REPORT OF THE HEALTH SERVICES MANPOWER PLANNING WORKSHOP
Rotorua, September 1982
DEPARTMENT OF HEALTH

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Planning group

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Mr J R Martin, Deputy Director-General of Health (Administration).

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Consultants

Dr T L Hall, Director, Puget Sound Health Systems Agency.

Dr R M Williams, Leader of the planning group.

Other participants

Mrs M C Bazley, Director, Division of Nursing, Department of Health.

Ms M-A Boyd, Clinical Tutor, School of Occupational Therapy.

Mrs M E Bruce, Executive Officer, Federation of Voluntary Welfare Organisations.

Dr Heather Buchan, Past President, New Zealand Resident Medical Officers Association.

Mr David Buckle, Vice-President, Pharmaceutical Society of New Zealand.

Miss Sue Burrell, President, New Zealand Nurses Association.

Mr George Gordon, Chief Executive, Palmerston North Hospital Board.

Dr H J H Hiddlestone, Director-General of Health.

Professor J B Howie, Department of Pathology, Otago Medical School.

Dr A T Johns, Chairman, University Grants Committee.

Mr B W Kings, Assistant Secretary Tertiary, Department of Education.

Mrs J M MacKenzie, Chief Social Worker, Wellington Hospital Board.
Miss A E Murphy, Chief Nursing Officer, Auckland Hospital Board.

Dr James Ng, General Practitioner, Dunedin.

Mr O R Nicholson, Orthopaedic Surgeon, Auckland.

Mrs V O'Sullivan, Chairman, Waikato Hospital Board.

Mr D J Philip, Chairman, Medical Laboratory Technologists Board.

Mr W Potaka, Senior Executive Officer, Division of Hospitals, Department of Health.

Mr C B Ross, Chairman of Council, New Zealand Dental Association.

Miss Y T Shadbolt, Head of Department, School of Nursing, Auckland Technical Institute.

Dr D P Short, President, New Zealand College of Community Medicine, and Medical Superintendents Association.

Dr A J Sinclair, Deputy Director, Division of Hospitals, Department of Health.

Mr W E B Tucker, General Secretary, Public Service Association.

Mrs P G Wood, Course Supervisor, Physiotherapy Department, Christchurch Hospital.

Guest speakers

Sir Frank Holmes, then Chairman, New Zealand Planning Council.

Professor Margaret Clark, Department of Political Science, Victoria University of Wellington.

Assistance was provided by staff of the Management Services and Research Unit of the Department of Health.

Mr Richard Featherstone - workshop administration.

Mr Alan Morris - information support.

Mrs Eleanor Morris - workshop record.
Part A : the workshop

1 INTRODUCTION

Background

The health services workforce is the most essential element in the delivery of health care. The size and shape, the cost and the quality of that workforce should be of paramount interest to everyone concerned with health.

Because the workforce is made up of numerous diverse occupations, each with its own training, philosophy and special concerns, it is essential towards planning the whole that the parts are brought together. They need to share information, identify common goals and compromise parochial interests if their potential to fragment rather than coordinate health care delivery is to be avoided.

The major components involved in planning, producing and managing the workforce are the employees and employers, the education service, professional associations, industrial interests and registration boards. All these should be involved in the planning process.

With the present, and probably ongoing, constraint on health expenditure, any significant increase in health workforce numbers is unlikely. This presents problems because decisions made in the late 1960s and early 1970s to increase numbers of health workers now means a potentially serious oversupply in some occupations. Yet despite the general prospect of oversupply there are still some difficulties in recruiting and retaining appropriate health workers, depending on the geographic location or the occupation.

In New Zealand there was little in the way of formal manpower planning in the health area before the mid-1970s. Most planning had previously been done by ad hoc groups within the various occupations. By and large the information available to these groups for planning purposes was fragmentary and generally inadequate.

Since the early 1970s the coverage and quality of the statistics available for manpower planning have improved for most occupations. National manpower planning workshops have been held in the fields of medicine, nursing, dentistry and general health administration. Structures have been created to gather data and undertake ongoing planning.

Initial stimulus for a workshop first came from the Advisory Committee on Medical Manpower in 1979. There was a need to bring together both the various occupational groups and others with a role in the workforce planning process. The committee recommended that national health planning mechanisms be developed to include medical manpower planning within the broader context of health and health manpower planning. Subsequently, in 1980 the committee took up the theme again, recommending that a workshop be held with the aim of initiating a fully integrated health workforce plan.
In 1981 the government approved a proposal to hold such a workshop. The prime concern of the workshop was to be the workforce planning process - how the health workforce is, and could be, planned. It would consider how responsibility for the various steps in the planning process could be shared between agencies of government and other involved organisations. The object was to agree upon an integrated planning process, not to produce a national plan with manpower targets for each occupation.

### Workshop planning

In December 1981 a planning group started work on the project. Members of the group were:

Dr R M Williams, retired Chairman of the State Services Commission and previously Vice Chancellor of the Australian National University and the University of Otago.

Mr J Ferguson, Secretary/Registrar, Pharmaceutical Society of New Zealand.

Mrs G C Foster, Division of Nursing, Department of Health.

Mr H E Hutchings, Senior Education Officer Continuing Education, Department of Education.

Mr J R Martin, Deputy Director-General of Health (Admin).

Mr R I Parker, Chief Executive, North Canterbury Hospital Board.

Dr D E Richmond, Department of Medicine, School of Medicine, University of Auckland. (Replaced during his brief absence overseas by Dr C H Maclaurin, Chairman, Council for Postgraduate Medical Education).

Dr G C Salmond, Director, Management Services and Research Unit, Department of Health.

Assistance and research support were provided by the Department of Health's Management Services and Research Unit.

The planning group's terms of reference were:

- to prepare a proposal for an integrated and ongoing health manpower planning process in relation to future health programmes in New Zealand
- to gather, analyse and present information to support the proposal
- to present the proposal to a suitably representative workshop of leaders in the various health occupations
- to report on the workshop and initiate implementation of recommendations

### The workshop report

This report is divided into three parts. In Part A, chapter 2 presents the main conclusions and recommendations agreed by all participants at the workshop.
Part B provides the commentary on workshop discussion of specific issues. Chapter 3 outlines the current social and economic environment which affects and is affected by planning. In chapter 4, moves to reorganise the health services are described. These have important implications for workforce requirements. Chapter 5 provides some background information on health services occupations. With women making up approximately three-quarters of the health workforce the particular issues this creates for planning their training and employment are of significance, and are discussed in chapter 6. Health sector training in technical institutes, and the interaction between the health and education sectors is discussed in chapter 7. Chapter 8 summarises the reports made to the plenary session and the ensuing discussion.

Part C summarises reports and papers prepared for the conference and sent to participants before the workshop began. Chapter 9 is a summary of all the working papers. Two papers on education and training are reproduced in chapters 10 and 11. The first is a paper by Dr Williams, Chairman of the planning group, on interaction between the health and education sectors, and the second, by Mr H E Hutchings, is on health sector training in technical institutes. Chapter 12 gives a review of the submissions made to the planning group.
2 CONCLUSIONS AND RECOMMENDATIONS OF THE WORKSHOP

The workshop's purpose was achieved in that a proposal for an appropriate structure and process for integrated health workforce planning was formulated and agreed.

The following is the report of the workshop's main conclusions and recommendations. After the workshop it was sent to all participants and interested individuals.

General propositions

The workshop affirms the following general propositions as a basis for action by the government, all health workers and the wider community to protect and promote health and to make best use of health care resources.

1 The workforce is the most important and costly resource in the provision of health care. Human resources in the health sector should be carefully planned and developed.

2 Workforce planning is but part of the wider task of planning health care. Without health planning there can be no effective basis for the recruitment, training and use of health workers.

3 The government, through the Department of Health, has the leading role in health planning - including workforce planning. It is the government's responsibility to formulate national priorities, policies, strategies, guidelines and plans for action for health promotion, disease prevention, and the delivery of health services. In addition it should make available to interested parties the data base and assumptions upon which planning decisions are made.

4 All developed countries have in recent decades seen health expenditure rising at a significantly faster rate than national production. In New Zealand, as in many other countries, it is now generally accepted that the rise should be no more than production generally. In the years immediately ahead health expenditure in real terms is unlikely to grow any more rapidly than in the recent past.

5 To conserve resources and hence benefit from modern developments in health promotion and health services there must be a significant and sustained improvement in the management of health resources. Managers should be better trained and supported. They, along with decision-makers at both the administrative and political levels, should receive adequate information for discharging their responsibilities.

6 Changing public attitudes and opportunities for health status improvement are likely to mean that greater emphasis will be placed on health promotion, disease prevention and the delivery of community care. Institutional health services will continue to account for the major part of health expenditure but the emphasis is shifting more in favour of community care. Increasingly the political will is likely to favour this redeployment of resource.

Workforce planning propositions

7 The workforce should be planned with wide involvement of all interested parties. These include:
Department of Health
education authorities
health professionals
health administrators
educators of the health professions
employers
consumers
employee organisations
health sector students

The structure and process of planning should facilitate interaction with all groups. Special attention should be given to ensuring the full involvement of employers in health workforce planning, and to fostering joint planning among related health occupations.

8 Ways and means should be sought to coordinate and integrate government action in health care and education. Health care systems should join with educational systems in planning, implementing and evaluating basic and continuing education programmes for all practising health professionals, managers and teachers.

9 In the past planners have been mainly concerned with the stock-taking and supply aspects of the workforce. In future greater attention should be paid to role definition, standards, quality of care and productivity issues.

10 Through the decade of the 1960s and early 1970s the national economy was relatively strong and health expenditure grew steadily. Student intakes increased rapidly in many health occupations. Now with large graduating classes and constrained economic growth New Zealand can expect more health personnel in some fields than can be effectively employed. Such oversupply could result in personal disappointments, unnecessary care and expenditures, and inter-occupational problems, even while failing to fully correct continuing problems in deployment by mode of practice, area of specialisation and geographical dispersion. Innovative incentive schemes and regional arrangements will be required.

11 Approximately 70 per cent of the health workforce are women. With changing social and economic circumstances the involvement of women is increasing in all aspects and at all levels in the provision of health care. In some occupations the percentage of female entrants is increasing rapidly while others are experiencing significant changes relating to female participation and re-entry rates, and part-time career employment. These and other factors will need to be taken into consideration in workforce projections, along with ways in which working arrangements can be designed to enable the full potential of the trained female workforce to be utilised in the health sector.

12 For better integrated health workforce planning to be possible there must be structural change and better planning processes. To this end the workshop proposals are described in the next section. However, of themselves, these will not be enough. In a pluralistic society with complex and multiple goals and values it is necessary to learn ways of negotiation, ways of debating values and setting goals while recognising that conflict is natural and that different interests are legitimate. Coordination, the act of bringing the pieces together, requires trust and goodwill. Planners should seek ways and means to help parties to the planning process work collaboratively.

A structure and process
for integrated health workforce planning

13 The workshop noted the progress which has been made over the last decade in planning for the health workforce in New Zealand. Since the early 1970s the coverage
and quality of the statistics available for workforce planning has improved for most occupations. National manpower planning workshops have been held in the fields of medicine, nursing, dentistry and health administration and structures created to gather data and undertake on-going planning. Several other occupational groups have also moved to improve their manpower planning performance. Now it is time to draw these initiatives together in an effort to establish a process for integrated planning to cover the whole health workforce.

14 To this end the workshop recommends the immediate establishment of a Health Workforce Advisory Committee. Initially the committee could be set up as an advisory committee to the Minister of Health. When the Board of Health is reconstituted there could be advantage in the committee becoming one of the standing advisory committees to the board. As well as responding to requests from the Minister and the board the committee should have the right to undertake projects and to report on its own initiative. It should also preserve the right of direct access to the Minister while informing the board.

TERMS OF REFERENCE

15 The committee should advise the government on matters relating to the education, training, distribution, deployment and continuing development of the health workforce.

To accomplish this mandate the committee should:

(1) in the context of health planning, facilitate the alignment of workforce plans with the evolving needs of the population and with the health related aspects of national planning in other sectors of the economy;

(2) monitor the present situation and future developments in the need for and in the recruitment, education, training and deployment of the various health occupations;

(3) assess the workforce implications of changing technology and systems for the delivery of health care;

(4) identify emerging workforce shortages and oversupply and recommend measures, both immediate and long-term which may include retraining and redeployment whereby the adverse effects of these imbalances may be minimised;

(5) develop an advisory network, commission studies and plans and convene suitably representative working parties to review and report on specific issues;

(6) promote a national planning cycle for updating estimates of requirements and supply, and review these across the various occupational categories;

(7) monitor implementation and evaluation of health workforce plans; and

(8) report annually and publish major findings, recommendations, accomplishments and future committee plans regarding the health workforce.
MEMBERSHIP

16 The workshop recommends that:

- the advisory committee have seven members
- the chairman should be a lay person
- there should be three ordinary members, persons individually chosen from the health sector on the basis of personal ability and relevant experience and that each should be from a different discipline
- the chairman and the ordinary members should be appointed for a three year term and should retire in rotation
- there should be three ex-officio members, one each from the Department of Health, the Department of Education and the University Grants Committee
- deputies should be permitted for ex-officio members but not for ordinary members
- the committee should have the right to co-opt additional members for terms of up to one year.

