living under an RN's direction. (Pilon, 1998, p.44)

While in New Zealand such a classification is most recently associated with the new patient centred/focused care delivery systems and debate centres on the role of these caregivers, the use of caregivers is not new. In 1977 Kinross identified a number of assistant roles:

The medical assistant (p. 230)

This may be a 'barefoot doctor' with limited training working in poor and undeveloped communities; it may be a university educated well qualified physician's assistant or a registered nurse with special training.

The health assistant-the hotel concept (p. 231)

The person undertook hotel type duties carrying out messenger, housekeeping and clerical, pharmaceutical, laundry, dietary and equipment maintenance tasks.

The health assistant-the hospital concept (p. 231)

In 1977 this group included hospital aids, nursing assistants and Karitane⁶ nurses. They made up approximately 20% of the nursing workforce, being paid from the nursing budget. Some people in this group gave direct nursing care, others primarily clerical assistance.

The health assistant–the health concept (p. 231)

This person would be a health assistant in community health care situations where there was a high density of Maori or Polynesian families. (Kinross, 1977)

While medical ‘assistant’ roles have not been formally developed in New Zealand it could be argued that post graduate nursing roles overseen by medical specialists and designated by a disease entity e.g. diabetes, asthma are de facto medical assistant roles.

Roles designated ‘assistant’ roles by Kinross have evolved into variety of caregiver roles. The advent of the Maori Health Trusts that arose as one consequence of the health reforms has led to the creation of health assistant [the health concept] roles in Health Trusts funded by government but exclusive of the public hospital sector. During the 1980s in the public sector, the enrolled nurse and the hospital aid [the hotel type health assistant] between them took over the nurse aides⁷ work as hospitals strove to achieve a qualified nurse work force. In the 1990s, throughout the western world financial imperatives led to caregivers (also known as unlicensed assistive personnel [UAP] or clinical nursing assistants [CNAs]) being employed to complement or substitute for qualified nurses. Where in the 1980s the prevailing influence on staff mix had been nurses desire to optimise patient care and nurses career opportunities, in the 1990s it became finance (Hall, 1997). The advent of caregivers led to changes in the nursing structure, the role of the registered nurse, and nursing care delivery. With registered nurse shortages, tight budgets and de facto

⁶ A New Zealand term for nurses trained in the care of young children

⁷ Nurse aides assisted qualified nurses with nursing work. Hospital aides work was not deemed to be nursing work.

acceptance of the role by registered nurses the use of unregulated caregivers is not expected to decline.

The increased use of caregivers, the declining use of enrolled nurses, and the promotion of the advanced practice role have occurred without national research or serious debate.

The use of electronic data bases for literature searches, the loss of long serving staff and historical records have resulted in changes being adopted without due appreciation of nursing history, New Zealand's unique geography and demography, and other components of the nursing care delivery.

Locally decisions are regularly being made about the knowledge, skills and expertise required by registered, and enrolled nurse and caregivers. The choices made then impact on the delivery of patient care in a variety of ways. While caregivers carrying out hotel and administrative duties are clearly executives' responsibility registered nurses (including new graduates) working with caregivers may find themselves in:

- A proximity relationship with caregivers.

In this relationship the registered nurse and the caregiver are not employed by the same organisation.

- A supervision relationship with caregivers.

In this relationship there is clear employer expectation that the registered nurse will "assess, plan and monitor the client's care." (Gunn 1999, p.26) The employment relationship between registered nurse and caregiver is less clear. It could be argued that a registered or enrolled nurses' domain is nursing and by definition the caregivers domain is not nursing. It follows from this that caregivers' work should not be the responsibility of a registered nurse. However this is seldom reflected in registered nurse job descriptions which generally require registered nurses to supervise the work of caregivers.

- A delegation relationship with caregivers.

In a delegation relationship "all the work 'belongs to the nurse'" (Gunn 1998 p.26). In this situation caregivers work is deemed to be nursing work. Registered

nurses are required to use their knowledge and skills as a basis for making decisions about the delegation of nursing work to caregivers. (Gunn, 1998)

The result of all these scenarios is that registered nurses working with caregivers require nursing and management knowledge and expertise as well as knowledge of the environment in which care is being delivered. To meet employer and public expectation generated by the employment of caregivers nurses are requesting increased inservice education, orientation and internship programmes. The problem being addressed is the lack of preparation of registered nurses for working with caregivers. Questions relating to fundamental issues such the scope and nature of nursing work remain unanswered as individual and organisations seek immediate solutions to presenting problems.

Currently a review of undergraduate education is being undertaken for the Nursing Council of New Zealand by KPMG Consulting (2000a;b;c;d) and a national internship programme is being considered (Ministry of Health, 2000). Undergraduate and post registration education are being treated as unrelated entities. The New Zealand Nurses' Organisation and the College of Nurses have documented their support and lack of support respectively for the enrolled nurse programme. Private and public agencies are promoting New Zealand Qualifications Authority (NZQA) approved caregivers courses. Each issue is being treated as if it is a stand alone entity and addressed by a different organisation.

Findings

Question 7. What knowledge, skills and expertise do you think caregivers require to best work in the present system?

Did not answer the question

11 (18.03%) participants did not answer the question

2 (3.27%) participant's answers could identify the CHE and are therefore not quoted.

1 (1.63%) participant commented on the loss of specially trained assistants; and,

1 (1.63%) participant commented on the CHE's policy regarding the employment of caregivers.

Only 1 (1.63%) participant answered the research question.

First aid, good communication skills, good understanding of infection control policies [59]. Participants instead commented on caregivers/caregiving.

Contracted caregivers

We have caregivers. I'm not saying we employ them directly. I imagine that caregivers will be a lot more customer focused [1]

The service is sub contracted. The down side is that we don't know what they are doing and have no authority [Service specific answer] [6]

It's really only over the phone that we sort of communicate with them [home caregivers] [X]

Care giver–hotel type duties

We have caregivers who help with the flowers etc. [5]

We've just started to bringing in some to answer phones etc. but we've always had hospital aides [36]

Do not or would not have caregivers

We don't have caregivers [service specific] [3]

I would not have caregivers [8]

No caregivers [service specific] [19]

I don't see there being a place for them [51]

I might be wrong but I don't think we have a category we purposively employ [52]

Financial reasons

They've gone. The ones we had initially were wonderful but the pay rates didn't attract the people that we would like to have [33]

It's not something we've focused on. Where it happens it happens because people have seen it as a necessity to reduce costs [50]

Government can't afford higher salaries versus caregivers [60]

Lack of clarity

They require supervision. Need to define the standard at which you directly use these people. Need to be very careful how we go about it [2]

We need a clearer definition of what it is they do and what they don't. The critical factor is not to extend beyond their level of competence [33]

Non nursing duties

The RNs are saying there are things we do that would be better done by some one else, more menial type tasks [9]

There is room for some caregiver type person in terms of answering the phone, and clerical work and assisting with professional work-assist with baths and rolling patients [10]

We believe they would certainly be useful. 33% of the work done by registered nurses could be done by unskilled people [44]

I have lots of requests for someone to help with housekeeping and ward tidying [47]

We're now using caregivers as an extra pair of hands [37]

Employed for home help-cleaning etc. [X]

Limited use [at time of interview]

In a very small way [15]

Very limited. There's a raging debate around them here, as there is everywhere [23]

They're coming in slowly [59]

We do have caregivers in some places but no intention of introducing them into the main hospital [13]

Multiple categories

We've got different types of caregivers. Their roles will actually increase as everyone becomes more comfortable with them [49]

There are multiple categories of caregivers. They are all support workers. Historically they have been neglected [X]

Education

We do a bit of teaching of care givers here [reference is to family member or friend care givers] [25]

I believe it is really important that caregivers have training and educational opportunities [46]

We have an internal training programme and it's working really well. Nurses need to work with caregivers [X]

Role

I think that's [caregiver] got a role[4]

I think it is important to have a clear policy about what in fact their role is [26]

I think there is role in terms of a nurse caregiver workforce in New Zealand [35]

I think a large chunk of the majority of nursing work does not actually require that level [RN] of education and experience [57]

Remaining

We don't have many. I feel we moved into it before the profession decided that's where it should go [6]

They haven't got an established title. Depends on the acuity of the ward really [12]

We haven't talked about caregivers by that or any other name but I think the time will come soon [17]

I think we will go full circle. We will close the roll [EN] and have some sort of caregiver programme and then they will want to be nationally recognised [34]

You would have advanced registered nurses, registered nurses and caregivers. I would really like to see the family becoming more involved in the patient's care [43]

I noticed one on ward [X]. You just seem to find these changes have occurred [45]

We've been looking at a caregiver type person. I've put forward the areas we need to evaluate and the tools we will need to evaluate it [X]

In preliminary discussions the Second Level Nurse Sector Reference Group/ Ministry of Health members working on developing competencies for the second level nurse are suggesting 'health aid' is to be adopted as a generic term.

Comment

There is a need to determine the nature and definition of nursing work in a variety of contexts and over a variety of shifts. Until this is done it is inappropriate to attempt to define the role, competencies and reporting mechanisms of the 'second level' nurse or caregiver.

There appears not to have been (or be) a perceived need to formally evaluate the education and practice of enrolled nurses in a reformed health sector before discarding it and before embarking on a commitment to its replacement

Chapter themes

Registered nurses personal qualities and skills were given a higher priority than knowledge.

The nature and scope of nursing work is not clear.

Decision making about categories and roles of workers to deliver nursing care is fragmented and nurse centred.

Chapter nine

Nursing education

Introduction

Nursing is a practice discipline, therefore nursing education cannot be isolated from nursing practice and the context of nursing practice. Health sector reform impacts on nursing education as education sector reform impacts on the health sector. Ensuring the availability of an appropriate number of suitably qualified nurses able to provide the required care, at the time needed, in the appropriate location requires careful planning and a lead time of at least 3-5 years.

In New Zealand the lead time required to educate knowledgeable and experienced nurses, the small number of specialist nurses required, the availability of suitable lecturers and varying demographic and geographic factors create particular difficulties in meeting market demand. The situation is further complicated by a planning horizon that is generally prescribed by the length of an executives' contract, business planning parameters, and/or government time in office and the need for an immediate return on the time and money invested in education. This approach precludes an indepth investigation of emergent trends and their potential impact on the health sector in general and nursing in particular. It relies instead on the experience, knowledge and intuition of senior nurses and executives.

Mid 20th century New Zealand nurse administrators (the terminology in vogue at the time), ranged from the Department of Health Director of Nursing who had oversight of every aspect of nursing and responsibility for New Zealand's international nursing relations and their very powerful, experienced and knowledgeable Assistant Directors, together responsible for nursing administration, nursing education and public health nursing, to ward and unit sisters who exerted considerable power and influence in their own domains. Titles were used and recognised nationally. Job descriptions were designed to meet local requirements but at their core were a common salary scale, similar responsibilities and reporting hierarchy. Nursing was national industry with a powerful, centralised leadership based in Wellington.