ADVISORY NETWORK

17 One of the first tasks of the new committee would be to formalise and further develop the existing health workforce advisory network. This should consist of standing advisory committees (such as those for medicine and nursing) of which there will be relatively few, continuing advisory arrangements and ad hoc working groups.

18 Appropriate arrangements would be made to cover the workforce planning requirements for each occupation. This would include technical planning advice and practical assistance to plan. Each occupation should be invited to take part in an agreed cycle of planning activity. Where possible, use should be made of existing professional, registration and education bodies to obtain required information and advice. For example, the proposed standing committee of the Board of Health on dental health may be asked to advise on the dental workforce, the Pharmaceutical Society may advise on the pharmaceutical workforce, and the Social Work Training Council on social work. In addition steps should be taken to ensure that public, private and voluntary sector employers and employee organisations are fully involved in the network.

19 In addressing its terms of reference the committee should make extensive use of its advisory network. Most planning should continue to be done in occupational groups but in future it is likely that employers, and employer and employee organisations will wish to play a more active part in planning. The committee should endeavour to play a facilitating, coordinating and integrating role.

20 The committee should through ad hoc working parties and the like try to identify and address emerging issues many of which will involve more than one employer and more than one occupational group. Here the committee's role should be one of information gathering and the encouragement of informed debate. It should not be drawn into employer/employee negotiations.

21 Again working through its advisory network the committee should oversee the total health workforce planning process. It should review the national portfolio of workforce plans to ensure that available health resources are being used to best effect. Where problems are identified these should firstly be referred for attention to the appropriate part(s) of the network.
22. Once established it is expected that most interest groups would use the advisory network but from time to time some may wish to approach the committee or the Minister of Health directly.

23. The committee may need to give special attention to the needs of those occupations with relatively small numbers and hence with relatively slender resources for planning. Ways and means should be sought to enable all legitimate interests in the planning process to be fully involved.

SERVICING

24. The key to success in integrated health workforce planning is likely to lie with effective staff work. The task of servicing the committee and its advisory network would be the responsibility of the Department of Health. Organisational arrangements should be made within the department to bring into a close working relationship those administrative elements which at central level bear directly upon the health workforce planning process. These include activities associated with servicing of the various health professional registration bodies.

25. The committee's support staff should work closely with national health planners and planners in the Department of Education and the University Grants Committee. Although the bulk of the servicing would be done from the centre, thought should be given to the eventual establishment of regional manpower planning arrangements. This will become a possibility when the new Board of Health is in place and when service planning is more firmly established in hospital boards.

26. Servicing should be built around a group of staff whose prime function is to support the committee and its advisory network. The main functions and responsibilities of the group in summary would be:

- planning and programming
- coordination
- catalysis of the planning processes
- monitoring and evaluation
- research and development
- information collection and dissemination

27. The precise servicing needs and how they might be met within the available resources are matters for detailed consideration by the Department of Health. The possibility of secondment of staff from other parts of the health services at particular phases of the planning cycle should be considered. However, there is a need for dedicated core staff with particular skills. These include an executive officer of appropriate seniority with the management and planning skills and experience needed to lead the servicing effort. In addition an officer trained in statistics, experienced in operations research and knowledgeable about the health workforce and the technical aspects of manpower planning is required.

28. The paucity of staff trained and experienced in health planning throughout the health services was noted. Urgent and continuing efforts are needed to recruit and train such staff.

29. Funding would be required to support the advisory network - to obtain information, contract consultant help and to support research and development projects. To a considerable extent these activities are already funded by the department and it may be possible to find additional resources in other quarters.
REVIEW

30 The workshop accepts that it may take some months to establish the committee and its advisory network and to get integrated planning underway. Nevertheless the workshop recommends that a formal review should be made of the proposed workforce planning process at the end of three years.
As well as receiving background papers on this topic, participants were addressed by Sir Frank Holmes, then Chairman of the New Zealand Planning Council. Several participants also addressed the group on the topic from the viewpoint of their own work situation in order to clarify the context in which workforce planning will have to be done. From a variety of perspectives the developments addressed fell into three broad categories: economic, political, demographic and social changes.

Economic environment

During the past decade economic conditions in New Zealand, affected by international conditions beyond our control, have deteriorated. This has contributed to an emphasis being placed on the need for planning the best use of resources. In the health services the major finite resources are finance and trained workers.

The health sector has made a more effective transition than most sectors in reducing growth in resources being used. Most health expenditure (about 70 per cent) is on institutional services and the greater part of this is spent on salaries. Capital expenditure in hospital boards fell between 1980/81 and 1981/82 and the trend continues downwards. However, the relatively lower level of growth in real expenditure over the past 5 years or so is still in excess of the rate of growth in the economy as a whole.

For the foreseeable future the basis for planning should be that, at best, claims on resources should not increase. Higher levels of productivity and efficiency will be sought in every area. The current financial arrangements, with short-term budgeting and planning, incentives to spend whatever money is allocated, and compartmented financial and administrative control tend to work against these aims. Reducing costs of services without reducing their quality is a challenge.

Political environment

In the current political environment there is a confluence of opinion favouring a community and preventive emphasis in provision of services. This is not yet reflected in the funding of services, where the balance is heavily weighted towards secondary rather than primary care. However, the internationally agreed aim of 'health for all by the year 2000' is New Zealand's aim too - the right of all to lead a socially and economically productive life.

Demographic and social environment

The demography of the population is changing and the most significant developments for the health services are the increasing proportion of elderly and the changing ethnic
composition. Health status as well as morale of the population are believed to be affected by changes in employment patterns.

The demography of the workforce is also changing, affected mainly by the increasing participation by women - who are tending to remain in the workforce longer, return after a shorter absence for family reasons, and are more likely than men to seek part-time employment. This is discussed more fully in chapter 6.

Research and technology are also factors to consider in workforce planning. They can combine as a powerful stimulus to progressive demands for personnel trained to deal with new developments.

Consequences for planning

During the workshop some important consequences of the current environment were discussed. There is a more critical approach developing to the way in which the many people who constitute the health workforce are being trained and deployed but in times of restraint the power of the status quo is strong. Professionalism and exclusiveness, the urgency of cure versus the possibility of prevention, are difficult issues to balance with obtaining the best value for money in health care.

In such circumstances the need for clearly defined objectives becomes highly apparent. At present, hospital boards are involved in almost anything to do with health care; guidelines or parameters for community care are slow to develop. Compounding the confusion is the lack of clearly-defined boundaries - philosophical (as between the responsibilities of the health, social welfare and education sectors especially when the emphasis is on health promotion) geographical (the differing boundaries in the health services and in government generally) and organisational (for example between hospital boards and voluntary agencies).

Issues requiring resolution or balance of conflicting pressures are numerous. They include satisfying the demand for community input into health care decisions while resisting undue pressure from minority group interests. Health promotion and self-care activities give people increasing confidence to question, policy and decision-makers. Decisions made in the interests of the individual may not necessarily be in the interests of society as a whole. Higher levels of education in health occupations lead to increased status and involvement, which can lead to competing claims for leadership and responsibility. Time and workloads compete with opportunities for continuing education. Administrators' expectations compete with those of the community.

For the future there are changing potentials not only of prevention, treatment and cure but also of personal responsibility, effective social pressure and lifestyle. With less emphasis on the status quo and effective adaptation better health should be possible. Goals should be realistic, not 'ideal', and should be established for a simulated future environment. All objectives should be broadly based, not finely detailed, and allow maximum room for flexibility because the parameters are constantly changing. Some changes will not be foreseen and some cannot be foreseen. Some are outside planning control but that does not lessen the need and the responsibility to plan.
Changes in the way the health services are organised are likely to have an effect on the numbers and types of health workers required. There are currently several changes under way. These were described in background papers for the workshop.

Area health boards

There are moves to reorganise health services administration at an area level, following the reports of the Special Advisory Committee on Health Services Organisation and of the Northland and Wellington pilot schemes. Enabling legislation is being introduced to Parliament to allow a system of coordinated health planning through area health boards to develop on a permissive and evolutionary basis. It is difficult to predict the speed at which this will occur. Area health boards' functions will be those at present carried out by district health offices and hospital boards. Personnel will possibly work under a new employing authority. Moves towards regionalisation of services are likely to affect distribution of personnel as well as numbers and mix.

Board of Health

Legislation to reorganise the Board of Health is likely to be enacted and effective in 1983, the intention being to improve and better coordinate planning and policy development at the national level. Representation on the board and its standing committees will be based on individual contribution rather than on nominations from organisations, although in recommending appointments the Minister of Health will have regard to certain considerations. The chairman will be appointed and Department of Health representation will be reduced to one of the 12 board members. The board will be able to initiate its own enquiries and investigations. The emphasis will be on total health, not public health, and the focus of the board and its committees will relate to service grouping. Development along service lines results in the involvement of the private and voluntary sectors and it is hoped that this new structure will be more active and effective, and the committees less numerous. Standing committees will report annually and self-destruct after three years.

Hospital board funding

Moves to alter the basis for hospital board funding have resulted in a funding formula for an equitable allocation based essentially on the size of the population served, but with adjustments for age, patient flows between boards and private sector activity. Hospital admission and discharge data are the main information source. Standardised mortality ratios are adjusted for relative need and supplements are added for some specific functions such as teaching. Development of hospital service planning guidelines is an integral part of this process, within the context ultimately of health service planning guidelines.

There is an inexorable movement towards health planning on a service basis at all levels, with an emphasis on coordinating both planning and delivery in the public sector. Development of the health workforce is only one component of the development of health services into which it must be thoroughly integrated.
Community care

There is increasing pressure towards the provision of more care in the community. Such care should not be regarded as a cheap option but as a matter of effectiveness rather than efficiency. It holds potential for care of groups at present underserved as well as for keeping people out of hospital. There is potential for preventive programmes through natural community networks to be extended and complemented by the input of trained health workers. Individuals in their social context are at the receiving end of health plans. The efforts of self and of family must be built into the health care system.

Consequences for planning

The new moves are intended to encourage more consultative planning, with the role of the voluntary sector taken into account as well as that of the private sector. Responsibility for services will be more widely shared. As consumers' participation increases, the adequacy of the information they receive becomes a matter of some importance. The underlying problem with this is how to ensure consumer representatives are well-informed without distancing them too greatly from those they represent.

An expected outcome of the new moves is that priorities and objectives will be brought into sharper focus, supplemented by guidelines that are centrally and peripherally implemented and monitored, and responsive to local, national and international influences.

Although a high proportion of health activity is still in the public sector, the private sector's influence is rising and this will affect workforce planning. The relationship of private practitioners to public health workers will need study as will the effect of organisational structure on staff.

The general direction the health services are taking is reasonably clear. Because they deal with people, not pawns, change will inevitably and properly be gradual.
5 HEALTH SERVICE OCCUPATIONS

Participants at the workshop were sent, along with other working papers, copies of the publication 'Health Manpower Resources - 1980 Data'. Data on 32 occupations is collected by the Management Services and Research Unit and published approximately every three years. Table 1 on the next page is taken from the 1980 edition and shows the numbers of people employed in each occupational group.

Workforce growth

In 1966 the health sector accounted for 4.3 per cent of the total labour force. By 1976 this had risen to 5.3 per cent and by 1980 to 5.5 per cent. This growth roughly parallels the increasing rate of public expenditure on health services. In 1966 3.7 per cent of Gross Domestic Product was spent on health services. By 1976 this had increased to 5.3 per cent and by 1981 to 5.7 per cent.

In some occupations the growth rates exceeded 5 per cent per annum 1976-1980. The recent constraints on public expenditure on health mean that these growth rates in the health workforce must be curbed. This presents real problems because of the time it takes to alter the rate of production of trained health workers. In the case of doctors for instance it takes six years for a decision to change student intakes to be reflected in graduate production.

Through the 1960s and early 1970s the national economy was relatively strong and health expenditure grew steadily. This resulted in pressures which led to increased student intakes to many health occupations. Now, with constrained resources it seems that we may be entering a phase in which we are not able to usefully employ the available workforce in a number of areas.