By the end of the century government had legislated a series of Acts that resulted in the decimation of the once powerful nursing leadership. Professional disciplinary matters, previously the province of the Nursing Council of New Zealand, are now mediated via the Health and Disability Commissioner.

As a result of the State Sector Act 1988 public health sector agency CEOs are nurses' employers. The Employment Contracts Act 1991 led to a change in structure and functions of the New Zealand Nurses Association (now NZNO) and variation in employment conditions including titles and salary packages. Clinical experience became a commodity to be purchased from the health sector by the education sector and rising student fees were increasingly funded via a government funded student loan scheme.

When these factors were combined with the fragmentation of the public health sector, the competitive health and education markets, minimal nursing research and a loss of nursing and institutional memory links between education and practice weakened. With no nurse/s charged with maintaining oversight of nursing, no sustained programme of nursing research, little independent analysis of available data and minimal analysis of developing trends, the relationship between nursing education and nursing practice, each a component of a complex, and separate system which also overlaps with the other systems, has received little attention from health sector agencies CEOs or their senior nurses.

Participant's responses to the question '*describe the ideal system of nursing education*' are indicative of the situation at the time of interview. Since then there has been a professionally divisive report of the Ministerial Taskforce on Nursing (1998) and the Nursing Council of New Zealand has commissioned KPMG consultants to undertake a strategic review of undergraduate education. Four papers have been released for discussion and the final report is due shortly. In December 2000 the Ministry of Health released a consultation document on building a framework for a nurses first year of practice.

The KPMG review is the first independent examination of national nursing education since the comprehensive nursing degree was piloted in 1973. That it is only an examination of pre registration nursing education is indicative of the fragmented state of nursing 100 years after nursing registration was first legislated for in 1901. In the intervening century registered nursing training/education has moved from the hospital ward and the hospital nursing school, where student nurses' practical learning was overseen by ward and tutor sisters and clinical knowledge imparted, in large part by non nurse health professionals, to the polytechnic and university where clinical and theoretical knowledge is, in the main, imparted by nurses. Assistants to the registered nurse have ranged from those completing nationally recognised training of at least a year in length to those given a brief period of orientation and then trained on the job.

A shortage of experienced, knowledgeable and well qualified registered nurses and an increasing percentage of part time and/or casual nurses was becoming evident at the time of interview. For CHEs education was not part of their core business. The education they did provide to staff was designed to meet short term local need as economically as possible. Immediate need, financial constraints, inadequate data and physical isolation from the nursing education sector all contributed to the nursing education receiving a low priority in the CHEs.

The mid 20th century combination of national and local nursing power and authority facilitated the move to university and polytechnic based programmes. The current fragmentation of nursing, lack of unity (Wilson, 2000), competitive and litigious education environment (Carson, 2000) and the limited number of experienced, knowledgeable and powerful nurses at executive level nationally and locally militates against the KPMG report resulting in significant change. In the event that changes are to be implemented a programme of research will be necessary to ascertain the effect of the proposed changes on both the patient and nursing care delivery systems and a systematic long term programme of evaluation initiated.

Childbearing and family responsibilities (perceived and legal), and joining and/or breaking up with partners affect the availability of females for education and work. For nurses working in a physically and mentally demanding job with irregular or uncongenial hours of work and heavy family obligations post graduate or post registration education can be a challenge. For educational institutions post graduate nursing education offers access to funding. The result in New Zealand is similar to that in Australia as described Whyte (2000) who commenting on a recent national review of specialist nursing:

Along with the rapid proliferation of nursing specialties, a myriad of education courses has emerged. Over the past decade a number of reports have found that, like the ambiguity that surrounds the nurses's role, variation, duplication and inconsistency characterise the status of specialist nurse education in Australia. (p.210)

In New Zealand the Nursing Council of New Zealand's pre-emptive assumption of approval rights for post graduate nursing courses and programmes is premature given its failure to commission a review of post graduate education. It also poses a serious challenge to universities, which have traditionally focused on developing postgraduate programmes designed to meet future need not present demand.

Findings (Education)

Question 15. Describe the ideal system of nursing education [New Zealand]

Participants were told by the researcher to base their answer on unlimited funds being available to fund the New Zealand system of their choice.

This question was designed to elicit information about participants' understanding of trends in health care and education and education as a component of the patient and nursing care delivery systems. The question came near the end of the interview and the majority of answers were brief.

At the time of the interviews trends likely to affect nursing practice were being documented in the general and scientific literature. Video conferencing, improved telephone and television systems and the internet were beginning to change the way health professionals communicated with each other and the way in which lay people obtained health related information. For a country like New Zealand this gave health professionals and technologically competent lay people quick and relatively easy access to overseas expertise and up to date information.

Participants gave little indication that they had given serious consideration to the effect developments in nano and communication technologies, genetic engineering, the increasing use of complementary medicines and the use of food as a preventative and curative agent may have on nursing practice.

Only 1 (1.63%) participant commented on the relationship between nursing education and public need.

Nursing education needs to look at what the real needs of the general population are [31]

Participants made little reference to specific research and no participant commented on ethnicity in relation to nursing education or the nursing workforce.

2 (3.27%) participants made reference to age and 1 (1.63%) to gender.

I'd train some older ladies [33] *Need to be older* [38]. 1(1.63%) participant commented on enrolled nurse education. *I'd bring back enrolled nurse training'* [33].

No participants referred to caregiver education programmes, as distinct from short training courses.

Negative

6 (9.83%) participants made some negative comment or criticism:

I don't much like the polytechnic system [3]

The curriculum or what is being taught has not kept pace with changes here and in the community and the real world [28]

One of my criticisms is that there hasn't been a greater effort to define what needs to be done differently in education [30]

In general what is missing is the lack of a general nurse [35]

Every year what they do and how the course is structured is different [37]

The nurses are really resistant to continuing their education [43]

Comfortable

4 (6.55%) participants were comfortable with a polytechnic and/or university component to nursing education”

I'm more than happy with the core comp.[comprehensive] degree and I think we could refine that [10]

I've been pretty impressed to be honest. There's probably not a lot I would change [15]

I like the technical institute programmes [20]

I think the current training system is good [32]

Link education and practice

6 (9.83%) participants linked education and practice:

We want a very strong relationship with institutions preparing nurses. I think need to link education and industry more closely [16]

I'd like to have closer links in terms of the academic part of nursing [joint funded chairs in nursing] [23]

Knowledge is best generated from both camps [education and practice]...a collaborative approach to education [26]

Joint appointments [CHE and educational institution] are useful [44]

A mixture. The advantages of tech [polytechnic] training and the advantages of what used to be hospital based training with hands on experience [52]

Pre-reg. [registration] marriage between the CHE and education. Education facility on site and integrated [51]

Closer physical proximity

3 (4.91%) participants wanted closer physical proximity of the CHE and education facilities:

I'd have a nurse trained in a hospital environment with a university structure around them similar to medical education [12]

I would like to take the polytechnic and put it in our [CHE] back garden. They would be allied to us. They would be our partners. I would like to see a liaison lecturer role [48]

Education facilities on site and integrated [51]

Post registration education

5 (8.19%) participants indicated a need for post registration education:

Use the present system, then add extensive clinically based one for a couple of years [2]

I'd continue with a single generalist registration or undergrad. preparation. On top of that I'd add specialist programmes [6]

A university or polytech based degree as a base then lots of experience in different areas and university based learning [19]

More hospital inservice. 6 month specialty courses [51]

Internship

4 (6.55%) participants specified an internship:

Internship [10] [59]

I'd have a university trained nurse with an internship and a very structured graduate programme [29]

I think the current training system is good but I think some type of formal internship. Maybe for 6 months [32]

Orientation

3 (4.91%) participants indicated a need for orientation:

I believe their first year of registration is an orientation year [46]

I'd have a huge orientation block lasting 6 weeks [47]

Much cleverer orientation systems and the ability to pull people off the ward to complement their job/work ability [49]

Work with experienced nurses

2 (3.27%) participants wanted new graduates to work with experienced nurses

Working together with skilled role models [18]

More people to provide on the spot mentoring, education and skill development with nurses as they work [46]

Extend pre-registration education

2 (3.27%) participants wanted to extend the pre-registration education:

If it [pre-registration education] were a year longer and apprentice based I'd be quite supportive of that [27]

A 4 year programme with a greater integration of theory and practice [14]

Content

Business

2 (3.27%) participants specified business content:

Nurses have got to the understand business [4]

Better educated in business [53]

Other

5 (8.19%) other participants also specified content:

Problem solving, and critical thinking, analysis. Technical competence [14]

I'd like to see them [pre registration students] get more clinical experience [21]

Education for change is an essential component. Good assessment skills [24]

Teach people to think and use the resources available [41]

Reduce the cultural component. Encourage critical thinking. Promote patient independence not dependence [60]

Hospital component

3 (4.91%) participants wanted a hospital based component:

A hospital based training.... You want the best of both worlds [hospital and educational institution] ' [36]

Put in more hospital based training [6months] before going into the community [5]

Do a probationary three months in a hospital then go away for a year [to an educational institution] [59]

1 (1.63%) participant commented on the timing of the hospital component.

We have 2nd and 3rd year students coming to us and they haven't been in a hospital [58]

Generic health base

1(1.63%) participant wanted a generic health base

A generic health course open to everyone then specialise after two years. Maybe they could enrol after the first year? [8]

Students paid

1(1.63%) participant wanted students working in the wards to be paid [54].

Remaining

We need a spectrum, some to be more hands on and some to be more high powered [4]

Perhaps there needs to be a system where older hands train younger hands on the job [11]

I think there needs to be a training programme that lets people progress from base level caregiver and go to case manger type roles [22]

A culture to enable nurses to make black and white decisions effectively while giving greater insight into the organisation [50]

More integration between tech and hospital and community services [20]

Service specific

Some comments were service specific for example, *something that would give the district nurse a formal qualification. I'm sure you could do it in a year [X]; three years at tech and they have never done nights [X]; more chances [for night nurses] to go to inservice [X] there's not enough inservice on nights. It has to basically be videos [X]*

The answers to question 15 are opinion based in response to a single question. As such they are not definitive but they do indicate a desire for improved post registration nursing education and closer links between educational institutions and the CHE.

Health management education

In chapter eight the need for registered nurses to possess management skills was highlighted by 15 (24.9%) participants. In chapters five, six and seven the apparent lack of planned, systematic evaluation of care delivery and clearly identified resources implications, suggests that senior staff management knowledge, skills and expertise is less than optimum.

In 1991 Lockett-Kay noted "traditional management theory does not always provide solutions to many of the complex health service issues" (Lockett-Kay, 1991, p.10.). In New Zealand two organisations were initially the primary providers of health service management education. These were the now defunct Health Services Management Development Unit (HSMDU) and Massey University. Today other universities and polytechnics also offer graduate programmes.