Planning issues

Over-production is only one aspect of the supply problem. In the past many female workers left the workforce after only a short period of employment and many did not return. With changing social and economic circumstances not only are fewer women leaving the workforce but more are later seeking re-employment. Also, rates of loss by emigration are falling in many occupations. There is no overall retirement policy which applies to all health workers. It would be easier to forecast future workforce requirements if the age of retirement were known.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1976</th>
<th>1980</th>
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<tbody>
<tr>
<td>Air Pollution Control Officers</td>
<td>170</td>
<td>180</td>
</tr>
<tr>
<td>Ambulance Officers (not incl part-time and untrained)</td>
<td>270</td>
<td>340</td>
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<tr>
<td>Audiologists</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>Biomedical Technologists (incl 100 trainees)</td>
<td>*</td>
<td>485</td>
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<tr>
<td>Clinical Psychologists</td>
<td>110</td>
<td>120</td>
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<tr>
<td>Dentists</td>
<td>1070</td>
<td>1140</td>
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<td>110</td>
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<tr>
<td>Dental Technicians</td>
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<td>310</td>
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<tr>
<td>Dietitians</td>
<td>160</td>
<td>190</td>
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<td>Dispensing Assistants</td>
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<td>10</td>
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<tr>
<td>Food Service Supervisors</td>
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<td>190</td>
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<td>Health Education Officers</td>
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<td>Health Inspectors and Trainees</td>
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<td>Hospital Chaplains</td>
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<td>Nurse Aids, Orderlies, Other</td>
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<td>6330</td>
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<td>Occupational Therapists</td>
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<td>380</td>
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<tr>
<td>Optometrists/Dispensing Opticians</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>Orthotists and Trainees</td>
<td>*</td>
<td>200</td>
</tr>
<tr>
<td>Pharmacists</td>
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</tr>
<tr>
<td>Physiotherapists</td>
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<tr>
<td>Podiatrists</td>
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<td>School Dental Nurses</td>
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<tr>
<td>Social Workers in the Health Field</td>
<td>320</td>
<td>490</td>
</tr>
<tr>
<td>Speech Therapists</td>
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<td>190</td>
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<tr>
<td>Training Officers</td>
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<td>100</td>
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<tr>
<td>subtotal</td>
<td>45200</td>
<td>49100</td>
</tr>
<tr>
<td>Department of Health - not elsewhere included</td>
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<tr>
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<tr>
<td>subtotal</td>
<td>47900</td>
<td>51800</td>
</tr>
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<td>Hospital Boards other than above</td>
<td>17630</td>
<td>18320</td>
</tr>
<tr>
<td>covering - General Treatment;</td>
<td>full-time</td>
<td>full-time</td>
</tr>
<tr>
<td>Diagnostic Services; Hotel,</td>
<td>equivalent</td>
<td>equivalent</td>
</tr>
<tr>
<td>Maintenance and Administrative Services; Domiciliary;</td>
<td>approx</td>
<td>approx</td>
</tr>
<tr>
<td>Psychon. Hospital; Clerical and other</td>
<td>20000</td>
<td>21000</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>73000</td>
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<tr>
<td>Change approx</td>
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</tr>
<tr>
<td>Total population (000)</td>
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<td>3149</td>
</tr>
<tr>
<td>Change</td>
<td>+0.8 per cent</td>
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</table>

* incorporated within hospital boards not elsewhere included.
New Zealand's health occupations are affected to varying degrees by the manpower situation in other countries. When there is a worldwide shortage of certain skills this affects the workforce turnover if the New Zealand qualifications are acceptable overseas. Whilst portability of qualifications overseas should not be an over-riding concern of planners, it is very important within various professions. There is a fine balance between unintentionally training New Zealanders to supply an overseas job market and encouraging a healthy interchange of skills with other countries. Keeping track of workforce movement is a very important part of overall planning.

For future progress in health workforce planning each professional group must define the area of its practice and what it sees as its relationship to other health disciplines. No one group can decide what another should do. Therefore, there will be a great need for the recognition and acceptance of the unique function of each discipline by each discipline. The versatility of occupational groups and hence their flexibility to change according to changing circumstances affects planning.

The present pattern of division of labour is unlikely to return to a former state. it is much more likely to become further fragmented, causing more duplication. Identification and understanding of the roles of the various health professions and the appropriateness of their contributions to the health services should be an ongoing process. This requires detailed knowledge. Current practices do not necessarily indicate the potential scope of a profession's contributions: it is possible that they only reflect controls. When groups working together in a particular field are being compared, every effort must be made to eliminate undue influences from well-organised pressure groups. Undoubted overlaps exist, and an issue to consider is whether they can, or should, be reduced. However, perhaps the most important problem in workforce planning is the changing requirements of the health services.

**Consequences for planning**

In brief, it is likely that the health services of the future will give much greater emphasis to health promotion, disease prevention and primary health care in its many dimensions. At the same time the emphasis given and the resources directed towards the institutional aspects of care are likely to be reduced. Team work involving people from different disciplines, many of them from outside the traditional health sector, will become increasingly important. To meet these new requirements there will have to be major changes in the recruitment, training and deployment of health workers. This, together with the need to manage within tight resource restraints, will present the future planners and managers of health services with their most difficult problems.

Planners' projections of how many health workers should be doing what will not generate much confidence until there is a much more rigorous approach to all aspects of health planning. Education schemes developed in isolation from such planning are not likely to produce health workers of the type and in the numbers required. A new and integrated approach is needed, firmly based on a more systematic and rational examination of the issues. New methods are needed to gather and share a wider range of information. More research, critical analysis and structured discussion is needed to explore options and to seek out new solutions. More open and informed debate is needed between the various health disciplines, and between the health and education sectors, about the future goals for health care and about the training and deployment of health workers. The goals set for the future development of health services must be realistic in terms of the resources available. To these goals workforce planning must be firmly linked.
Professor Margaret Clark from the Political Science Department at Victoria University of Wellington addressed the workshop on the subject of women in the workforce. A major paper on women employed in the health services was also prepared for workshop participants. It was very favourably received and has subsequently been issued as a departmental publication.*

Approximately three-quarters of health service personnel are women. It is generally recognised that the female labour force does not exhibit the same employment pattern as its male counterpart. Although the current employment situation makes this an unpropitious time for women to seek new roles or rights, the increasing proportion of married women in full-time employment is a trend evident in all western, mixed-economy countries and there is unlikely to be a dramatic change. Part-time employment opportunities are perhaps more easily manipulated by making it less attractive or by requiring recertification at intervals.

**Recruitment and retention**

It is not known how many women leave work soon after graduating or qualifying in a particular health occupation. However, a significant proportion do leave for varying lengths of time - often to raise a family. There appears to be little difficulty in attracting women with children back into the health services, but this continues to necessitate a number of adjustments to employers' attitudes, staff management, education and promotion practices.

A number of occupations which are predominantly female experience difficulty recruiting people to senior positions (nursing, physiotherapy and occupational therapy, for example). One reason for this could be limited mobility due to a predominantly married female workforce. Possibly more important reasons are, however, that most senior positions require a level of experience which women with prolonged absences from work have been unable to achieve. Also many of these positions are full-time, consequently excluding women who are able to work part-time only.

**Staff management**

The increase in the number of persons employed to equate to full-time requirements creates more demand on staff administration facilities and resources. Employers must balance the possible advantages of greater flexibility and productivity against increased costs and complexities of personnel management. One of management's basic responsibilities is to ensure that all members of staff have responsibilities commensurate with their level of knowledge and expertise. When a workforce consists of new graduates, part-timers who may have had varying breaks in employment and a comparatively small proportion of experienced senior personnel, it is a major undertaking to meet both the needs of the service for adequate staff coverage and the needs of the service for maintaining and developing skills.

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A major problem is the maintenance of effective and efficient communication, essential for continuity of service. A larger and more complex workforce requires a more complex communication network, particularly when it is providing a 24 hour service. This puts increased strain on the administrative support system.

A predominantly married female workforce is less flexible and less mobile than one which is largely unmarried or male. Even if married women do not have children they are frequently limited to finding employment in the general geographical area in which their husbands work. Although conditions of employment are negotiated by both employers and employee organisations for their mutual protection they may, in some instances, be working against the employment of people with joint family and work commitments because they inhibit the development of innovative employment practices, such as rescheduling work hours, modifying job descriptions or job sharing schemes.

Continuing education, maintenance of competence and career development

Increasingly, promotion within health service occupations is becoming dependent not only upon experience but also upon further qualifications. Continuing education programmes, however, often do not cater for the part-time employee. Such programmes are usually full-time. Increasingly they are becoming centralised into regional or national courses rather than being offered by individual employers. It would appear to be necessary to make greater provision for a wider range of continuing education to be undertaken on a part-time basis to allow large sectors of the workforce to maintain their skills and competence or be prepared for more senior or more demanding positions.

There are a number of ways that continuing education could be made more available. A wider range of extramural study or distance learning courses could be offered by a university or polytechnic. Greater use could be made of intensive vacation courses or summer schools utilising existing educational facilities. Development of local multi-disciplinary programmes would not only facilitate communication between different occupations but would also give the numerically small and geographically dispersed occupational groups an opportunity to attend courses on a regular basis at a local or regional level.

People who are not interested in promotion still require well developed staff training programmes to maintain their expertise in a constantly changing work environment.

A further type of educational programme is needed by women re-entering health service occupations when child rearing responsibilities become less demanding. The requirements of such a programme vary depending upon the level of experience attained prior to leaving the workforce and the duration of absence.

Other issues to consider are whether it should be compulsory for health personnel to update skills and knowledge at specified intervals. There are a number of health occupations overseas which require members to attend recognised courses on a regular basis in order to be eligible to practise but the schemes tend to be cumbersome and difficult to administer. They could lead to certificate chasing, which is not the most effective form of learning.

In addition, the role of responsibility for maintaining competence is a thorny problem. To what extent is an employer obliged to sponsor employees attending courses which will benefit the service, and to what extent should employees be prepared to support themselves while undertaking programmes which will, after all, benefit them too?
Consequences for planning

In many instances the information necessary to determine the extent to which a particular aspect of employment is an issue or a problem simply is not available. Consequently it is a matter of opinion which factors relating to female employment in the health services are the most important.
Because of the central importance of education and training to the process of health workforce development and planning, a paper by Dr R M Williams was commissioned for the workshop. This and a paper by Mr H E Hutchings describing the technical institute situation are included in Part C of this report. Four workshop participants delivered papers based on these and a panel discussion followed. The issues raised during discussion and in submissions are summarised in this chapter.

Curriculum development

It is not just the numbers that are an important consideration in planning manpower; it is the nature of the training and the environment in which it is done. Traditional training for traditional goals needs to be re-thought. Once curricula are established there is a great investment in the status quo. Meanwhile health problem areas shift. Any curriculum influences the attitudes of those in training and provides an opportunity for teaching strategies that maintain flexibility, cope with change and institute an awareness of cost-effectiveness. Curriculum developers should take into account more than the short-term demands of employers. A balance has to be found between receptivity and responsiveness versus undue influence from particular groups with special interests.

Certain groups (for example, hospital physicists and biomedical engineers) are almost totally self-trained for their specific occupations subsequent to their degree qualifications. Possibly some efforts should be made to structure this training.

Maintenance of standards and level of education

The vital importance of organising continuing education and monitoring standards was stressed. Professions which issue annual practising certificates are concerned about the circumstances under which they are reissued. In some cases they are automatically issued to those who remain on the register but who have had no further education - and possibly not much practice - for many years.

Retraining opportunities are widely thought to be urgently needed, as more women are returning to the workforce after an absence of some years, but the numbers that should be catered for are largely unknown and there is no agreement on suitable timing of courses.

Some support was expressed for the idea that perhaps more generalists are needed, especially at a basic level of qualification. One of the submissions to the workshop asked whether thought is given to the health care needs of isolated areas which cannot sustain a multiplicity of highly specialised professionals but require someone with a broad background knowledge. There was also a suggestion that perhaps a higher level of qualification for any group may mean that fewer persons trained to that level are needed. Certainly, thought needs to be given to questions concerned with the division of labour and the quality and costs of care. From the occupational groups themselves there is continuing pressure for increased professionalism, extended training and additional qualifications. Increased research opportunities are wanted by those who have trained in technical institutes.

Policies for each occupation's postgraduate needs should be determined. The rapid growth in technology affects some groups more than others and sophisticated
equipment calls for postgraduate training. The universities need feedback about likely future requirements. The question was posed: in what kind of forum could there be an input into university curricula from other professions, those involved in health planning and administration and the consumer? The machinery at technical institutes is fairly clearly defined but it is mostly directed towards establishing minimum standards required for registration. There is no control over professions' drive to get as high a standard of training as possible.

Preparation of top managers and educators is an area currently given insufficient attention. It was suggested that carefully articulated university programmes are needed to avoid wasted time, energy and manpower in this area.

Organisation of courses

The approach to organising courses differs. For some a 'national school' is felt to be the best way; for others there is fragmentation into small courses in several centres with, possibly, a coordinated national syllabus.

Fragmentation of training - courses provided at more than one institution - makes it much harder to balance numbers trained with numbers for whom there is work available unless there is excellent communication between teaching bodies. This aspect needs consideration when new courses are established in more than one location.

When considering potential location of a course, the structure of an organisation - its policy, staffing, conditions of employment - must be sufficiently flexible to cater for special requirements of particular groups.

Courses tend to be established with insufficient regard to their effects on other groups. People planning courses need to be aware of potential conflicts of jurisdiction.

A lack of understanding of the roles of other health professions is mainly due to isolation in training and in clinical placement. All professions would gain from close liaison at all stages of their education and practice. Educational experience shared with other health occupations is important for breaking down barriers between subjects and occupations and facilitating the development of team care. Clinical experience is an important aspect of health occupations' training, in developing not only technical skills but also attitudes. The development of satisfactory links between health care and education is vital to the provision of satisfactory clinical experience. Clinical practice should mirror the reality: it should be continuous over hours and days and be participatory and accountable.

The desirability of maximum provision for systematic cross-crediting between tertiary education institutions was widely supported. Some potential problems would have to be resolved; for example technical institute students are enrolled for fixed, complete courses, regardless of cross-credits. It was suggested that increased provision for cross-crediting might well result in a lessening of 'education inflation' and so a lessened demand for, or duplication of, courses.

Changes in education, in training, and in student numbers, have considerable consequences for those who must accommodate such change, particularly the teaching institutions and the employing/sponsoring hospital boards. There were strong views held on the best time to control numbers of those trained. In general it was believed preferable to cut intakes rather than train more than can be employed. Intakes should roughly balance with job opportunities. As things stand, various occupational groups have opinions on desirable numbers to be trained in that occupation but these numbers are of uncertain origin and almost always imply required growth in manpower numbers.
Decisions on intake numbers

On matters affecting student intake numbers, the consultative process operating in technical institutes seems to function so that changes in supply requirements can be responded to by the institution. Indeed, for courses recently established, such as nursing, there is central control over intake numbers. No comparable process of consultation or central control exists in universities.

Institutions' ability to carry out appropriate future planning is greatly affected by their degree of awareness and involvement in workforce planning activities. In turn, the workforce planners need to have regard to the effects their decisions may have on the institutions involved and aim for incremental change when change seems necessary, rather than a sudden, drastic change.

In the universities, staff tenure and existing facilities slow down the capacity to adapt. Certain restrictions apply in that, although universities provide open entry to all who qualify, it is not necessarily to the faculty of their choice. Universities have had to find out for themselves which professions are likely to be in demand. The long lead-time involved with professional education means that planning decisions are often wrong. Although liaison has been established between universities and technical institutes, countering potential problems of overlap and conflict, there was support for the idea that closer formal relations between the health and education interests on local, regional and national levels would be desirable. Consultation between the Department of Health and the universities producing health professionals would be of benefit to both. Indeed, it is essential on matters affecting student numbers that formal mechanisms to ensure this should be established. The universities, the University Grants Committee and the particular university faculty involved, should all be included in discussions.

It seems clear that where there is central funding for a specific course, central control over intake numbers is possible. Where there is no central control it was felt that there should be a means whereby the situation can be influenced in acknowledgement of a changing work situation. Some informal means exist. When employers are involved in training (for example, when the Department of Health pays subsidies on trainees' salaries) they are well able to influence student numbers. Where training is arranged through hospital boards there is constant feedback concerning numbers needed and succeeding intakes are adjusted accordingly. The varying use made by hospital boards of study awards for in-post training clearly affects numbers in training and the question which arises is how the boards can be influenced towards long-term goals.

Hospital board input

Hospital boards receive many requests to support new, extended or postgraduate courses and the provision of training is regarded as a problem area to organise and manage. National guidelines for priorities in the provision of training and experience are needed. The hospital board lack of input is more apparent in the university and post-graduate area than in the technical institute.

Section 59 of the Hospitals Act provides for hospital boards to enter into agreements on a wide range of matters and decisions on training might well be better if boards were directly involved, providing a balance of opinion. Hospital boards are responsible for about 70 per cent of the health budget and in turn wages and salaries account for 70-75 per cent of hospital board budgets. However, little attention has yet been paid to how effectively the education and training dollars have been spent as far as
measurement of skills and performance are concerned. Boards have accepted the end-products of training and then expected them to cope with responsibilities for which they are unprepared or to be employed at a level less than their education and skills justify.

**Bonding schemes**

There was some workshop discussion of arrangements for bonding of bursars and general agreement with the idea that the technical institutes' longer academic year should be taken into account because of the students' reduced earning capacity. It was generally agreed that the government's commitment (if any) towards subsequent employment should be spelt out.

Guaranteed employment may or may not be preferable to release with adequate and prior notice, since guaranteed employment only has value to the worker in times of oversupply. It can have troublesome effects to employers unless posts supernumary to staff establishments are created because it requires the power to move others out of jobs. This could mean a loss of stability, morale and experienced workers. Further debate is needed on the pros and cons of bonding people in the workforce for a sufficient length of time to make them viable workforce members or of releasing them after adequate prior notice.
To achieve the level of cooperation and coordination required for planning the health workforce, it is essential that the roles and responsibilities of all involved in the process be clearly defined and accepted by the parties concerned.

This chapter is a summary of workshop discussion on the roles and responsibilities of all the individuals and organisations that plan, produce, manage and participate in the health workforce.

Workshop participants divided into three groups for the discussion and reported back to the plenary session.

**Standardised information base**

The first step in the planning process is collecting standard quantitative data. A mix of centralised and decentralised activities is required here and at other stages of the planning process. It was thought that data should be collected at local level where possible but in a common format to achieve compatibility of results when coordinated at the national level. The information collected in association with the issue of annual practising certificates is a valuable data base. There is a particular need to add alongside this, reliable information collected on a standardised basis from hospital boards.

The health workforce planning process needs to be particularly sensitive to:

- Changes in the workforce:
  - need for new positions; or
  - the reorganisation of existing ones

- Distribution of positions:
  - geographically
  - institutionally

- Types of positions and any special additional qualifications needed to fill these:

- Time required for:
  - basic education and training
  - post-basic education and training
  - retraining

The process needs to be amenable to the needs of a numerically small workforce and sufficiently reliable to produce projections to enable educators to train appropriate types of workers at the right time to meet employers' requirements. Currently manpower forecasts tend to be based on supply because 'need' levels have not been established. No single method of forecasting is adequate used on its own.

Hospital boards should be encouraged to involve themselves, as principal employers, in planning their workforce - not just management of the workforce they happen to have. Because hospital board functions vary substantially, according to the needs they perceive, they should work towards having common objectives tailored to local needs. The workforce should be tailored to meet the objectives.
Planning responsibilities

Workshop participants divided into three groups to discuss health workforce planning responsibilities. Drawing upon the knowledge and views of their members and a variety of other information available, each group addressed specific questions and reported back to the workshop for further discussion and acceptance.

Each group stressed the importance of input from the private and voluntary sectors. In addition, it was thought important to retain existing structures and arrangements and incorporate them into any new structure and process which might be developed.

1 PROFESSIONAL ORGANISATIONS, EMPLOYEE ORGANISATIONS AND REGISTRATION BODIES

The questions addressed by the group were:

What structure and process is required to enable professional organisations and registration bodies to adequately address the issues of manpower planning, production and management? Does this vary with the size and organisational arrangements for each occupation?

The roles and responsibilities of each group were seen as follows:

(a) Professional organisations

responsibility for advising registration boards on registration standards
responsibility for setting practice standards for their members
advice on manpower needs based on indices of market sensitivity
interpretation of data collected and collated about their membership
documentation of need, and advocacy, for higher or lower educational qualifications with the educational institutes and the proposed Health Workforce Advisory Committee

comments on curricula

(b) Employee organisations

advice to the Health Workforce Advisory Committee via direct access or membership
reaction to proposed changes in workforce numbers and deployment.

(c) Registration boards

setting of practice standards (although some may delegate this function to certain professional groups)
comments on under or oversupply if it affects standards
fulfilment of statutory functions

 carrying out disciplinary role
maintenance of lists of registered practitioners
provision of curricular advice in broad terms to the health educational sectors and professional bodies if they are examining bodies.

To enable these functions to be carried out efficiently:

All professional groups should operate under a registering body which, in the case of larger groups, would issue annual practising certificates and carry out regular data collection. In the case of smaller groups, practising certificates may not be needed but there should be a register of numbers.

the registration bodies should have educational representation on them.

information about the number of trainees in each discipline should be available to the registration board.

professional organisations should be encouraged to set up their own workforce planning and advisory sections.

2 EMPLOYERS AND EMPLOYER ORGANISATIONS.

The question addressed by the group was:

What structure and process is required to enable the principal employers (hospital boards and the Department of Health) to adequately address the issues of manpower planning, production and management?

The roles and responsibilities were seen as follows:

Increased involvement in workforce planning, through establishment of an accurate data base with data collected on a standardised basis.

assistance in setting goals and objectives through consultation and cooperation with the agencies and organisations involved.

investigation and advice on the functional skills required from the various disciplines.

identification and discussion of demarcation problems and training and skills required.

appropriate management of manpower relative to workload, case mix and knowledge and skills of the various occupations.

forecast of future treatment trends and workforce adjustments likely to be needed.

establishment of regional and local advisory committees to liaise with education bodies and ensure effective communication.

The employers' responsibilities should be simpler when area health boards are a reality. Meanwhile a revamped and strengthened Hospital Boards' Association could act as a data collection agency and speak with one voice for the public hospital sector on issues such as industrial relations and clinical experience. Coordination between hospital boards is also essential to help overcome maldistribution problems with the training of various occupations. The economic climate has led to a dramatic decrease in hospital board sponsored students.

A review of medical staffing in hospitals is needed because the way in which the medical profession organises its work has the greatest effect on other staffing
requirements, and some areas in particular require study. Specialists trained in use of high-technology equipment are reluctant to work in smaller hospitals where less sophisticated equipment is available. Smaller hospitals have developed training posts but when they are not filled the service content of the post is not carried out either. The provision of different levels of services in different places complicates the picture. There is a risk of 'service inflation' due to a thrust to develop services up to the level of training completed by service providers.

3 CENTRAL GOVERNMENT

The questions addressed by the group were:

What structure and process is required to enable the central agencies in the fields of health and education to adequately address the issues of manpower planning, production and management for the health related occupations? Does this vary with the size and organisational arrangements for each occupation?

Because central government is the major provider of resources for the health sector it has an interest in seeing that workforce planning is integrated and nationwide.

Such planning would need to have regard to regional developments but regional planning should be undertaken regionally, not nationally.

To advise the government on planning, production and management requirements a small, high-level committee would be needed.

For planning, it is the responsibility of the Department of Health to:

- disseminate basic planning material such as demographic data, service goals and guidelines
- monitor individual occupations' workforce planning activity to achieve consistency
- assist in definition of the health services' expectations of the roles of individual health occupations

For production, final responsibility rests with the Department of Education and the universities to:

- prescribe the numbers entering courses
- introduce, terminate or make major modifications to courses
- monitor the education and training of the individual health professions bearing in mind the health services' expectations of the health workforce.

For management, central government's role is to ensure that information and advice are available to enable the employers to make best use of staff.

To enable these functions to be carried out it will be necessary that:

- the statutory roles of the Ministers, departments and agencies concerned be given due regard
- educational institutions be receptive to desired changes in health services occupations and be prepared to move in directions consistent with planning needs.
Consequences for planning

Collaboration and coordination are important but difficult to achieve. To be worthwhile they must have high utility for the parties concerned. Establishment of formal mechanisms for coordination may not make the parties more willing or capable to collaborate. What is often ignored is the cost and benefit incurred by collaboration. If one sector or party is bound to lose (funds, degrees of freedom or influence) as a result of collaboration it is bound to resist it. Hence, the issues of coordination and collaboration are very much political in nature.

In a pluralistic society with complex and multiple goals and values it is necessary to learn ways of negotiation, ways of debating values and setting goals which recognise that conflict is natural and that different interests are legitimate. Coordination, the act of bringing the pieces together, requires trust and goodwill.