McCann, a foundation staff member of HSMDU, reflecting on why the national initiatives begun by HSMDU were not followed through noted "the HSMDU initiatives were not able to be anchored because anchoring takes some years and HSMDU only existed for four years" (McCann, 1996, p. 5). This is an important observation given the turnover of CEOs and executives in the health sector and a

factor McCann believes is the reason for many health sector organisations “getting caught in activities traps of reactive crisis management”(McCann, 1996, p.5).

As North, a senior lecturer in the longstanding (approximately 25 years) health management programme at Massey University, recently observed “the small select group of educators in New Zealand involved in teaching in these health management programmes face unusual challenges” (North, 1998, p.8). These challenges include:

- A small market
- A health sector that seems to be “one of the most turbulent in the world” (p. 5)
- Few colleagues available for interaction and peer review.

Health management education is an important component of executive and senior nurse education. Lockett-Kay, McCann and North’s comments combined with relevant material from this study suggest that there is a need for a review of health management education in New Zealand to ensure that it has the capacity to develop the knowledge and skills required for executives and nurses to manage collaboratively and effectively in the challenging New Zealand health care environment.

Chapter themes

There was a desire for closer links between the CHE and educational institutions.

There was a failure to appreciate the link between changing patterns of health care and the education of nurses.

There was a failure to appreciate of the link between nursing education [pre and post registration] and supply of appropriately educated nurses.

Chapter ten

Nursing research

Introduction

Currently New Zealand nursing research and research on nursing is mainly the product of the education sector. This has to be conducted within the constraints imposed by that system of timeframes imposed by financial and course requirements, the need to manage student and institutional risks, the availability of appropriate supervisors and examiners and the ethical constraints imposed by the need for students (many of whom are employed) to avoid a conflict of interest. It also needs to be research that is of interest to the student and his or her supervisor/s. There is an expectation in the education sector that research findings will be published. Publication in the prestigious refereed journals favoured by education sector academics seeking promotion can take place a year or more after the article is first submitted and may have lost some of its relevance for the practice sector.

The Health Research Council and the Nursing Education and Research Foundation (NERF) are the primary non-education based funders of nursing research. Various nursing related organisations for example the College of Nurses, the Nursing Council of New Zealand, NZNO on occasions commission small, self contained, short term research projects designed to obtain specific information, as do public sector health service agencies including the Ministry of Health.

Currently nursing research is generally considered by nurses to be:

- About nurses.
- About the practice of nursing.
- By nurses.
- Published in nursing publications.
- Research conducted in an academic nursing department.

Pearson, FitzGerald and Walsh (2000, p.162) narrow this range with their suggestion that:

Because nursing is so diverse, practice is broad and varied the focus of legitimate nursing research is best defined in broad terms as:

- The process of nursing (that which occurs between the nurse and the nursed);
- The subject of nursing (the nurse);
- The context of nursing (the physical, cultural and socio-political environment in which nursing takes place). (Pearson, et al., 2000 p.162)

In New Zealand nursing research is increasingly qualitative or a qualitative/quantitative mix. It is seldom longitudinal or part of a programme of research. With a few exceptions for example, the recent \$240, 000, 17 month study to investigate mental health nursing standards currently being undertaken by O'Brien, O'Brien, Morrison Ngatai, McNulty, Skews and Ryan (Manchester, 2000) it is by medical standards poorly funded.

In 1995 the results of a NERF funded Delphi study of nursing practice priorities for research-based solutions was published (Cooney, et al, 1995). A volunteer sample of 360 registered and 100 enrolled nurses employed by the Northern Area Health Board (NAHB) based in Whangarei completed a series of three questionnaires. Although the results could be criticised on the grounds of a low response rate (8% to the first questionnaire and 30% overall) it was an well-organised study conducted with the assistance of a respected and internationally experienced nurse researcher. This attempt to obtain information about research needs in a rural an area with high unemployment and an ethnically mixed population highlighted the lack of a research culture and researchers' dependence on nurses' goodwill and willingness to participate.

The results indicate a desire for research that will find solutions to current practice problems namely:

- Nursing interventions for pain
- Discharge planning
- Preoperative teaching
- Care of aggressive patients

- Informed consent
- Nurses' stress and quality patient care
- Assisting families to cope with death
- Promoting rest and sleep in hospital
- Patient self-care
- Nursing care of wounds
- Understanding of diabetes mellitus
- Nursing care plans
- Patient-administered medication
- Health teaching
- Nursing process

(Cooney et al., 1995, p.10)

A year later Sigsby and Bullock published the results of their 1991 "small descriptive survey" (1996, p.296). Completed questionnaires from a convenience sample of 24 self identified nurse researchers and the results from structured interviews conducted with 9 participants led the researchers to conclude that:

- Most research is qualitative and focuses on clinical care (p.269).
- Researchers are interested in:
 - The expanded roles of nurses as teachers, managers and clinicians
 - Nurses' socialization and career paths
 - The differences between enrolled and comprehensive nurses
- Nursing research should demonstrate excellence of clinical practice (p.270).

Other issues of concern were:

- Ethical dilemmas in practice
- Cost effectiveness of health services
- Community health services
- Cultural issues
- Birth intervention rates (p.270).

In 1998 the *Report of the Ministerial Taskforce on Nursing* confirmed the trends indicated by the NAHB and Sigsby and Bullock (1996) studies. The Taskforce identified nursing research as:

- An essential element of nursing practice.
- Generally indepth and qualitative.
- Most research studies either explore patient's experiences (with a view to providing greater understanding particular states of illness or disability), or they examine nursing practice (in order to understand or critique health-promotion practices) (p. 64),

The Taskforce (1998 p. 64) also suggested that there is "not enough nursing research is done in New Zealand... [and] overall the number of nurses engaged in research are a tiny proportion of the nursing profession".

While nurses in New Zealand are achieving excellence in qualitative research as measured by the increasing number internationally examined successful masters and doctoral theses this has "coincided the primacy of the market and its emphasis on numbers above all." (White cited in O'Connor, 1996, p.21). The reason for this dislocation between the needs of the market and the path of nursing research is not clear. It may be related to what Lange and Cheek (1997) identified as the "apparent silence of nurses in the policy formulation process." (p.7). Nursing is a complex entity that cannot be divorced from the context within which it operates. Without nurses who understand these two factors and have the ability to commission and use appropriate research, the nursing professions' potential contribution to health policy is likely to be experiential rather than research based. The dislocation observed by White in 1996 may have been a reflection of the difficulty obtaining a sizeable research grant without a proven track record. More likely, it is a reflection of the difficulty of accessing the practice domain to undertake quantitative research and to publish the results in a competitive environment.

In New Zealand nursing research is also constrained by financial, ethical, boundary and time constraints and the present orientation of many nurses (Hamilton, 1982) combined with a shortage of nurses qualified and experienced in quantitative

research working in nursing practice. Without these issues being addressed nurse researchers in New Zealand are unlikely to focus on needed research to identify the nature and scope of nursing work, evaluate the use of nursing practice/care delivery models, and evaluate nursing care delivery in the public, private and voluntary sectors in New Zealand.

A Memorandum of Understanding with the Ministry of Health, recently signed by nine nursing groups¹ and intended to be signed by the NZNO, is designed “to develop a new, collaborative working relationship to consider, plan implement and evaluate sustainable health systems’ developments in New Zealand” (NZNO seeks greater input, 2001, p.8). This memorandum should ensure an increased nursing input into policy making.

A recent trend in New Zealand is to rely heavily on a consultation with nurses as a primary source of data, as for example in the *Report of the Ministerial Taskforce on Nursing* (1988) and, to date, in KPMG review of undergraduate education. Shamian and Gerlach’s (1997), in their Kings Fund Seminar *Health Human Resources Planning: Evidence-based versus Opinion based* cogently argue against an over reliance on trade literature and expert opinion as a base for policy and decision making. Opinion based policy making is unlikely to result in a patient and/or future centred approach to policy making as this requires a firm base in national and international research.

Research in a practice discipline needs to be followed by utilisation and the evaluation of its findings. Four factors are likely to have an influence the future utilisation of nursing research. The first of these is the already noted increasing popularity of evidence based practice. The second is increasing public access to

¹ ‘Nurse Executives of New Zealand, The College of Nurses Aotearoa, The National Council of Maori Nurses, the Directors of Mental Health Nursing, Nurse Educators in the Tertiary Sector, The Independent Nurse Practitioners’ Association, The Australian and New Zealand College of Mental Health Nurses, The Samoan Nurses Organisation of New Zealand and the Occupation Health Nurses’ Association. (NZNO seeks greater input, 2001, p.8).

electronic databases and the third is a “significant trend in the wider research context in the NHS, in which emerging new modes of research seem likely to blur traditional boundaries between the academic world and the world of practice.” (Scott & West, 2001, p.393) The same authors go on to note the increasing number of publications by nurse researchers in the health policy area suggesting an increasing contribution of nursing research to health policy making.

Findings

Question 16. What nursing research would you like to see done?

Did not answer the question

7 (11.47%) participants did not answer the question. Of the remaining 54 (88.53%) participants none asked the researcher for a definition of nursing research.

Answers not related to the question

2 (3.27%) participants gave answers that better fitted with the question on nursing education.

1 (1.63%) participant *did not think about research unfortunately because I go home some days and feel I have been putting out forest fires all day* [38]; another answered *nothing springs to mind* [36]

Wanted something identified

23 (37.70 %) of participants wanted something identified.

Patient related

4 (6.55%) participants wanted patient related information:

Why patients are coming; why patients are coming to us in such a state [17]

What sort of patients we have compared to five years ago. Where the referrals are coming from [33]

A method of delivering care that is consistent over 24 hours so that the patient receives the same standard of care right through [37]

Way we provide information and education to our patients [46]

Human resource matters

7 (11.47%) participants wanted human resource related information:

Why nurses self esteem is so poor [7]

Why hospital nurses can't see life outside the ward door [25]

What nurses feel so threatened by [41]

Why people go nursing [51]

The people who go nursing and getting some understanding about them [57]

How to get attitude change [39]

Why there is not a greater investment in staff development [53]

What nurses do/want to do

3 (4.91%) participants wanted to know what nurses do:

What it is that we [nurses] really do [34]

What [nursing] wants to do and what it wants to be in the context of taking care of patients [35]

What nurses do [59]

Scope/boundaries

3 (4.91%) participants wanted scope/boundaries of practice identified

The scope of practice; the boundaries of practice [6]

Professional boundaries [40]

What should be the scope of that person's [Nurse Advisor] job [43]

Leadership traits in nursing [41]

Model/system

2 (3.27%) participants wanted a model/system that works identified:

Model systems that work really well (and then actually looking at them) [3] What kind of models really work (and how do you know which models really work) [28]

Night

2 (3.27%) participants gave night duty specific answers

Long term effects of work on night duty [5]

Research should be done on the fact that things don't just stop at 11 o'clock at night
[54]

Other

5 (8.19%) participants wanted other information

What makes a good nurse [2]

Problem areas [1]

The pathway that leads to strong clinical leaders the acute setting [20]

*I would like to know the real number of registered nurses we need relative to patient,
To ensure clinical viability* [22]

Leadership traits in nursing [4]

This selection is interesting because participants made no reference to previous research and had not apparently undertaken or instigated any research on these topics. A number of topics listed are well researched with an extensive general and nursing literature readily available, for example the literature in nursing and non nursing publications on the effects of shift work in general and night shift work in particular is extensive as is the literature on attitude change.