For better integrated health workforce planning to be possible there must be structural change but, of itself, this will not be enough. Ways and means must be found to make the parties to the process want to collaborate. To do this it may be necessary to train more people in the art and the science of collaboration. If those involved in health workforce planning want to collaborate and know how to consult, better coordination in health care and in workforce development can be expected.
9 SUMMARY OF WORKING PAPERS

All participants were sent sets of working papers before the workshop to ensure that they were well briefed and that discussions and decisions would be well informed. The working papers were not published but three of them are reproduced in this report as chapters 10, 11 and 12. The following is a summary of all the working papers.

SECTION 1: WORKSHOP INFORMATION

This provided information on the workshop, submissions and working papers, list of participants, programme and workshop process.

SECTION 2: SOCIO-ECONOMIC PLANNING IN NEW ZEALAND

These papers provided a general overview of socio-economic planning in New Zealand. This was done by drawing upon New Zealand Planning Council documents. Extracts were used to highlight key issues.

The first paper was a brief introduction and overview of New Zealand's socio-economic situation and prospects in the years immediately ahead. Socio-economic planning was looked at in the second paper and answers offered to the questions - why plan and how well are we planning? The third paper dealt with policy objectives, the legislation and the planning and consultative processes which are evolving in New Zealand. Papers four and five dealt with social policy making and social planning in New Zealand. Paper six looked at new directions in the welfare state and specifically addressed the issue of public expenditure in the social areas.

SECTION 3: INTERNATIONAL HEALTH PERSPECTIVES

International influences in the field of health have impact in New Zealand. This is most obvious in the area of medical technology but also occurs in other areas. New Zealand has always been interested and actively involved in the work of the World Health Organisation (WHO).

Three papers in this group provided participants with a general overview of WHO's global strategy. The first was an executive summary of the global strategy. The second set out the Declaration of Alma-Ata. The third, in keeping with the global strategy, outlined the essential characteristics of and offered a framework for the health system.
SECTION 4: HEALTH SECTOR PLANNING IN NEW ZEALAND

Health manpower planning is just part of the larger health planning process and it was therefore essential that workshop participants have a good working knowledge of health planning and health services development in New Zealand. These papers aimed at providing the required information.

The first paper looked at needs for health care from a demographic perspective. The second took a general look at priorities for health care. The third, entitled 'Health and Health Care', was extracted from the New Zealand Planning Council's 1979 publication 'The Welfare State? Social Policies in the 1980s'. Fourth in the series was a key paper on the organisation and planning of health care, mapping moves towards more integrated health care, towards more regional planning and regional arrangements and towards priority setting, policy development and objective setting in programme areas. Paper five on regional planning guidelines was largely an appendix to the preceding paper. The sixth paper described the essential features of service planning and development and examined the implications for health manpower planning. Paper seven reviewed New Zealand developments in the field of primary health care. Using a Christchurch example a further paper looked at the manpower implications of moves towards community care. Paper nine set out the information required for health manpower planning and looked at the extent to which these requirements are currently met in New Zealand. The final paper reviewed health expenditure patterns and looked at the allocation of health care resources.

SECTION 5: MANPOWER PLANNING METHODS

The aim of the papers in this category was to give participants some understanding of the knowledge base which underlies health manpower planning. Organised efforts to plan health manpower are relatively recent but with rising labour costs and shrinking resources the manpower aspects of health care have assumed increasing importance in the last decade. Based largely on WHO publications these papers provided an international perspective on health manpower planning.

The first paper provided a general introduction and overview of health manpower planning. In the second, an effort was made to organise and simplify the health manpower process in ten procedural steps. Paper three took a more detailed look at ways and means of assessing health manpower requirements. The fourth paper explored the organisational and structural arrangements which would be needed to support an integrated health services manpower planning process in New Zealand. The role of research in health manpower development was examined in paper five. The final paper, written by Tamas Fulop, Director of WHO's Division of Health Manpower Development, and taken directly from a WHO publication, looked at the future of WHO's health manpower development programme.

SECTION 6: HEALTH MANPOWER PLANNING IN NEW ZEALAND

The first paper looked at the main influences on health manpower development (HMD) in New Zealand and at prospects in the years ahead. It then went on to describe the processes evolving for the planning of health manpower. Paper two was in two parts. Part one described the present arrangements for manpower planning for the principal health-related occupations. Part two looked at the role and functions of health profession registration bodies and at the involvement of such bodies in manpower planning. The third paper was a selected HMD bibliography of New Zealand material.
SECTION 7: REVIEW OF SUBMISSIONS

A review of the submissions received by the Planning Group was prepared as a working paper. The full submissions were used in preparation of the background papers and in preparation of this report. They were available to all participants at the workshop.

SECTION 8: HEALTH SECTOR/EDUCATION SECTOR INTERACTION

Health sector/education sector interaction in the context of HMD was one of the most important topics to be addressed at the workshop. Recognising this, the Department of Health engaged Dr R M Williams as a consultant to review and report upon the education implications of manpower planning in the health area. His paper was accompanied by a review of health sector training in technical institutes in New Zealand and a paper providing an international perspective on policies for the education of health professionals in the 1980s.

SECTION 9: WOMEN EMPLOYED IN THE HEALTH SERVICES

A major paper since published as a Department of Health Occasional Paper, addressing the topic of women employed in the health services, formed this section.

SECTION 10: PROPOSALS FOR INTEGRATED HEALTH MANPOWER PLANNING IN NEW ZEALAND

Under this heading were presented a set of proposals on which the workshop discussions might focus and develop recommendations for action. The results form the substance of this report.
10 EDUCATION IMPLICATIONS OF WORKFORCE PLANNING IN THE HEALTH AREA

- a working paper for the Health Manpower Planning Workshop, Rotorua, September 1982 -

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SUMMARY
1 Introduction

1.1 PURPOSE OF THIS PAPER

The fact that the interface between the service and the educational arms of health care is a continuing source of concern is not surprising, nor is it special to this country - the considerable international literature on health care education bears witness to that. The importance of clinical experience in developing not only technical skills but also attitudes makes development of a satisfactory modus vivendi between health care and the education of health professionals vital. While they share long term objectives, short term priorities (including financial priorities) are often in conflict: a conflict that is sharper when money is short. No single clear-cut solution is available. Several approaches can be ruled out: to ignore the problem; to draw apart and abandon the aim of integrating education and health care; to create simulated work situations (as is done in legal workshops) which might impart some skills but will certainly not influence attitudes.

This paper is concerned with identifying some of the processes and problems found at this interface in the hope that this will enable us to get rid of some of the obstacles to the effective working of a joint operation where the product is the trained health professional. How to ensure the quality of the right quantity of that product is the theme of this workshop.

1.2 FACETS OF INTERACTION BETWEEN HEALTH AND EDUCATION SECTORS

Interaction between health manpower planning and the educational bodies has several facets:

(a) The process by which an educational body becomes involved in training a particular group.

(b) The factors which determine a curriculum.

(c) The factors which determine the size of a course intake.

(d) The means by which the educational body's performance is monitored.

(e) The way in which the educational body responds to outside pressures and influences.

1.3 LOCATION OF TRAINING

In New Zealand the universities early took responsibility for undergraduate training of doctors and dentists; the hospitals trained nurses under the overall control of the Nursing Council (known as the Nurses and Midwives Board until 1971); various special bodies in fields such as physiotherapy and dietetics established under the general auspices of the Department of Health had oversight of courses in these fields run in hospitals. Some professional bodies (for example pharmacists) conducted examinations with training provided by a variety of institutions (for example, the technical colleges). Postgraduate medical education, apart from some university postgraduate diplomas, was the responsibility of the various colleges, with minimal provision of training within New Zealand.

The strengthening of the individual universities from the early 60's and the major development of technical institutes led on the one hand to the development of a
number of other health-related courses or papers in the universities (pharmacy, clinical psychology, social work, nursing and optometry) and a comparable development in the technical institutes in fields such as nursing, pharmacy, physiotherapy, occupational therapy, chiropody and orthotics. In a number of cases this involved taking over a responsibility previously carried by the hospitals, (for example, nursing and physiotherapy). This development reflected the deliberate policy of transferring the training responsibility from service institutions to educational bodies. The need for continuing cooperation in providing clinical experience was of course accepted. This transfer, while beneficial in its overall effect, may have made more difficult some desirable forms of cooperation.

The process of transfer is not complete. A school dental nurse training school is administered by the Department of Health; the medical photographers' training is under a hospital board, as are a number of other smaller groups. An illustrative list is given in section 8.3. It may be that some of these special arrangements should continue but at least they should be examined systematically to see whether reasons which led to the present arrangement are still valid. This review could well be a responsibility of any advisory mechanism which might be established along the lines of that outlined in the paper presenting proposals for a manpower planning process for New Zealand.

2 Establishment of training courses

2.1 IMPETUS FOR NEW COURSES

The impetus to establish a regular training programme in New Zealand for a group arises when the demand is such that it is no longer sensible to rely solely on qualified immigrants or to send our own people overseas for training. The demand may derive either from the Department of Health, from the employers or from members of the professional group concerned. Often, as in the case of school dental nurses, the real source is the initiative of a single individual. Sometimes strong consumer demand has been an important factor. Whatever the particular impetus, the establishment of the training course in a university is often seen as giving a desirable status.

2.2 UNIVERSITY COURSES - APPROVALS STRUCTURE

Usually within a university there are some sympathetic academic staff interested in responding and convinced of the value to the community of a professional training in a discipline related to their own. In the expansionist period of the universities this view was often matched by support from the faculties and the administration. Provided there were few requirements for special buildings or higher than normal funding there was likely to be a fairly easy run through the Curriculum Committee of the University Grants Committee (UGC) and the course was then established.

Sometimes a department of state anxious to see a course established would volunteer to seek extra support outside the normal block grant. This was opposed both by the UGC and the Treasury and in practice seldom occurred on a significant scale. Effectively, the block grant system prevented any earmarked support from other official sources but occasionally a limited term grant from a private source would help the establishment of a course. Those sponsoring a course had therefore to convince the university's administration that it would attract enough students and consequently enough increase in the block grant to be viable or that it was of sufficient importance to be carried out even at the expense of some other desirable activity.

The ability to get a course established depended heavily on the advocacy and status of the department within the university seeking to promote the course and/or the
sympathy of the administration to this type of development. Support had to be secured successively in the department, the faculty, the professorial board and the council as well as from the administration. A proposal sponsored by someone not widely respected by his colleagues was more likely to fail and the thought that a proposal might compete for funds wanted by someone else could lead to less than impartial voting in faculty and professorial board.

While the not unnatural expansionist pressures of professional groups aided by sympathisers in the universities were continually pressing to get courses established, often in several universities at once, the only safeguard against proliferation was the UGC acting through the Curriculum Committee. But in the expansionist period the Curriculum Committee saw its responsibility as ensuring academic soundness rather than rationalising development.

2.3 TECHNICAL INSTITUTE COURSES - APPROVALS STRUCTURE

The situation in the technical institutes was, from the beginning, a more structured business. While the same external factors that encourage the establishment of a course in the university operate in the case of the technical institutes the departmental process involved is simpler. The authorisation of a course (and the size of the input) is the responsibility of the Department of Education which is advised by the Department of Health as to the need. Where the national need justifies one course only, there is a preference for establishing it at the Central Institute of Technology but other institutes compete with vigour for other courses. The professional body also may influence the site of a course.

2.4 OVERSUPPLY

While there are marked differences in the machinery whereby courses are established and intake determined in universities and technical institutes, both have found themselves in the position of running courses which are now believed to be seriously over-supplying the market. A tidier formal structure of approvals does not appear to be an automatic guarantee against error.

3 The case and the means for controlling student numbers

3.1 GENERAL ISSUES

Before the machinery for setting the numbers to be trained is considered, some general issues about exercising control need examination.

Whatever means are used to control or influence numbers in a training course, the same amount of information will be required to reach a good answer as to what the target should be. This information should be available to whoever has to make the decision, whether it is a potential student responding to market forces, a central planning body, an institute, or, in some cases, a university. The information should be made available widely - but particularly so if it is intended to let market forces control the entry.

It is important that the information relate to the number of positions likely to be available and not to an estimate of the number of people who, according to some criterion of satisfactory service, ought to be employed. The latter too often reflects a
rather specialised view of the country's priorities unlikely ever to be fully accepted by those who finally allocate resources.