Personal interest

6 (9.83%) of participants identified an area of personal interest:

I'm interested in what motivates people, what makes them want to work [9]

I'm fascinated by the new re-engineering, new design methods... and the notion of patient centred holistic care [15]

The way senior nurses are evolving into the junior house surgeon type thing [32]

Around the culture of nursing and how we unravel [42]

Recent stuff from ICN on cost and value of nursing [55]

Outcomes

5 (8.19%) participants were interested outcomes:

Looking around nursing practice and the complexities of adapting your practice, so you ensure the outcomes are safe [7]

Trying to look at patient outcomes and the impact of nursing [14]

Outcomes of nursing intervention [27]

Seeing whether the nursing delivered actually made the difference the providers think it does [43]

I'd like to see the difference in outcomes in increasing the skill base from low to high [49]

Clinical research

4 (6.55%) participants wanted clinical research:

2 participants specified the area: *chronic leg ulcer management in the community [29]* *developments in wound care [45]* and 2 others indicated more general clinical research: *practically based research; what's available, how we use it [23]* *pure practical research [60]*

Effectiveness

4 (6.55%) participants were interested in effectiveness:

Effectiveness of district nursing. Effects of non nurses doing the work [8]

How effective [nurses in the community] actually are [19]

Research into the effectiveness of nurses in different settings [16]

Measure the effectiveness of promotion and prevention campaigns in preventing people coming to hospital [52]

Workforce planning

4 (6.55%) participants wanted information about workforce planning:

Workforce planning nationally [26]

Where the organisation needs to go in service delivery; staffing mechanism and mix [39]

There needs to be more info on workforce planning and ways the workforce can become integrated [50]

staff mix and numbers [54]

Remaining

The aging workforce; the ideal composition of teams; patient dependency ratio [26]

Theory /practice gap [39]

Evidence based practice [47]

Critically look at the role of the advisor [43]

Around the culture of nursing and how we unravel [42]

The interface between GPs and nurses; looking at how this could be developed into a more productive relationship [58]

2 (3.27%) participants made the point that interdisciplinary research is required. One participant was particularly interested in the international cost and value of nursing research and wanted to see more of this done in New Zealand [55]

Nursing research (however defined) in a CHE at the time of interviews required collaboration of executives, nurses and ethics committee members. Ideally the CHE would have an approved programme of research deriving from and including the evaluation of structural and system changes within the CHE. It could be expected that research conducted within a CHE would primarily have potential benefits for patient care and/or CHE management.

Future challenges

Nurses implement many new health related discoveries, often as part of delegated medical care. If nurses are in fact responsible and accountable for their practice some research on the effect new discoveries may have on nursing work and consequently on workforce planning, patient and staff safety and nursing care delivery would seem to be required. This is currently not the case and there is a need for ongoing research on the impact and potential impact of new technologies on care delivery.

The nexus between medical education and nursing education and practice is poorly understood. That the future path of medicine in New Zealand is not clear is indicated by a reported comment by Professor Peter Gluckman, the retiring Dean of the Auckland Medical School. He stated “we are coming to a threshold where decisions

are going to have to be made about the future of the medical profession which will either leave it much as it is or lead to dramatic change.” (Chisolm, 2001, p.C4) Whatever path medicine eventually does takes it will continue to have an effect on nursing practice. The issue of nurse prescribing has highlighted some practice issues but research on the New Zealand medical education/practice and nursing education/practice relationship is needed in order to predict the effect of changes in one profession will have the another.

With the advent of the MOH Workforce Advisory Committee it seems likely that workforce related research will be commissioned and now that issues relating to a female workforce are emerging in medicine (Chisolm 2001 p. C4) it is likely that some of this research will address this subject.

Perhaps the greatest research challenge is to find a way of identifying and researching New Zealand public, private and voluntary sector nursing work, (what it is that nurses actually do and the basis of the decisions made), and the nursing care delivery system, its component parts and their relationship to each other and elements of other systems. Registered nurses work in rural clinics, secondary and tertiary sector public hospitals. They work in prisons, defence forces and the fire services. They work in primary health care clinics as independent practitioners and practice nurses. They are to be found in factories and student health centres. They work in private hospitals and rest homes. They teach in private and public sector education agencies. They work as managers and researchers. Together they deliver a wide range of services, in a variety of locations at various times. Some, such as those working in intensive therapy units work on behalf of patients who are unable to care for themselves while others work alongside clients in a partnership relationship. Some only see a patient for a duty or two, others must maintain a long-term nurse/patient relationship. Some need to be able to use sophisticated technologies while others need sophisticated interpersonal skills.

Without an understanding of what comprises nursing in New Zealand, the practice/care delivery models used, the ways in which practice decisions are made

and evaluated, and the effects of structural and legislative changes on nursing practice there is no way of knowing if resources dedicated to nursing are being utilised in the most efficient and effective manner possible.

There is a need for an independent, large-scale longitudinal study that will map the nursing work and nursing care delivery system and the way in which it operates and changes and interrelates with other systems. Such a project would be a large and difficult undertaking for a number of reasons including:

- It will be expensive.
- Baseline data is minimal.
- The reductionism necessary to make the project manageable is the antithesis of the systems ideal. The strength of the systems approach, which is that it ensures that all aspects are addressed and the interrelationships between the component parts are also examined, requires researchers familiar with nuances and subtleties of New Zealand nursing practice, education, management and research and the systems approach. Such people are in short supply.
- Nurses and executives, pressured to meet immediate demands, have a natural preference for research that provides information to assist them in their work or improve their personal circumstances. A long-term project researching the nursing care delivery system may not be attractive to them.
- The research is unlikely to find favour with those nurses who prefer to continue as they have done and avoid critique of their practice methods.

If such a project is not undertaken it is unlikely that the present fragmented and ad hoc approach to nursing research will ensure the optimum return on the resources invested and the present drive to develop new care delivery models (Hughes, 2001) will be based on inadequate research.

Chapter theme

The following theme emerged from participants' answers to the question about nursing research:

The approach to nursing research was fragmented and ad hoc.

Chapter eleven

Study themes

When chapter themes were clustered and analysed seven study themes emerged. These chapter and study themes emerged from the combined interview data. As such they provide insight into nursing care delivery in the New Zealand public health sector. They are not CHE or individual specific.

The seven study themes are:

Organisational structure was seen as a self-contained entity.

Systems approaches were not used.

Planned, systematic and ongoing evaluation of structural change and care delivery was not evident.

The resource implications of proposed changes were not canvassed.

Little was known about the nature of nursing work in the CHE

There was a desire for closer links between nursing practice and nursing education.

The approach to nursing research was fragmented and ad hoc.

These themes are interrelated and together give insight into nursing care delivery in the reformed health care environment. However, in order to facilitate discussion of the themes each theme is commented on separately in the following section.

Organisational structure was seen as a self-contained entity

An understanding of the intricate, complex, interacting and inter linked web of organisational and professional form and function is an essential prelude to effective operational and strategic planning, implementation and evaluation. In New Zealand public health sector agencies organisational structure, professional structure and organisational function should be interrelated and interactive.

In this study organisational structure was most commonly seen as an independent, self-contained entity. An appreciation of the relationship between organisational and professional structures and between these and organisational function was not

demonstrated. It is suggested the primary reason for this is that CHE executives followed the 1991 government model of structural health reform. In this model primarily designed to improve efficiency:

- There was no publicly available and comprehensive analysis of proposed changes to structure. (Opinions may however be sought from interested parties).
- After general approval by the executive team restructuring was implemented by the person who had the legal power and authority to impose and modify the structure.
- Initial restructuring was rapid and comprehensive.
- Structures were primarily changed in response to efficiency problems, most commonly a cut in available financial resources.
- There was no regular, planned and comprehensive evaluation of the advantages and disadvantages of old or new structures as they affected health professional practice and patient care.
- Contracts created artificial boundaries that may or may not have been congruent with best health professional practice.
- Artificial boundaries were created around the entity being restructured and change within those boundaries was not considered in terms of its impact on associated areas

While there is some debate as to whether form follows function in health care agencies (Strasen, 1994) or function follows form it is generally agreed that in any organisation form and function are interrelated and interactive. Changes in one have an effect on the other. In a professional organisation there is the added dimension of the form and function of the relevant profession/s. These should be congruent with, or a subset of, the organisation's form and function.

Simon Upton's 'leap in the dark' was structural in nature and theoretically covered all aspects of public sector health service management. Unfortunately it took little cognisance of the covert structures underpinning professional practice. Strongest and most pervasive of these is the medical education template that is allied to medical structures and the division of medical work. At the time of the interviews public

sector health service agencies were beginning to attempt to discard or amend service based structures but covert pressure from health professionals and contractors, for whom a service based structure offered readily definable boundaries, ensured subtle pressure to retain service based structures continued. The result has been that structural change in care delivery has been more apparent than real. Patient centred/focused care and case management may have placed the patient at the centre of health agency activities but they have had little impact on the entrenched medical structures that underpin health care delivery in New Zealand.

In New Zealand five recent developments, occurring after the period in which data was collected, could signal the possibility of change.

- In health professional education patient safety has been improved by the use of new communication technologies that increasingly enable student health professionals in general, and medical students in particular to learn at a distance from patients and hospitals. As a consequence health professionals' previously very strong socialisation to the New Zealand public hospital system and its medical structure has been weakened.
- Easy and economical consultation with overseas experts offered by the new video conferencing and the internet technologies is redefining the boundaries of the organisation and the roles of consultant and resident health professional.
- Electronic databases which provide a convenient and fast way for health professionals to obtain up to date literature, combined with the academic imperative to publish have resulted in a deluge of specialist publications, many of which are equally accessible to lay people. Sophisticated lay users of this technology may now be as informed of recent developments in an area of health care that is of special interest to interest to them as the medical consultant. They have in effect become their own consultant. However this same technology has also had a number of counter effects, among them increasing health professionals' focus on specialty areas by profession and subject/s, and on the

present and recent past and easy access and overseas literature which subtly reinforces the continuing fragmentation of organisation and professions.