The demand for manpower may be limited in two ways; either, as in the case of dentistry, by the amount of service the public is willing to pay for directly - which will depend on a number of factors, including fashion, and will not necessarily reflect what health professionals see as the proper level of care; or by the amount the government is prepared to fund through taxes. This will depend on a complicated interaction involving the overall state of the economy and competing alternative demands for funds, the advice of departmental officials and professional groups on the relative priorities, and the political assessment of what the public wants or is prepared to put up with. This last is a very proper consideration if it is based on serious grass-roots study rather than on press comment and the activities of pressure groups.

Short-term planning has to be based on demand as it emerges in the form of available jobs. Long-term planning should make provision for adapting to changes of attitude and fundamental values which will ultimately lead to a different demand. Educational institutions, professional bodies and manpower planners may deplore some of the factors that influence demand but they have an obligation to their students to recognise what will in fact determine this demand in the short term, even though they may be working towards changes in the long term. They also have to recognise that the proportion of demand which they have to meet will be affected by factors such as migration, which has fluctuated widely although may do so less in the future, and the return of married women to work - probably a more stable trend even though its initial impact was often under-estimated.

3.2 GOVERNMENT INTERVENTION

While the need for good information is a common requirement of all means of influencing or controlling numbers, the case for the government actually intervening to increase or reduce numbers as distinct from allowing an informed market to decide depends on specific criteria. There are many professions - law, accounting, engineering, science - where the government has not sought to influence the output of the training institutions except when a school requiring specialist facilities (for example, engineering) is established or expanded and some estimate is made as to likely demand. Only in teaching and the health services have attempts been made to plan the total manpower to meet projected needs, presumably because the state is the major funder and is held by the public to be responsible. It is at least arguable that the state should only intervene when there is a positive case for doing so which overrides the arguments for allowing the market to determine supply.

The arguments for direct government involvement are:

(a) That the government is seen as having a responsibility for providing a service which it funds and either over or under supply is embarrassing. This covers a substantial number of important groups such as nurses.

(b) That the group has the power to turn on the tap of government expenditure even though they are not necessarily themselves predominantly state-funded. This applies peculiarly to doctors and is a cogent reason for adequate control of their numbers.

(c) That substantial extra training costs are incurred if we train more than are needed. This argument is not necessarily correct. The professional schools of many training institutions may be generously staffed in comparison with other faculties, in terms of students per
staff member, but they are sparsely staffed in terms of spanning the subject because its subdivision into specialised topics requires greater staff numbers to cover it. Reductions in intake will often not permit reduction in staff without neglect of significant topics - increase in intake will not increase the student to staff ratio to the extent of justifying a staff increase. Economies may occur only if the school is closed down and then only after redundancy and other problems have been disposed of.

(d) That the market will be over-supplied and professional incomes will fall, or under-supplied and the quality of service, particularly to the poor, will fall. This argument is only valid if for some reason market forces do not work. It may also be necessary to contemplate further intervention to ensure that the poor do benefit from increased supply.

When one applies these considerations to, say, dentistry the only argument that may have validity is (d). They are not funded by the state, cannot turn on the tap of state expenditure, and reduction in intake to the Otago School of Dentistry is unlikely to permit any significant savings - nor can we contemplate closing it down. Furthermore, increased supply will not necessary by itself ensure better service to the poor.

In the case of dentists the objectives of manpower planning might best be achieved by the dissemination of well-researched studies on the likely impact of changes such as fluoridation and the likely demand for orthodontic and periodontic treatment (if such studies were available) and of policy decisions about the future role of dental nurses. The recent directive by the government to the university to reduce the intake to the dental school is probably the only case in New Zealand history where a government has directed a reduction in the size of a school training a profession which overwhelmingly serves and is paid by the private sector.

Applying this argument to the professionals trained in the universities, only doctors, because of their unique ability to increase government expenditure, seem clearly to merit direct intervention if the intake rises too high. Other groups such as dentists, optometrists and pharmacists could be expected to respond to market factors.

Groups such as social workers and clinical psychologists find their main employment with the state, which has some obligation to match numbers to available positions but they too are likely of their own initiative to adjust to well-publicised information on employment prospects. The majority of health professions trained in technical institutes (pharmacy is an exception) find their main employment in state funded organisations.

3.3 DOCTORS - A SPECIAL CASE

The unique position of doctors has important implications for our attitude to the 'numbers' aspect of manpower planning. The machinery already operating in the technical institutes, the activities of the UGC, the market forces strengthened by good information and communication in all areas, are likely to be effective in bringing about the necessary changes to most manpower plans without involving issues such as university autonomy. While we can hope that this will be as true for doctors as for the other groups, in their case the consequences of a serious mismatch between needs and numbers, both overall and in the various specialties, is too serious for the government simply to accept the consequences should the other processes not work effectively and in time.
3.4 POSTGRADUATE MEDICAL TRAINING

At the postgraduate level the establishment of the Council for Postgraduate Medical Education with significant funding gave an impetus to both a more organised and structured approach to the provision, in association with the specialist colleges, of work towards specialist qualifications and a more general postgraduate training not aimed especially at college membership.

The colleges and the Council for Postgraduate Medical Education do not have a formal relationship with the universities. But in so far as they both have responsibilities for postgraduate medical training they have a number of informal relationships which arise from the indivisibility of the programme leading from the last undergraduate years into those following graduation.

The colleges are responsible for approving positions in hospitals as suitable for training leading to membership of the colleges. They have also, with varying assiduity, surveyed their current manpower situation and identified the needs of their specialties and made this information available to the Advisory Committee on Medical Manpower. The completion of this information is an important target in the development of effective planning in this area. The number actually trained is currently limited by the number of training posts approved by the college and the number the hospital board is prepared to fund. Both situations demand review. The estimate of training needs (which must take account of migration and drop-out as well as less predictable factors) and the steps necessary to meet the targets are national responsibilities. While the colleges have an important input into the numbers of trainees required, in addition to their responsibility for the adequacy of the training post, the ultimate decision about numbers is a matter for the government. If the colleges do not approve sufficient posts to meet the national need, meeting the need by immigration remains a means to be considered. In times of financial stringency the boards of major hospitals where training posts are likely to be approved will be tempted to economise on these, but the brunt of any later shortage of specialists will be borne by the smaller boards whose positions are harder to fill.

It seems essential that the number of training posts established in each specialty should finally be a responsibility of the government acting on the advice of the appropriate advisory mechanism which will of course involve the colleges and that the government should be able to influence the number of training posts. One way of achieving this would be to remove training posts from the hospital boards' budget and fund them centrally. It might be more acceptable if boards with hospitals in which posts are approved for training were funded in terms of the number of training posts which would, over all disciplines, be needed to support the demand for specialists. Non-training hospitals would receive no allocation under this item. The money necessary to fund training of those needed to staff non-training hospitals would then be allocated by the Minister of Health to training hospitals in light of the need for various specialties. A board that had not funded roughly the number of training posts necessary to support its own needs (or some other target accepted by the Department of Health), would be less likely to receive further training posts from the pool. There are a number of possible variants. The essential point is that the number of training posts required for each specialty should be determined nationally and there should be a national responsibility to see they are established.
4 Maldistribution of health services

4.1 ROLE OF EDUCATION BODIES

The problem of maldistribution of services - particularly medical services - has several facets. The maldistribution between specialties should, in an oversupplied market, respond to good information on employment prospects - and shortages in really remote areas can be met by politically acceptable incentives. But the problem of staffing country towns, small centres and impoverished and racially mixed areas is more difficult.

Discussions with medical schools confirm that, apart from a greater willingness (likely to be reduced by increased interest of spouses in worthwhile employment) of those from rural areas to return there, selection on the basis of other factors (race or socio-economic status) is not likely to increase the prospects of recruiting to non-metropolitan or otherwise unattractive areas.

Medical schools could possibly undertake contracts to provide a range of health services in unattractive areas, thereby meeting a service need, but also obtaining for their students some work experience in areas which may broaden their interests and increase their confidence in moving into new environments, particularly if the opportunity is provided at a stage in their training when they can be actively involved in the work.

Alternatively, one might adopt an approach similar to that used for many years by engineering schools, which requires students before graduation to spend nine months of their long vacation in workshops or construction sites as engineering labourers or similar posts in order to obtain an insight into the limitations and problems of the people, material and tools they will subsequently control. No doubt there are many situations in which medical students working in a subordinate role in community groups could obtain a good insight into social conditions outside their own experience and might in some cases broaden their perception of what could be a satisfying career.

4.2 ROLE OF BURSARIES

The Department of Health is currently reviewing its health bursaries system whereby it grants a health bursary to medical students, occupational therapy students, and physiotherapy and nursing students, at their request and for all or part of their training.

Current departmental policy is that the health bursaries are not, and never have been, related to the cost of living. Each bursary is granted in exchange for bonding the student, on graduation, to work as directed by the Director-General of Health, in areas where essential services must be maintained. This is intended to ensure appropriate distribution of personnel throughout the country. The health bursary is not seen as a payment for any cost-related expenses. The students are bonded for different periods of time according to the number of years they have accepted the bursary.

Payment of the health bursary is on the basis of $10 per week of study, and this varies according to the course, year of study, and what school the student is attending. Payments for all groups range from $380-$420 per year.

The bonded bursary has a proper role in assisting distribution, as well as increasing overall supply. Health authorities have, with great advantage, avoided the heavy dependence on bursaries that has characterised teacher training. Their emphasis has been securing a limited pool of people willing, in return for a bursary, to accept direction to positions hard to fill, rather than to increase the overall supply. But both
are legitimate uses provided the need for either is continuously reviewed. It is recommended that such a review should look at the various means of support of health professionals while training and see whether rationalisation is needed.

The following comments raise some of the issues relevant to such a review. The principle that people entering a health career should be able to get unbonded support sufficient to enable them to undertake the course at a frugal standard of living should be reinforced. But it should be noted that where the training is at a technical institute (with a longer academic year than in universities) the basic allowance should be paid not only for the longer period but, if savings from long vacation earnings are an important part of students' support throughout the year, the technical institute student should receive a higher weekly rate to compensate for smaller vacation earnings.

Bursaries with bonding are an acceptable device when recruiting is generally inadequate or to secure a small pool willing to be directed. Because (as in teaching) the Department of Health is usually not the direct employer it is not easy to guarantee a position on graduation and in both education and health areas a surplus has proved embarrassing. In theory, the bonding eliminates one major unpredictable source of loss (through emigration or taking other work) and bonded bursaries should therefore make planning easier and reduce the margin necessary to allow for loss as well as aiding recruitment. However, bonding has been taken to mean also the guarantee of posts which in the case of physiotherapists recently were not available. While in theory the physiotherapists might be absorbed in the private sector, the prospect of a substantial number entering private practice without further work experience is not good. The same problem was met for teachers by reserving a number of positions for the first three years of teaching so that they could fulfil their bond and acquire work experience even though they might then have no permanent post.

If the government continues to provide funds additional to the ordinary tertiary bursary and wishes to bond the trainee in return, it is essential that the government's commitment (if any) to provide work is spelled out. A minimum commitment could be: if jobs are not going to be provided the trainees should be notified of this and released from the bond six months before completion of the course so that they can start seeking other posts. But this is barely satisfactory and a preferable alternative, in line with the teachers, would be guaranteed employment for the period of the bond, or sufficient to acquire registration and adequate work experience. Rapid adjustment of the intake when a surplus appeared possible should enable any mismatch to be ironed out fairly soon.

5 Registration boards

5.1 Functions of boards

Most of the major health professions are subject to registration under an Act and a board or council is established for that purpose. The Act may either be specific to a health group, or, as in the case of public health engineers, cover a more diverse group. The minimum functions of a registration board are to maintain a register and have machinery and criteria for placing people on it and removing them. The removal of names because of death, retirement, and emigration, etc is a routine function but important in manpower planning to maintain an up-to-date picture of resources. Removal for disciplinary purposes is important in maintaining standards - but not important quantitatively.

The exact role assumed by a registering body to some extent reflects what other bodies there are in the same field. The fact that there is no single division in the Department of Health concerned with doctors (in contrast to dentists and nurses) has probably been a stimulus to the Medical Council taking some initiatives that might
otherwise have come from other directions. In a later section, three functions - the maintenance of standards, advice on manpower requirements and provision of a forum for the interchange of ideas which bear on the quality of training are noted. The first is clearly the function of the registering board. Its involvement with the others may vary, but the indispensable condition is the avoidance of conflict of interest.

The placing of people on the register is highly relevant to the training function since through this the board exercises its authority to monitor training standards. Some boards monitor in broad terms the curriculum and facilities of the training institution; some express quite detailed views about curriculum; some actually conduct the registration examinations. This last practice appears to be confined to bodies who have (or have had) responsibility for registering groups whose training was done in hospitals or through a fragmented mixture of courses, and was no doubt necessary to achieve some uniformity of standards. The tendency among professional educators is to be sceptical about examinations particularly about external examinations.