- Health professionals are increasingly dependent upon technicians, technologists and engineers to assist them in their work. In some cases these professionals now have parity with their medical colleagues. For example, human genetics once the domain of the medical doctor is now a domain shared with scientists, engineers and lay people able to access published information at the push of a button.
- In 2000 the retiring Dean of the Auckland Medical School noted programme content is reaching saturation point and it is has become apparent that a new system of medical education is required (Chisholm, 2000). If this new system encompasses graduate and undergraduate medical education it may herald opportunities for significant sector change. However, for this to happen there will need to be a significant breakdown of the barriers between the various medical specialties.

The combined effects of these five developments may in time erode the barriers imposed by medical structures and division of work. Meanwhile discussions about the need for a specialist or generalist nurse and advanced nursing practice continue in New Zealand. What constitutes a nursing specialty or advanced nursing practice is far from clear. The development of roles such as diabetes, respiratory and oncology clinical nurse specialists would seem to confirm the continuing influence of medical form and functioning on the nursing structure in public sector health care agencies.

The restructuring of an organisation and the creation of new or changed boundaries and reporting lines on the organisation chart may give organisational structure the appearance of an independent entity. However these boundaries and lines represent factors that intersect, interact with and influence the functioning of the organisation.

Systems approaches were not used

The development and maintenance of safe, efficient and effective nursing care delivery that will best meet the unique needs of New Zealand public sector health service client populations within available resources requires a meld of structural reform and systems redesign.

The use of systems approaches to management and the concepts of patient and nursing care delivery systems was not evident. The reasons for this are not clear. Two factors may have influenced the results. Because the researcher wished to explore executives' and nurses' understanding of the patient and nursing care delivery systems these were not defined and for the particular benefit of executives the researcher provided background information on nursing models. While the question areas outlined in the pre interview information clearly indicated the researcher's interest in systems some participant's answers may have been cued by the information on models. More likely is the common use of nursing model and nursing system as synonyms. Even if answers to specific questions were cued by answers to nursing models, a systems approach was not evident in the data.

It is suggested two contradictory factors may have created major obstacles to using a systems approach to implementing and evaluating care delivery changes:

- The fragmentation created by, and maintained by the RHA contracting process; and
- The complex and poorly researched nature of CHE care delivery systems.

These factors combined with some nurse and some executive's lack of management sophistication has resulted in a failure to appreciate the advantages and disadvantages of using a systems approach in the health sector.

At the time of the interviews the majority of CHEs still had a service based structure. A number were planning or beginning to introduce new structures designed to remove or weaken the boundaries that had developed between services. A few, with staff members interested in changing to 'patient focused' or 'patient centred' care were taking a CHE wide approach and in doing so were beginning to use a patient

centred approach that transcended service boundaries. These approaches which included case management and critical pathways were based on a change in focus from a service as the agent of delivery to the organisation as the agent of delivery. While these approaches are more congruent with a systems approach than a service based approach they do not have the analysis of input, output and feedback inherent in a systems approach.

It could be argued that a systems approach was not appropriate at the time of the interviews. Indeed Mulgan's (2000 p.136) view is that "many of the 20th century greatest successes came from reductionism: breaking issues down into their component parts to guide the organisation of bureaucracies, production lines, or whole economies". Mulgan's suggestion that the reductionism of the health reform process may have been a necessary prelude to taking a systems approach is interesting. In terms of nursing it would suggest that the destruction of autonomous nursing services was a necessary first step towards nursing being recognised as and recognising itself as an integral part of the PCDS. It is also congruent with the need to remedy health professionals' detachment from the constraints imposed by limited resources and the need for efficient use of available resources. A systems approach militates against fragmentation, and therefore the ability to sustain competition and establish the clear organisational boundaries needed for the measurement of efficiency. The measurement of effectiveness however requires a systems approach (preferably in health a multi-system approach) and a capacity to measure multi-system input and client outcome. This was a factor acknowledged by Mulgan (2000, p.36) who argued "now many of the most important issues require more holistic, systemic ways of thinking that build on the insights of reductionism but go beyond them" and Kerfoot (1999, p.106) who observed:

Health care is not a series of linear events that can be isolated into parts and inspected without consideration of all the other processes that are occurring. The process of delivering care is fraught with complexities that defy reductionist simplification.... The process of care cannot be divided into silos of service line organization or the functional organization of parts within an organization that

cannot positively and synergistically interact as a system to achieve the goal of excellence in patient care.

Incorporating as it does all of the following elements, each of which interacts with all the others the NCDS is complex and multifaceted involving:

- Patients; their need, source, care process, education, satisfaction and destination.
- The philosophy of care underpinning nursing practice and the nursing care model/s in use.
- The physical layout of the institution
- The source, use and disposal/dispersion of resources, including nurses and caregivers.
- Staff and student education.
- Documentation and communication systems.
- Continuity of care over changing locations and shifts.

(Guild, Ledwin, Sanford, & Winter, 1994)

The scale of the work required to identify, analyse and evaluate the NCDS, even in a small public sector health care agency is daunting. It requires significant input of resources including scarce, knowledgeable and expert staff time. When nursing appears to senior staff to be operating in an efficient manner the investment of these resources is not a high priority. Instead resources are invested at local and national level to solve presenting problems. The result can be seen in the current fragmented approach to nursing issues. To illustrate; underway at the moment are the:

- KPMG Consulting [on behalf of The Nursing Council of New Zealand] strategic review of undergraduate nurse education.
- Ministry of Health's development of a framework for the first year of clinical practice.
- Second Level Sector Reference Group and the Ministry of Health work on developing competencies for the second level nurse.
- National Nursing Workload measurement project sponsored by Nurse Executives of New Zealand, the Crown Health Authority and MidCentral Health.

In addition to these projects the Health Workforce Advisory committee, the membership of which has recently been announced, will soon begin to address nursing and other health professional workforce issues. Unfortunately the completion of all these projects is unlikely to shed much light on the nature or definition of nursing work.

Inherent in the systems approach is a feedback loop preceded by an evaluation phase. It is argued that the failure to utilise a systems approach contributed in large part to participants' apparent disregard of the need for a planned and systematic evaluation of changes made.

Planned, systematic and ongoing evaluation of structural change and care delivery was not evident

Evaluation in a sector as complex as the health sector is a difficult task. The evaluation of planned changes to organisational structures and care delivery systems requires senior staff with an indepth knowledge of the subject being evaluated and appropriate evaluation techniques. Even then the evaluation of changes made presents a formidable challenge. Indeed the States Services Commissioner has argued "because of New Zealand's integrated approach to reform it is well nigh impossible to assign costs and benefits to any one element, such as a change in structure" (Wintringham, 1998, p.8), which is a viewpoint that perhaps indicates why evaluation was not given priority by many participants and one which promotes ad hoc and ongoing tinkering with structures and systems.

While actual evaluation is dependent on planned interventions being completed, provision for evaluation is an inherent part of planning. It could therefore have been expected that participants, who were all senior staff members, would consider evaluation to be a planned activity. This clearly was not the case. New structures were implemented, new care delivery systems, for example patient focused care and case management, were introduced without the planned and ongoing evaluation of their impact on the nursing care delivery system. New nursing practice/care delivery

models were introduced without an evaluation as to their practicality particularly on night duty. New contracts appear to have been concluded and introduced without any assessment of their cross service and/or cross system effects. The reasons for this are not clear but the problem is not solely a New Zealand one.

What we know about changes in organization and structure and the potential for these changes to affect patient outcomes pales by comparison to what we do not know. However, this is itself an important finding: we are subjecting hundreds of thousands of very sick patients to the unknown consequences of organizational reforms that have not been sufficiently evaluated before their widespread adoption. (Aiken, Clarke, & Sloane, 2000 p.463)

A number of factors are suggested as the possible cause of the evaluation of changes made to the organisational structure and the care delivery system having a low priority: These factors are:

- The lack of a systems approach.
- The priority given to structural reform and organisational efficiency.
- Changes made were not discrete but part of an overlapping and ongoing process of change.
- Frequently insufficient time was available to plan and implement one intervention before it was affected or replaced by another.
- Changes that occurred outside the organisation for example, the end of enrolled nurse training created and affected changes within the organisation.
- There was a shortage of staff members with the knowledge, skills, and expertise needed to plan and undertake evaluation
- Contracted work was apparently completed in a satisfactory manner.

In nursing these factors were combined with:

- A philosophy of finding ad hoc solutions to presenting problems in order to give the care required.
- A tradition of implementing significant change/s without a programme of planned, systematic and ongoing evaluation of their effect/s on patient care.
- Blurred lines of accountability especially on night duty.

- A decimated senior nursing staff and a consequent lack of people who understood the NCDS.

Participants appeared to use 'review', 'audit' and 'evaluate' as synonyms. The difference between these is subtle but important. To review is to make a one off "general survey or assessment" (Thompson, 1995, p.1179). Commonly a review is conducted by an external agency. To audit is to conduct a "*systematic review*" (p.81) of one particular component of a service e.g. documentation. To evaluate is to "1. assess or appraise, 2. Find or state the number or amount of, 3. Find a numerical expression for" (p.466).

It is possible to review a structure or system and not fully evaluate it. It is not possible to effectively evaluate a health structure or system without possessing an understanding of its component parts and their relationships. Executives, and senior nurses' capacity to identify and correct system failures is crucial to patient safety and "enhancing patient safety requires a firm and shared commitment on the part of nurse clinicians, executives and researchers to fill the knowledge gaps" (Maddox, Wakefield & Bull 2001 p. 10). While it is acknowledged that evaluation of organisational structures and care delivery systems in a constantly changing environment poses a significant challenge to executives' and senior nurses' evaluation is generally accepted to be an inherent part of management and health professional practice. The lack of priority given to evaluation is reflected in participants' failure to identify resource implications.

The resource implications of proposed changes were not canvassed

Related to the paucity of planned, systematic and ongoing evaluation is the participants lack of comment on the resource implications of changes in the organisational structure and patient and nursing care delivery systems. This is unfortunate, as an understanding of these implications is an important prerequisite to effective workforce planning.

Understanding and assessing resource implications is difficult because decisions made by one professional may result in the use of another professional's allocated resources. For example a doctor's decision to admit and /or operate on a patient late at night will require night nurses to be available to care for the patient. It may also require nurses who can cover for technical, pharmacy and physiotherapy staff and accompany patients to another part of the hospital.

Nursing, which was a large component of the health professional work in a CHE (and its successors), is primarily carried out by female registered nurses. The resource implications of having a female dominated workforce are considerable.

Nursing requires:

- Qualified and competent practitioners that are physically and mentally able to cope in stressful and on occasions, hazardous environments.
- Practitioners available to cover all shifts on any and every day of the week.
- Practitioners to devote time and energy to ensuring their ongoing competency.