In the case of universities, registering bodies have always accepted a monitoring role and have not sought to spell out a detailed curriculum. It is to be expected that as the registering bodies' appreciation of the role of technical institutes grows, they will adopt the same attitude towards them. A number already do. But it is important, if teaching bodies are to take over the examining role and there is more than one teaching body involved that they accept the responsibility for maintaining uniformity of standards - for example, by assessing each other's examinations.

Apart from the inadequacies of external examinations as a means of determining competence, there is always a danger that the curriculum to be examined will become set in a rigid and conservative form which will inhibit what should be a continuous process of curriculum review and reform.

While there will no doubt have to be exceptions, where the registering body continues to conduct examinations it is recommended that they should examine whether their reasons for doing so are still valid, and whether their responsibilities might not be better met by monitoring the overall standards of the institutions responsible for training.

5.2 POSTGRADUATE EXPERIENCE REQUIREMENTS

Some registering bodies require postgraduate work experience before registration but practices vary: the Dental Council requires none; the Medical Council requires one year (and more for specialist qualifications) and has taken an increasingly positive interest in the nature and environment of that experience. Some, while requiring work experience, take a much less positive interest in its nature. This period of experience, and further experience following registration are relevant not only to professional competence but may well be important in forming personal attitudes towards various types of possible future practice and therefore have a direct bearing on the manpower problem - particularly as it affects distribution between geographical areas and disciplines.

5.3 ROLE IN MANPOWER PLANNING

Registering bodies vary in their attitude to the 'numbers' aspect of manpower planning but there is a disposition to keep somewhat remote on the grounds that they could easily be alleged to have conflicting interests which might lead to an alteration of standards in order to meet manpower objectives - whether they be of the government or of the profession. The risk of such accusations is particularly high when the body has to assess the value of overseas qualifications, often on individual basis. But there have been cases (although not, to my knowledge, in the health field) where the
academic requirements for registering New Zealand qualifications have been raised without any clear demonstration that this was necessary to the proper serving of the public. This concern to preserve a neutral posture seems well based although it should not preclude the registering body taking a role in promoting manpower studies outside its own structure, and, even more important, ascertaining complete and up-to-date information on the active work-force necessary to planning. But again it must be recognised that there will be cases, particularly in smaller groups where there may be a limited number of people available to contribute to the two roles and separation may not be practicable.

5.4 PLACE IN ADVISORY STRUCTURE ON MANPOWER PLANNING

The manpower planning role of registration bodies varies between the different health professions. A pattern seems to be emerging whereby the larger professions such as medicine and nursing have stand-alone manpower advisory bodies. Where these exist the registration body need not be directly involved in manpower planning. However, for the smaller occupations where such bodies do not exist and may not be justified, registration bodies may have to accept a more formal and direct role in manpower planning.

A strong case can and probably will be argued at the workshop for some central mechanism (board, council or committee) to integrate and generally facilitate health manpower planning. For those occupations where the registration body includes manpower planning among its functions the central body would need to exercise more direct oversight.

6 Public input into the training process

6.1 APPROPRIATE MACHINERY REQUIRED

The role of the registering body in maintenance and monitoring of standards and the educational body in training and examining does not fulfil one of the requirements mentioned in section 1.1 - that the latter respond to outside pressures and interests. A registering body must of its nature be rather remote from public concerns and influence (although it can respond to specific complaints involving possible disciplinary issues) and may well feel it necessary to adopt, in case of doubt, a slightly conservative attitude.

There is need for some machinery through which the public, the government and professional groups can make an input, perhaps through fairly informal means, into the training process. Where such input leads to change, the registering body will retain the responsibility for accepting or rejecting the changed programme.

6.2 TECHNICAL INSTITUTE MACHINERY

For many (perhaps all) of the courses run in technical institutes a machinery which at least in part serves this purpose appears to exist: the advisory committees set up to oversee the work of each group training health professionals. Typically it includes representatives from teachers, community, profession and departmental personnel.

The composition is not uniform. For example, in physiotherapy there are significant differences in the advisory committees at Otago and Auckland and the same officer from the Department of Health fills different roles on the two committees. The Department of Health is not necessarily represented on all the advisory committees. Even when it is, national policies are not always represented. Some modification of composition and terms of reference may be desirable. In particular it should be made
clear that the advisory committee should be a forum which would welcome inputs from outside groups both official and informal, on the adequacy of the training. It should also act as a continuing link between the training institutions and the Department of Health, both to exchange ideas and to identify and facilitate the removal of obstacles to effective training and to introduce new ideas. It should be a multidirectional activity - stimulating and informing departmental officials, the profession and the consumers, as well as the teachers.

A particular role it could fulfil is one alluded to in the 1975 OECD report 'New Directions in Education for Changing Health Care Systems' which emphasises the need for general policy statements about health care determined by health care officials being adopted and translated into effective policies in the education institutes. The same report also noted that sometimes an educational institute could move more fully than is normal into the health care role to meet some special care need, and in the process acquire facilities for training not otherwise available. It is not hard to think of situations where there are unfulfilled health care needs which an innovative educational institute could fill - but the administrative and attitudinal problems have seemed insuperable. The advisory committees within the technical institute structure representing all interests, could be expected to provide a forum for developing a viable programme in which overall costs and benefits could be seen as a whole.

6.3 UNIVERSITY SITUATION

As already noted, such an advisory committee structure seems already to exist in the technical institutes. No comparable arrangement seems generally available in the universities. This difference is probably due to different perceptions of the roles and independence of the two types of institutions. This issue is addressed in chapter 7.

7 Nature and independence of the universities

7.1 NATURE OF UNIVERSITY TRAINING

The particular quality of a university is that those who pass through it should have some appreciation of, and hopefully some capacity to practise, what Ashby has called the 'discipline of dissent'. By this he meant the process whereby data are collected and analysed, hypotheses are tested against evidence and as a result existing theories and practices are tested, challenged and if necessary changed. This is the basis of all research, and the reason why a respectable research activity is an essential part of a university. To a person who has adequately grasped these attitudes, the current views and practices of professions have a certain impermanence - to be held and defended only until the accumulated evidence forces their abandonment and a move to a more defensible position. At the least it should produce a person who is alert to the transitory nature of the currently received doctrines and is therefore a self-motivated and life-long learner. At best, if the attitude is accompanied by real intellectual ability and energy, that person should contribute to the changing of established views.

It follows that if a profession is to provide from its own ranks the major impetus for change, particularly intellectual impetus, at least key members of it, and perhaps all, should be trained in a university. Thus doctors should be trained in a university; plumbers, whose craft will change mainly as a result of the work of other groups, such as chemists and engineers, should not. Practical considerations will often dictate that a group be wholly trained within one type of institution, even though a case could be made for training some in each type of institution.
Although understandable, it is curious that universities, one of whose distinctive contributions to society is the rational criticism and renewal of our institutions, are often very sensitive to criticism of their own role, achievements and teaching.

This sensitivity may be based on a belief that such criticism is often a prelude to an attempt to suppress vigorous debate and argument which might be uncomfortable for those hearing it. No doubt it often is. But the independence of the university has to be defended more selectively than by blanket resistance to criticism. The role of critic to society carries an equal obligation to listen seriously to criticism of the universities' achievement. The training of a health professional - as distinct from, say, an astrophysicist - is a matter of considerable practical interest to the community, about which it is entitled to a voice. Because in many disciplines the direct community interest is slight - and expressed, if at all, by a concern that some academic is preaching sedition or immorality - there has been a tacit assumption that it will not be expressed in respect of professional schools. But when Abraham Flexner decided that the universities had a major and indispensable role in medical education in injecting into it the 'discipline of dissent' he was asking them not merely to confer that benefit on the medical profession but also to accept that it should be applied to the universities and the hospitals themselves. This does not imply that the community's interest is served by an attempt to control in detail the universities' teaching. It does imply the right to monitor and comment on the objectives and the result, and to indulge in vigorous dialogue about the means. The exact structure of such a forum is itself a matter for debate. The concern here is to affirm the need for such a forum in respect of each of the health professional groups trained in a university.

If these proposals are accepted then there is potentially a separate body concerned with each of the three functions referred to in 5.1 - registration, manpower planning, and the provision of a forum for advice and exchange of ideas with teaching institutions.

These functions are distinct. Where the groups are large and taught in more than one institution the functions should normally be separate. However, when all are taught in one institution it may be that economy of resources demands that, say, the last two functions be carried out by the same body.

8 Division of responsibility for training

8.1 POLICY FORMATION IN TECHNICAL INSTITUTES AND UNIVERSITIES

As already noted the technical institutes, whose emergence as a major part of the tertiary education system is much more recent, were more consciously planned than universities. They have accepted the strongly vocational role of meeting identifiable needs in training in accordance with the best accepted practices of the day. With a few exceptions they have not sought to occupy territory which is occupied by the universities (although there are courses which universities would probably not have undertaken had there been strong technical institutes at the time the universities undertook them). In this respect our history is much happier than that of, for example, Australia. As a result of technical institutes' different histories and traditions we see in them a reasonably tidy system of policy formation which some may criticise as being too centralised but it is at least simple, and in the universities a much looser system in which controls are more indirect and the issues sometimes clouded by some confusion about the nature of university independence.
8.2 MACHINERY TO RESOLVE CONFLICT

However, the fact that the expansionist phase when universities and technical institutes were both growing rapidly without treading much on each other's territories is now past makes it prudent to look to the machinery for resolving possible conflicts. Scorite (Standing Committee on Relationships in Technical Education which comprises the Director-General of Education, Chairman of the UGC, Chairman of the Technical Institutes Association, Association of Teacher's Colleges and Education Departmental personnel, plus the Director-General of Health by invitation when matters affecting the health sector are being discussed), at least provides a forum for identifying proposals that overlap and is reported to work quite well. One of its problems is to ensure that it hears of proposals before they become too far advanced.

8.3 THE PRESENT POSITION REGARDING ROUTES TO QUALIFICATION

A comprehensive list of 57 routes by which people may acquire health-related qualifications prepared by the Training and Education Branch, Department of Health, was attached to the original of this paper as an appendix. It has not been reproduced here. A brief summary of some of the major groups serves to illustrate the variety of combinations.
### Training Institutions by Occupations

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Training Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctors</td>
<td>Auckland, Otago</td>
</tr>
<tr>
<td>Nurses</td>
<td>Massey, 10 TIs, Hospitals</td>
</tr>
<tr>
<td>Clinical Psychologists</td>
<td>5 Universities</td>
</tr>
<tr>
<td>Physiotherapists</td>
<td>Otago, Auckland</td>
</tr>
<tr>
<td>Social Workers</td>
<td>Victoria, Massey, Canterbury</td>
</tr>
<tr>
<td>Optometrists</td>
<td>Auckland</td>
</tr>
<tr>
<td>Dietitians</td>
<td>Otago (pre-requisite Dip HSc)</td>
</tr>
<tr>
<td>Dentists</td>
<td>Otago</td>
</tr>
<tr>
<td>Dental Nurses</td>
<td>Health Dept School</td>
</tr>
<tr>
<td>Pharmacists</td>
<td>Otago, CIT</td>
</tr>
<tr>
<td>Administrators</td>
<td>Massey</td>
</tr>
<tr>
<td>Chiropodists</td>
<td></td>
</tr>
<tr>
<td>Occupational Therapists</td>
<td></td>
</tr>
<tr>
<td>Orthotists</td>
<td></td>
</tr>
</tbody>
</table>

In addition, there are:

- Numerous postgraduate diplomas offered eg Community Health (at Wellington Clinical School); Audiology at Melbourne University.
- A variety of courses combining on-the-job training and block courses at technical institutes, for example, dental technicians, medical laboratory technicians.
- Some courses run entirely in hospitals; for example, medical photographers.
- A number of posts held by people who have any of a variety of degrees, usually in science or engineering, who learn the special aspects of their work on the job; for example, toxicologists and noise-control officers.

### 8.4 Review of Training Locations

Broadly, the training location seems to conform to the criteria suggested and to common sense. Given the central significance of nursing, it is proper that there should be at least one university course which will develop its leaders. There are some
courses run by hospitals that, prima-facie, could be in a technical institute, as might the training school for dental nurses. One can query the need for the two courses in pharmacy, unless they can be shown to be fulfilling significantly different needs; even more doubtful is the case for five courses in clinical psychology. There are a number of proposals for new courses; for example, for rehabilitation officers and bio-medical engineers, which seem designed to demonstrate the urgent need for a machinery which ensures that such courses meet the needs of as many groups as possible and are located in the right places.