When these requirements are in addition to nurses childbearing and family commitments they constitute a significant resource management challenge.

To add further complexity the return on money invested in care may not be apparent in the short term as it is difficult to measure the value of avoided complications and preventive education. In addition the minimal use of resources in one area may result in increased consumption in another area. In its extreme form it may result in cost shifting between one government department and another. While this may be deliberate cost shifting it is more likely a consequence of not taking a systems approach. More importantly cost shifting may result in a lowered health status at individual and community level.

Given that information system and plant and equipment costs are more readily determined than human resource costs the scarcity of references to them is surprising. Possibly this occurred because nursing is not generally seen as information or equipment intensive work.

Little was known about nature of nursing work in the CHE

In New Zealand nursing work is an elusive concept. Over the last decade it has become simply that work done by qualified nurses. Made up of knowledge work, physical work and what Bolton (2001) calls 'emotion work' its exact nature has not been adequately explored. What constitutes nursing work, how it is allocated and evaluated in terms of its contribution to meeting patient need and the optimal use of national resources is not known. The immediate and long term effects of structural change and changes within the patient and nursing care delivery systems and education system on nursing work currently remains unexplored. The emphasis given to the importance of personal qualities, in comparison to knowledge, suggests that nursing work is perceived to be human and face to face work, a conclusion that is congruent with nursing work being more than a physical and intellectual activity. However the recent emergence of robot nurses (Nativio, 2000) and telenursing (Lensen, 2000) suggests a contrary view exists.

As Hardy, Payne and Coleman's research on the use of 'scraps' (any available piece of paper) to record a "combination of personal and professional knowledge that informs the delivery of care (2000, p.208)" nursing does not have a strong written tradition. It is a profession that has until recently favoured face to face communication. When the majority of nursing staff were fulltime and leave allocations less, patient hand over meetings, regular (usually monthly) staff meetings and occasional study days provided an acceptable forum for the transmission of nursing related matters. Institutional memory resided with long term staff and some documentation.

The reform process combined with changes in nurses working conditions resulted in a number of changes, among them :

- A number of long serving nurses left the CHEs.
- An increase in part time and casual nursing staff.
- An increase in use of computerised documentation systems.
- A move to archive only information required by law.

- An increase in the time needed to communicate with all nurses on a public hospital's staff.

One result of these changes is a loss of institutional memory. As a consequence the historical foundations of nursing work in a particular institution are unlikely to be elucidated. The best that could be expected is that the nature of present nursing work in New Zealand is established. Such a project is resource intensive and is unlikely to be supported by nurses whose primary concern is their particular specialty and/or duty/shift or executives who control the allocation of resources. Unfortunately the ongoing failure to establish the nature and scope of the work being done by nurses in different locations, on a variety of shifts is likely to result nursing work being further delegated to other health workers.

Recent research looking at what nurses actually do is scarce and tends to be location specific for example, Jinks and Hope's (2000) observational survey of the activities of nurses on acute surgical and rehabilitation wards and Bowers, Luring and Jacobson's (2001) intriguing and valuable study of how nurses manage time and work in long term care. Identifying the nature and scope of present and potential nursing work is an essential prerequisite to determining the nature of the nursing workforce required and the education system needed to prepare and maintain it. This will require a considerable financial investment but the alternative, continuing the current ad hoc and fragmented approach, is unlikely to result in a NCDS that will meet future needs.

There was a desire for closer links between nursing practice and nursing education

Undergraduate education for the majority of government recognised health professionals is now undertaken in the education sector with clinical experience being purchased from public and private care agencies. For public sector agencies the clinical education of health professionals is an integral part of their work. As such it interfaces with, influences and is influenced by the public and professional

education systems. The effect of these on the activities of CHE was poorly understood.

Education sector contractual arrangements with public health sector agencies determine the student/clinician, student/educator and student/patient interface. The care agencies income stream, reflecting as it does the work of its medical specialists, determines the experience available to students. Hospital based undergraduate clinical education provides health professionals with a medically influenced frame of reference for their graduate study. As a consequence there is demand for nursing education programmes that echo the medical specialties, for example intensive therapy, paediatrics, medicine and surgery, geriatrics and public health. This in its turn generates a push for recognition of the specialist nurse role and a consequent ongoing demand for nurses able to fill these roles. Increased specialisation and scarcity are associated with increased costs. When budgets are constrained increased costs in one area must be contained by reducing costs in another. In nursing this has traditionally been done by devolving work previously labelled registered nurses work to less qualified staff. This in its turn drives a demand for new education and training programmes.

While the institution receives financial compensation for the presence of student nurses, their presence creates additional work and responsibility for health agency nurses. When students are perceived as being poorly prepared to work in a particular area it adds an additional stressor to an already stressful environment (Orchard, 2000).

Health care agencies are the primary source of clinically oriented staff in the education sector. But with these peoples' move to the education sector comes an insidious decline in their clinical competence that is only reversed in part by time spent in the clinical area. The medical school model of joint education and health sector appointments helps to overcome this problem but the difficulty that then arises is divided loyalty.

Nursing practice requires nurses who are competent and up to date. The respective role of the employer and employee in ensuring this is not clear. Up to date acute care experience can only be obtained in a health care agency and in the foreseeable future the majority of acute care these will continue to be public sector agencies. This indicates that there is a need for DHB executives and senior nurses to work more closely together to develop a closer links between nursing practice, nursing education and nursing research.

The approach to nursing research was fragmented and ad hoc

Clinically related nursing research needs to be conducted in a supportive clinical environment. That CHE based nursing research was not seen as an integral part of CHE activities is evident by the difficulties encountered by the researcher, the lack of an identified need for research and the lack of an ongoing programme of nursing research in the CHEs. With the current interest in evidence based practice and the slowly increasing use of joint appointments more CHE based research nursing research is being conducted, promulgated and utilised within health care agencies.

As Kalunzny and Shortell (2000 p.443) observe:

Nursing is the largest single profession in health care and is undergoing profound change given the larger transformation in the financing and delivery of health services. As a profession nursing, has joined the coalition of managers and physicians who can make a difference in the major challenges involved in providing an efficient and high quality health care. This is particularly true in enhancing the clinical integration of care across the continuum.

The study themes indicate factors that need to be addressed before nursing in New Zealand can reach its full potential as an equal and fully contributing coalition partner.

Chapter twelve

Discussion

It is time for clinical staff and management to make a fresh start in the co-operative endeavour that should be at the heart of any hospital: safe and effective care of patients. (Paterson, 2001)

Beginning with the disestablishment of the Department of Health's senior executive, line management Director of Nursing position in 1986 significant changes to nursing management predated the 1990s health reforms. At the International Council of Nurses 1989 conference in Seoul Sally Shaw, the General Manager (Population Health Policy) New Zealand Department of Health, gave expression to central government's emerging interest in a split between the management of nursing and the management of nurses. Shaw's advice that "Nurses *must* refocus on the core functions of nursing management within general management systems-on the management of *nursing* as distinguished from the management of *nurses*"(p.19) was not well heeded and nursing was ill prepared for the health reforms introduced by the incoming National government.

The 1991 health reforms began an intense and ongoing programme of public health sector structural reform. Financially driven, the mechanisms to measure efficiency themselves became drivers for further structural reform. The purchaser/provider split, itself a structural reformation, mandated a fragmented organisation. Structural change broke up formal hierarchies. Health professionals found themselves with two, often conflicting, lines of accountability; the managerial with its focus on the organisation and the careful management of limited resources, and the professional with its focus on the individual and the acquisition of resources needed for optimal health care. Continuing financial pressures seeded further structural reform and other changes that challenged many health professionals' beliefs and values. For the first time withdrawal of labour became a part of health professionals' negotiation repertoire.

Uncomfortable in the new environment many healthcare professionals left the public sector for the growing private sector. The loss of the institutional memory and the expert and experienced practitioners from the CHEs (and HHSs) needed to implement and evaluate the effectiveness of the care delivery system fuelled further structural reform. Health professionals who stayed or joined a CHE/HHS during the 1990s found themselves working in an environment of constant change. This combined with a need to adapt to new organisational structures, a contractual environment and changes in clinical care offered constant challenges to practising health professionals who consequently had little time and/or energy to concern themselves with the care delivery system as a whole. With management concentrating on efficiency gains, health care professionals occupied with organisational and professional challenges there were few staff members available:

- To assess and promulgate the advantages and disadvantages of past and present systems of care delivery.
- Who understood the intricacies and complexities of the patient care delivery system.
- With the knowledge and experience needed to evaluate the effects of structural and system change at unit, service, organisational, and sectoral levels.
- With health service management [as distinct from management] qualifications and expertise.

As a consequence ongoing structural change in the CHEs and HHSs, while still being impeded to some extent by the inertia that exists in large and complex systems and entrenched professional structures continued virtually unchallenged by CHE and HHS employees throughout the decade.

The health reforms entrenched the separation of managing nurses and managing nursing. Managing nurses became an executive [non-nursing] role and managing the nursing care delivery system at national and local levels and its interfaces and interactions with other systems fell into limbo. The sensitivity of intraorganisational structures to extraorganisational forces and events (Scott, & Backman, 1990) was ignored by those executives who saw nursing as an intraorganisational and service

bounded activity. Within this frame of reference the effects of restructuring on nursing and its core function (meeting patient need) as distinct from the effect on nurses was not a primary consideration.

The primary function of the CHE (and its successors) was/is to meet patient need. When this is not central to all the activities of a public sector health care agency the organisation lacks the common purpose needed to transcend the artificial boundaries established to meet operational and professional imperatives and establish safe, efficient and effective patient care as the pre-eminent function of the organisation. Participants' responses suggest that meeting patient need was not the primary or common goal of the CHE executives and nurses interviewed.

Taken together the study themes suggest that the largest and most expensive component of the public sector health service, the nursing care delivery system, is poorly understood and consequently not well managed. While individual executives and nurses may have had patient need as personal driver, participant's responses suggest that it was not central to the work of the organisation. Without patient need as a central focus health care organisations and the nursing profession do not have a unifying factor. Thus the organisation and the profession become a loose conglomeration of units. With this comes the push for increased specialisation first in practice and then in education. Once entrenched in education specialisation becomes self-perpetuating

With structural reform such a prominent factor at the time of the interviews it is surprising that so little consideration appears to have been given to establishing why a particular structure was the most appropriate one for a particular CHE. The influence of geography, funding systems and the need for efficiency is evident in participant's answers. The irony as demonstrated by some participant's answers is that the fragmentation designed to improved efficiency ultimately becomes self defeating because the boundaries established to manage economic imperatives militate against the efficient flow of patients through the organisation, creating unnecessary expenditure. Failure to consider the effect of organisational structure on

patient outcome and executives and nurses apparent expectation that nurses input, especially from nurses on night duty, into the choice and evaluation of structure was not required indicate a perceived separation of organisational structure and function. The failure to link structural changes to organisational function was not an issue for participants because organisational efficiency was their priority. Because effectiveness was not a priority the lack of a systems approach and its consequent need for executives and senior nurses to have an understanding of the patient and nursing care delivery systems was not perceived by participants to be a problem.

The place of nursing practice/care delivery models and their relationship to organisational structure and patient and nursing care delivery systems did not appear to be well understood by executive or nurse participants. Executives and nurses appeared to regard nursing education and nursing research as items of interest rather than important elements of nursing.

Of concern was the number of nurses who interpreted the NCDS as a model and then did not reveal a good knowledge of the model's advantages and disadvantages, the resource implications of implementing that model or an expectation that the model's implementation would be evaluated.

Planned, systematic and ongoing financial audit seems to have been accepted as a key component of management but assessing costs to the institution and/or service overrode the assessment of total cost to the state and hidden costs to family and friends. This however is a by-product of the competitive model and may since have been alleviated by the move first to HHSs and subsequently to DHBs.

Evaluation of effectiveness was not given priority or identified as such. The lack of planned, systematic and ongoing evaluation and appreciation of the advantages and disadvantages of structures and systems in place and resource implications evident throughout this study suggests an inherent lack of sophisticated health management knowledge and expertise among executives and senior nurses.

The current nursing shortage which has recently resulted in Auckland nurses being reportedly offered a bounty of \$500 for each nurse recruited is the result of what Pinkerton considered to be a “disequilibrium between supply and demand” (Pinkerton 1999 p. 32). The delicate and complex nature of the balance between these forces and the inherent complexity of the NCDS is illustrated by Dumpe Herman and Young’s (1998) nursing workforce forecasting model. Health sector workforce forecasting is a difficult management art that requires an excellent understanding of the present delivery system and the collaboration of health and the now essential technology professionals. Health care professionals constitute the single biggest ongoing expense in the public health sector. They are tertiary educated and their education is expensive, time consuming and ongoing. Their practice is interdependent and should be research based. The lead time required to prepare them mandates health service executives and senior nurses with an ability to predict, recognise and understand the consequences of trends in health care. Participants’ responses demonstrated little recognition of these trends.

Nano, genetic, and electronic technologies; nutritional and biochemical manipulation and supplementation; global environmental management and personal self care had already laid the foundations for new forms of health service at the time of interview. ‘High tech’ and ultra ‘high tech’ institutions now have more in common with their global counterparts than they do with their comparatively ‘low tech’ community health service neighbours. New discoveries can be promulgated (and in some situations implemented) before the long term consequences have been determined. Managing and practising well in this context requires high level health care knowledge and expertise.

The scale of the challenge faced by executives and senior nurses is demonstrated by the dearth of available information about nursing work. “The type of patient needing care is a primary determinant of nursing” (McManus & Pearson 1993 p. 79) and the type of patient is determined by a complex web of demographic, geographic ethnographic, social, economic, technologic and non nurse professional factors. Once a patient is admitted to a public health agency it is expected that the agency’s

nurses supported as necessary by temporarily employed nurses from other agencies will provide the nursing care required.

The nature, allocation and evaluation of nursing work are poorly understood. Possibly this occurs because while “nursing is a complex art involving the provision of hundreds of different specific activities in an infinitely diverse combination to satisfy patient needs, usually on a hospital nursing unit” (McManus & Pearson, 1993 p. 79) the complexity of nursing work is lost sight of in its illusionary simplicity.

Nursing is essentially interested in the reality of everyday life, of being. Nursing knowledge and skill are expressed through acting in the world in very practical ways, rather than in dwelling on abstraction. Indeed society expects this pragmatic, immediate orientation from nurses. Because of this there is a tendency for some nurses and rather more policy makers, social scientists and other health professionals to construct nursing as merely the application of science constructed by ‘experts’ thus the nurse is seen in some quarters as the Jack or Jill of all trades and the master or mistress of none. (Pearson, et al., 2000 p.160)

Expert nurses are the masters and mistresses of nursing. Managing these nurses in a small country is particularly difficult because the “specialist and idiosyncratic nature of their work makes detailed regulation or supervision of defined periods of knowledge work difficult or impossible” (Hodgson, 2000, p.107) and there is limited potential for peer review. Every day nurses make hundreds of nursing decisions in an increasingly complex and sprawling health care environment. The quality of the majority of those decisions is unknown and their effect on patient outcome a mystery. Because it is individual patient need, not diagnostic category that determines nursing need nursing practice should be tailored to the individual and their family by expert nurses. The availability of expert nurse hinges on the timely preparation, recruitment and retention of these nurses. This in its turn is influenced by international health care trends, the availability of nurses world wide and an appreciation by executives and nurses that nursing requires high order nursing knowledge, skill and expertise and expert nursing requires sophisticated management, nursing and research knowledge and expertise.

The interview responses showed a perceived lack of integration of education and practice. A closer physical relationship between nursing education and health care institutions would facilitate the development of nursing knowledge and expertise. In this respect the medical model of education has much to commend it. It not only has the advantage of facilitating a closer integration of theory and practice it also facilitates up to date clinical practice and research based practice and adds a degree of continuity in a changing environment. The major disadvantages of such a relationship is that working together to meet immediate local need academics and clinicians may lose sight of the larger health challenges.

While there is an “urgent need for clearer definitions and more consistent methods to study the nursing issues or nursing service structures, support systems, patient classification systems, the determination of nursing costs and interrelationships among these variables” (McManus, & Pearson, 1993, p. 90) the immediate need is for an improved understanding of nursing work. Currently this is poorly understood as the lack of recent, internationally and New Zealand, researched answers to the following questions, demonstrates.

- How do nurses contribute to maintaining a safe environment for patients, their relatives and friends and staff?
- How is an individual patient’s need for nursing care throughout a particular duty determined and the nursing care given evaluated?
- On what basis are the needs of a group of patients and their relatives and friends prioritised?
- What determines the nursing practice care/delivery model selected to frame the allocation of work in a given situation at a particular time?
- How is nursing work allocated? How does the assessment of need and allocation of particular staff members and their time vary in different locations? For example, in acute medical/surgical care how is the need for emotional support of patients and relatives determined and time allocated to achieve this? In mental health nursing how is the need for physical care assessed and the work allocated?

- How does the actual nursing care given relate to pre-duty assessments of patient acuity?
- What care is omitted when available resources do not permit all the nursing needs to be met?
- How is nursing work documented?
- What are the qualifications and experience of nurses [including casual and agency nurses] actually delivering nursing care?
- How do nurses manage a patient's interface and interaction with other systems? How and where do they learn to do this?
- How is nursing knowledge and nursing craft transmitted in the practice area?
- What level of specialist knowledge required by nurses not working in specialist unit but nursing patients before and/or after their time in those units?
- Is there a core of nursing work that is common to all nursing in New Zealand? If so what is it?

A new perspective

A combination of time required to obtain the interviews and to meet work demands mean that this project has inadvertently become a longitudinal study. As a consequence it is now possible to offer a new interpretation of the reform process as it affected nursing. It is suggested that the 1990s reforms were an unrecognised catalyst for significant changes in nursing. The reforms created a new structure but not a fundamentally changed system of care delivery. Initially clinical nursing in the public sector continued pretty much as it had always done. Over time however the new structures effectively fragmented and eroded the old system of nursing control and with this has come a renewed national focus and willingness to look at nursing in the context of the new health care environment which has coincided with the end of the National/New Zealand First coalition government and the coming to power of the Labour/Alliance coalition government.

Limitations of the study

Given the exploratory and wide ranging nature of this research it is inevitable that it has a number of limitations.

Scale and breadth

The scale, breadth and unique nature of the study posed significant and ongoing challenges for the researcher. Three main reasons for this have now been identified

- The constantly changing health environment.
- The huge amount of relevant literature generated during the course of the study and most importantly,
- The research being out of step with the prevailing emphasis on efficiency, structural reform and service management.

Thus a significant facet of the study was the project's incompatibility with the prevailing organisational climate. The same research conducted today when the value of using a systems approach to organisational development is again, after a break of some 20-30 years, being explored would be more compatible. Combined with the government mandated competitive environment and the management of nurses by non-nurses this had the unanticipated effect of limiting the amount and range of expert advice and experience available to the researcher. As a consequence ideas that might otherwise have been tested in discussion were tested in reality.

Sole researcher

The researcher believes the advantages gained by taking an overview and looking at multiple factors in the organisation outweigh the disadvantages of the approach. However the disadvantages of a sole researcher taking the broader approach are considerable and if the research environment had been different a team approach to researching nursing care delivery in New Zealand would have been advantageous.

Negotiated project

The research project completed was that negotiated over time with CEOs, ethics committee members and participants. As a result it is the research that proved possible not the research as originally conceived.

Time and context specific

Research findings are time and context specific. CHEs have since been replaced by Hospitals and Health Services (HHSs) and District Health Boards (DHBs). The

highly fragmented and competitive system in place at the time of the interviews has been abandoned and with it some of the difficulties encountered by researchers wishing to obtain approval to conduct national studies. Ethics approval processes have been streamlined.

Reductionism

A further limitation of this research is the limitation inherent in any analysis of a social system. That limitation is the reductionism necessary to analyse the system being inimical to understanding the system as a whole. In this study organisational structure, patient and nursing care delivery systems, nursing and caregiver skill, knowledge and expertise, nursing education and nursing research are addressed as separate topics and the findings recorded in separate chapters. Using a thematic approach to analysis was designed limit the effects of this separation and maximise the study's coherence and unity.

Participants

Participants were a self-selected group of executives and senior nurse willing and available to take part in the study. As such they do not represent the views of those invited but unwilling or unable to take part.

Finance managers have an overview of the whole organisation and a unique view of nursing and financial system evaluation is normally pre planned and comprehensive. Why so few finance managers wished to participate is not clear. Participants and two potential participants initially thought they had been contacted in error. The two potential participants telephoned to say they had been willing to participate but would not now be able to so because they were leaving their position.

Confidentiality and anonymity

The need to preserve participant and CHE confidentiality and anonymity posed some limitations. For example a detailed analysis of participants' biographical information could not be given. This eliminated information about qualifications that had the potential to identify participants. Some participant's answers that clearly identified a

CHE required editing or omitting. While this latter did not affect the results it may have affected the audit trail.

Literature and new developments

Nursing care delivery is the subject of the thesis. In the CHE and its successors this was/is carried out within a context that includes organisational structure, the patient care delivery system and nursing education and research components and their interrelationships with the nursing care delivery system. This study therefore needed to address all these topics. The literature on each and every topic is substantial and separate.

Virtually every week there are significant new developments in the New Zealand health sector. The majority of these will affect nursing some directly, some indirectly. For example, District Health Board CEO positions have been advertised, the Ministry of Health has entered into a formal understanding with some nursing organisations for greater nursing input into health policy, Manawatu Polytechnic (trading as UCOL) has challenged Massey University's right to conduct an undergraduate nursing programme and a Mental Health Commission review of policies around disclosure of patient information has been announced.

In order to encompass the breadth and range of relevant information required within a thesis framework and because literature that deals with nursing care delivery in context is sparse the classic indepth literature review has been replaced by broader, more selective and informative approach. While a pragmatic solution, it could be viewed as limitation because the approach is more superficial and informative and less analytical than is generally expected of an academic literature review.

Indications for future research

Nursing is an expensive and fundamental part of the caring for patients. As a profession it is sustained by independent, national research and publicly available research results. An independent, national and longitudinal New Zealand study of public, private and voluntary sector nursing would yield a great deal of valuable

information about the present health care system. In its absence smaller studies such as this offer some insight into the system.

As an exploratory descriptive study this research is a pilot project that clearly indicates the immediate need for research that establishes the nature and scope of, and evaluates, nursing work.

Specifically it demonstrates the need for collaborative nursing and management research which:

- Investigates the nature of the PCDS, its component parts and their relationships and interactions with each other and outside systems.
- Researches health sector decision-making processes and the way in which they affect nursing.
- Provides an ongoing analysis of trends that have the potential to significantly affect future nursing care.

Nursing is a wide-ranging, complex and dynamic entity, practised in variety of environments over a range of duty times. Consequently research on nursing care delivery is difficult, expensive and time consuming; all features that make it unattractive to potential researchers and funding agencies. The situation is further complicated by the lack of capacity for longitudinal (over decades) research that is the result of the contestable and short term nature of most research funding and a scarcity of nurses and executives with the ability to appreciate and a willingness to utilise nursing research findings. To remedy this, special provision needs to be made for government funding of selected national and longitudinal studies.

Recommendations

New Zealand is a unique country. Its demography, geography, and small population base pose particular challenges. The management of modern nursing requires sophisticated nursing and management knowledge and expertise combined with an appreciation of the special characteristics of the local context. Participants' lack of appreciation of the resource implications of decisions made and the lack of planned

evaluation suggest a need for improved health executive and senior nurse management expertise. New Zealand's small population provides a limited base for specialist nursing management and/or nursing practice positions so people with these attributes are in short supply. It makes sense therefore to suggest that the management and development of nursing in New Zealand requires the re-establishment of a small number of senior nurse executive positions in a central, national nursing agency. With the disestablishment of the Department of Health there is no longer a home for a central nursing executive so the Ministry of Health is the default location suggested. To ensure the development of innovative nursing practice/care delivery models and systems that will meet New Zealanders' present and future need for nursing care it is strongly recommended that priority be given to identifying the nature of nursing work.

It is also recommended that:

- An independent nursing research unit with a capacity to carry out national and longitudinal research in nursing is established.
- An independent national agency to oversee the management and development of nursing in New Zealand is established.
- The Ministry of Health commission a review of health management education.

Conclusion

The consistent delivery of safe, effective and efficient nursing care is an ongoing challenge to public health care agency executives and senior nurses because it requires a carefully managed meld of structural reform and systems redesign. The management and development of nursing, as distinct from nurses, at national and local levels requires a collaborative and informed senior staff with the common and primary goal of meeting patient need. It also requires an understanding of the relationship between organisational structure and function, in depth knowledge of the patient care delivery system, its component parts, their interface and interaction with each other and with other systems, combined with a high level of management knowledge and expertise.

The results of this study strongly suggest that this is not the case and indicate an overall lack of knowledge about nursing care delivery and the nature of nursing work in the reformed health care environment. The findings also suggest a lack of sophisticated resource management and evaluation expertise. It is suggested that the primary reasons for this are the paucity of international and national research on these subjects and a fragmented approach to the management and development of nursing in New Zealand.

From this study the following emerge as areas of concern requiring both attention and further study to enhance the future development of nursing in New Zealand.

- By treating organisational structure as a self contained entity the relationship between structural change and care delivery is not fully explored.
- Future developments in patient and nursing care delivery systems will require executives and nurses with an understanding of, and an ability to use, systems approaches.
- The lack of planned, systematic and ongoing evaluation compromises the future development of nursing in New Zealand.
- When the resource implications of proposed changes are not canvassed practical and economic issues remain to be investigated.
- With little known about the nature of nursing in the CHEs its effectiveness cannot be questioned.
- The issues associated with developing closer links between nursing practice and nursing education require further exploration.
- With limited resources available for research the present fragmented ad hoc approach to nursing related research is inefficient.

If it is true that “in health reform lies its renaissance and its challenges and opportunities “ (Guild et al., 1994 p.23) the renaissance of nursing in New Zealand would seem to be due. However that renaissance will require the ‘continuously co-operating relation’ of executives and senior nurses at all levels and locations of the health service.

In the Keynote address to the 3rd [of four] conferences organised by the OECD Forum for the Future and held in Berlin from 6-7 Dec 1999 Donna E. Shalala the US Secretary of Health and Human Services identified six challenges that will confront us in the 21st century. Each of these has a health-related component:

Ageing

Poverty

The skills gap

Reducing income inequality

The public health challenge of the borderless community

Ending racial, religious and ethnic hatred. (Shalala, 2000).

Participants gave little indication that they anticipated that nursing will play a part in meeting these challenges. Individual shifts in health care such as an the increasing demand for health services by older people were mentioned but very few practitioners appeared to appreciate the nature, scope and significance of the multiple shifts that are occurring in health care. Four years after the interviews for this study, a decade after the 1991 health reforms and 100 years after nursing registration was introduced in New Zealand, the true (as distinct from perceived) value of New Zealand nursing in terms of its ability to deliver safe, effective and efficient nursing care and meet new health care challenges is all but unknown. In order to make a realistic appraisal of the likely future of New Zealand nursing it is suggested that it is necessary to define and evaluate the present national nursing care delivery system and its education and research components. This research suggests that there would need to be a considerable amount of work to be done before that could be completed and the potential contribution of New Zealand nursing to meeting the challenges identified by Shalala (2000, *op. cit.*) established.

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**FACULTY OF
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Appendix 1

INFORMATION SHEET NURSING CARE DELIVERY

DEPARTMENT OF
NURSING AND
MIDWIFERY

My name is CHARMAINE HAMILTON. I am a Senior Lecturer in the Department of Nursing and Midwifery at Massey University and a member of the Nursing Council of New Zealand. I am taking the opportunity provided by my enrolment as a Doctoral candidate to undertake a research project that will contribute to the development of new ways of delivering quality nursing care to patients.

This research is being supervised by:

Professor George Shouksmith who is Dean of Social Sciences at Massey University, and Associate Professor Judith Brook who is Associate Dean of Social Sciences and a lecturer in the Department of Psychology at Massey University.

They can be contacted by telephoning the Massey University Palmerston North campus on 06 3569099.

If you decide to take part in the study you are asked to complete and return the enclosed consent form to me in the envelope provided. Return of the consent form indicates to me your willingness to participate in the study. Once I receive your form I will contact you to arrange a one hour, face to face audio-taped interview at time and place convenient for both of us.

If you agree to participate in this study you have a right to

- refuse to answer any particular question
- withdraw from the study at any time
- ask any further questions
- provide information on the understanding that it is confidential to me and my thesis supervisors

When the study is completed (hopefully in 1998) I intend to send a summary of the results to the CHE Chief Executives and submit an article to Kai Tiaki (The Journal of the New Zealand Nurses Organisation) outlining the results.

My contact numbers are:

- Telephone 06 3570724

If you leave a message on my answer-phone please leave a contact phone number and suggest a convenient time for me to return your call. On occasions I will be out of the office for 3-5 days at a time. In the event that you need to contact me urgently contact the main office of the Department of Nursing and Midwifery-telephone 06 3504 335 fax 96 3505668.

- Fax 06 3570926



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Appendix 2

CONSENT FORM to be completed prior to interview

NURSING CARE DELIVERY

I have read the Information Sheet for this study. My questions about the study have been answered to my satisfaction, and I understand that I may contact the researcher for an answer to any other questions I may have at any time.

I also understand that I have the right to withdraw from this interview at any time, and to decline to answer any particular questions. I agree to provide information on to the researcher on the understanding that it is kept completely confidential.

I agree to the researcher's interview with me being audio-taped by the researcher.

I understand that I may request to see all or part of the transcript of my interview once this transcript has been prepared.

I agree to participate in this study under the conditions set out on the Information Sheet, of which I have a copy.

CHE Name

Position in the CHE

Name (Please print in capital letters)

Contact Phone Number/s

Signature

Date

Appendix 3

NURSING CARE DELIVERY

ALL PARTICIPANTS:

1. Please give the full title of your present position
2. How long have you been in this position?
3. Please list your academic and professional qualifications in full
4. If you are agreeable please indicate which ethnic group you identify with
5. If you are agreeable please give your age within one of the following 10 year bands:

10-20 20-30 30-40 40-50 50-60 60+

NURSING CARE DELIVERY

These following questions all relate to this CHE.

1. Please describe the present CHE organisational structure
 - 1a) who chose this structure?
 - 1b) why was this particular structure chosen?
 - 1c) when was this structure put in place?
 - 1d) how is the implementation of this structure evaluated?
 - 1e) what are the resource implications of having this particular structure?
2. Please describe the present patient care delivery system
 - 2a) who chose this system?
 - 2b) what are the advantages and disadvantages of this system?
 - 2c) when was this system put in place?
 - 2d) how is this system evaluated?
 - 2e) what are the resource implications of implementing this particular system?
3. Please describe the present nursing care delivery system
 - 3a) who chose this system?
 - 3b) what are the advantages and disadvantages of this system?
 - 3c) when was this system put in place?
 - 3d) how is this system evaluated?
 - 3e) what are the resource implications of implementing this particular system?

5. What knowledge, skills and expertise do you think registered nurses require to best work in the present system?
6. What knowledge, skills and expertise do you think enrolled nurses require to best work in the present system?
7. What knowledge, skills and expertise do you think caregivers require to best work in the present system?
8. Are you planning to change the patient care delivery system?
 - 8a) If you are planning to change the patient care delivery system please describe the new system present
 - 8b) If you have not made a decision about the new system please tell me which systems you are considering
9. Are you planning to change the nursing care delivery system?
 - 9a) If you are planning to change the nursing care delivery system please describe the new system.
 - 9b) If you have not made a decision about the new system please tell me which systems you are considering
10. What knowledge, skills and expertise do you think registered nurses will require to best work in the new system
11. What knowledge, skills and expertise do you think enrolled nurses will require to best work in the new system
12. What knowledge, skills and expertise do you think care assistants will require to best work in the new system
15. Describe the ideal system of nursing education
16. What nursing research would you like to see done?

[Note: after the first few interviews it was apparent that the distinction between past and present was not relevant and this distinction was not pursued.]