By way of example, the proposal for a course in rehabilitation has been developed to quite an advanced stage by one university with strong encouragement and promise of financial backing from the Accident Compensation Corporation. Its proposals do not take full account of the rehabilitation needs of many people for whom ACC has no responsibility. A slightly different course, possibly at another institution, might fill a much wider role. Had the ACC been a government department it could not have offered independent financial support. If a structure for planning is developed, one of its responsibilities would be to ensure that proposals such as this had been considered in the wider context of manpower. Its powers would have to include the right to be informed of such proposals at an early stage.

9 Decision-making process

9.1 TECHNICAL INSTITUTE PROCESS

As already indicated, the process for establishing courses and fixing the intake in technical institutes is highly centralised. The problem is to make the right decisions; if they do not stick it is a reflection on the firmness of decision, not on the machinery. The manpower planning machinery which is envisaged elsewhere could provide the appropriate means for reaching decisions provided it is supported by a small but skilled group, much of which already exists.

It has also been stressed that any central coordinating committee of the manpower planning machinery should have the right to be informed about all training proposals affecting health personnel, wherever they may be located, at an early stage so that the committee could make an effective input.

9.2 UNIVERSITY PROCESS

The inter-relationships involved in university course proposals are more complex than those for technical institutes. The variety of ways in which a proposal may be generated and the processes it must pass through within the university are covered in 2.2. The relationship of universities, with their high measure of independence, to the UGC and the government is also complex. The government has no legal power to direct a university - to tell it to open or close a school, to reduce or increase numbers.

The powers of the UGC depend on quite clear financial clout conferred by the section of the Act which gives power 'to determine the allocation of money to be recommended by it for appropriation by Parliament and to review the expenditure ...' It can also advise and recommend to the government on any matters relating to university education and to initiate and consider plans. The Act also has a clause giving the committee 'powers to do whatever it considers necessary ... to accomplish the purposes for which it exists'.

But as the purposes are 'to determine the allocation of money to be recommended. ... to review expenditure' and 'to advise and make recommendations to government through the Minister' they appear to be limited to acquiring the information necessary
to reviewing and recommending and do not include the power specifically to direct the closure or a reduction of a course. UGC's real power derives from its role in recommending on the allocation of money and on any matters relating to education.

Under these circumstances the universities accept the decisions of the Curriculum Committee which advises the UGC on new academic proposals. While formerly this committee confined itself to the soundness of the academic proposal, increasingly it now concerns itself with questions such as duplication of courses. While any new course that would require extra finance could be vetoed, the precise authority to stop one that does not is less clear.

Once a course is established in a university there is no direct means for controlling its numbers unless it requires special laboratory or other facilities - in which case these are effectively fixed at the time of construction, unless the university can, by more effective use or change of course content increase the throughput. If no special facilities are required, facilities will not limit numbers.

A few faculties (including medicine and dentistry) have high costs and are funded more generously than the majority of faculties. If an increase in numbers means substantially more staff this will only be achieved at the expense of other faculties and that fact may be a constraint, but as noted earlier, some special schools' costs are not very sensitive to significant changes in numbers of students.

In departments for which the operating costs are not greatly different from those of the average faculty (for example, social work) there has until recently been little constraint on growth - an increase in student numbers could be expected to lead to an increase in staff. But the recent financial stringency has meant that most universities are over-committed on staffing, and consequently increased student numbers may well not lead to increased staffing. Numbers are therefore limited by what the department or the administration regard as a reasonable work load. If the university has too many applicants for a course it can, with the approval of the UGC, limit numbers to that course. This is increasingly common.

In practice, therefore, courses needing specialist plant tend to be limited by the size of this plant and the limit on numbers agreed with the UGC at the time of establishing or expanding the school. If numbers are reduced, costs will probably not reduce much. For departments with average costs and no special plant requirements, the only effective limit on growth is the number they can teach with existing staff numbers, and less certainly, their perception of how many graduates the country needs or will employ.

Thus the controls on student intake in the university are indirect and, in an easier economic climate, could disappear in some disciplines. But provided the special problem of medicine is dealt with, some over-supply in the other health-related university disciplines, while a waste of students' effort in training for an unwanted career, would probably correct itself if good and prompt information on employment prospects is supplied.

9.3 REVIEW OF DECISION-MAKING PROCESS

While the government cannot be indifferent to the number and quality of manpower emerging from the professional schools in the health field it seems proper, recognising the traditional independence of the universities and the valid reasons for preserving it, to deal with the problem in three parts. To achieve this it is necessary:

(a) To recognise that doctors occupy a unique position and within this area the government must after proper consultation have the final say.
To develop an appropriate forum in respect of each professional group where both quality of training and quantity of the trainees is subject to regular discussion between departmental, professional and university groups, with a view to reaching a common understanding. The involvement of the University Grants Committee in the aspects of these discussions which have financial implications will give particular point to them.

To ensure an adequate and timely flow of information, which will influence both the market demand for places and departmental decisions to maintain or modify special bursary schemes.

Basically the situation that should prevail in respect of the technical institutes differs from this only in that under (b), the final decision, in the absence of agreement must lie with the government.

Summary

The essential element in control of the numbers in manpower planning is good information on assessed present and future demand. This depends on:

(a) A small but highly skilled central statistical/professional group - much of which exists.

(b) Input variously from:

registration boards and professional bodies in respect of the workforce and where relevant those in training;

teaching institutions in respect of intake, drop-out rate and the employment experience of graduates; and

employer in respect of manpower management matters.

(c) The presence of three types of bodies:

the registration boards with their responsibility for standards;

the manpower advisory committees with their responsibilities for planning; and

a forum in which teaching institutions, departmental people, employers, the profession and the consumer are involved in a debate which will enable inputs to be made which will influence the nature of the curriculum and teaching environment and will enable teaching organisations to feed back ideas to other organisations. This may help to iron out administrative obstacles to change.

Sometimes two or more of these bodies will need to amalgamate but as far as possible they should preserve their separate identities.

Given adequate information freely available, market forces can be expected to take care of most of the groups whose main employment is in the private sector.

Doctors, because of their power to turn on the tap of government expenditure are a special case, and the need for the government to be able to control their numbers is absolute.
With the exception of doctors, over-supply of health professionals where employment is mainly in the state sector can be embarrassing for employers and wasteful for employees, but not disastrous. Given a rapid response to the prospect of over-supply and reasonable attitudes on issues such as bonded bursaries, over-supply could be ironed out. The possibility of saving costs in teaching facilities if intake is cut is often illusory. However, even if reduction in costs is not possible, the waste is small compared with the likely consequences of continuing over-supply of trained personnel.

For the technical institutes there is machinery which, given some modification, provides for adequate control and/or influence on numbers and curriculum. For universities it does not exist, but by provision of appropriate advisory forums for each professional group the necessary influence could be exerted. The UGC has limited, if any, legal power to direct a university in respect of numbers or closing a course. It has very substantial clout by virtue of its role in advising on financial allocations.
HEALTH RELATED EDUCATION IN TECHNICAL INSTITUTES

- a working paper for the Health Manpower Planning Workshop, Rotorua, September 1982 -

by
H E Hutchings,
Senior Education Officer,
Continuing Education, Department of Education
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INTRODUCTION

In August 1956, Dr C E Beeby [1] presented a paper to the Senate of the University of New Zealand which in many ways set the scene for Technical Institute Education. In his paper "Education in Technology" he outlined the overseas trends, the situation existing at that time in New Zealand and in considering education for technology in New Zealand put the question as to where to draw the line between the universities and other tertiary institutions. With considerable foresight he described the development from the unique New Zealand technical college, of a technical institute where education for technologists, technicians and tradesmen could be pursued. Twentyfive years ago he gave criteria and offered practical suggestions and it is interesting to reflect with the achievements so far reached today, the weight given those criteria and the number of suggestions which have indeed proved practical.

From one prediction made by Dr Beeby, the technical institute system as we know it today was born. He anticipated the establishment of a national technical institute and foresaw that this could be the possible home for a school of pharmacy and that around it, might eventually grow a series of courses centred on the biological sciences. From this nucleus technical institute education has grown dramatically until there is now a Central Institute of Technology, a Technical Correspondence Institute, 11 technical institutes and six community colleges with two senior technical divisions likely to become community colleges in the future.

It was assumed that the teaching of the technologies would in the future be divided between the university and the major technical colleges in New Zealand, the technical colleges developing first into technical institutes and later into colleges of technology. Clearly the technical institute development has been achieved but the later development is still a hypothesis. Dr Beeby felt that no absolute distinction could be drawn between technologists and technicians or between university departments of technology and colleges of technology and since this was so, any formula to determine automatically where to train a new occupational group was difficult if not impossible. Many factors were present and still are present to influence the selection and site of a particular education programme. The relations with industry, the relations with other disciplines, the content of the course, the type of examinations for students, the number and type of the students, all have a bearing, as much today as then. Now of course, there is the added and overwhelming effect of cost.

The Universities Act 1961 established a direction for university education with a dissolution of the University of New Zealand to autonomous universities. While indicating the direction which university education should take, this act also influenced the future development of technical institutes. In limiting the power to award degrees to universities there was an implied direction that systems were needed which would enable students who achieved qualifications in other tertiary institutes to have that study credited towards continued education in the university system [3]. This translation has been present for some time in limited application but now shows signs of growth.

Further impetus was added by Dr D Kennedy [2], which had direct relevance to health related education when, as Director-General of Health in 1967 he stated that he wished to see the Education of Health Service personnel transferred from the responsibility of hospitals and the Department of Health, where it existed in various forms, to the more formal setting of the Department of Education*. Until this time qualifications were available for many of the Health Service groups. In some instances, named schools existed, such as the School of Physiotherapy at Dunedin Hospital, a School of Occupational Therapy at Carrington Hospital in Auckland and at most hospitals throughout the country a school of nursing. The basis of all these programmes was the strong work association or clinical experience concurrent with
the more formal classroom teaching. The value of the concurrent practical experience was a well recognised and a thoroughly entrenched requirement for the majority of courses already established at technical institutes, and had considerable influence in directing educational programmes toward the technical institutes.

The pharmacy course began it all in 1960, but it was almost a decade before the next of the health related programmes commenced in a technical institute. (Figure 1) Now there are nine health related vocations gaining qualifications through technical institutes and community colleges amounting to approximately 20% of their total current full-time equivalent student numbers. Just under half of this student body is accounted for by the ten three year full-time diploma courses in comprehensive nursing so far established.

I wish to briefly describe the nine types of Health Science courses offering qualifications from technical institutes in their order of establishment. They have all modified their format over the years to greater or lesser degree and principally through the influence of the professional and user groups - a factor predicted by Beeby as being inevitable for technical institutes but not for universities. Collectively they demonstrate the flexibility of this system of tertiary education for each has a design thought to be appropriate for their particular health service. (Figure 2)

PHARMACY 1960

There was considerable argument as to the appropriate site before a two year full-time diploma course was finally commenced at the Central Institute of Technology when at Petone in 1960. Some 4-5 years after the commencement it was reviewed by overseas specialists with a view to considering reciprocity of the graduates with overseas groups. There was little hesitation in accepting reciprocity but the recommendation made was that the course be extended to three years so that the period as well as the standard which was already recognised would more closely compare with overseas programmes. At about this time a degree course was also commenced at the University of Otago.

The Diploma in Pharmacy awarded by the Central Institute of Technology is followed by a postgraduate in-service period of one year and is then recognised for registration purposes by the Pharmacy Board and the Pharmaceutical Society.

FIGURE 1: YEAR IN WHICH HEALTH SCIENCE COURSES STARTED IN TECHNICAL INSTITUTES

| PHARMACY         | 1960          |
| MEDICAL TECHNOLOGY | 1969          |
| CHIROPODY        | 1970          |
| OCCUPATIONAL THERAPY | 1971          |
| PHYSIOTHERAPY    | 1973-5        |
| NURSING          | 1973-4-5-8-80-81-82 |
| DENTAL TECHNICIANS | 1975          |
| ORTHOPAEDIC TECHNICIANS | 1978          |
| THERAPEUTIC RADIOGRAPHERS | 1978          |
### Figure 2: Health Science Courses in Technical Institutes

<table>
<thead>
<tr>
<th>Course</th>
<th>Student Intake</th>
<th>Length</th>
<th>Entry Required</th>
<th>Prac. Exp.</th>
<th>Award</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacy</td>
<td>100</td>
<td>3 yrs</td>
<td>UE +</td>
<td>Intern.</td>
<td>dip.</td>
<td>= Register</td>
</tr>
<tr>
<td>Occupational therapy</td>
<td>90</td>
<td>3 yrs</td>
<td>UE</td>
<td>Hosp &amp; Community</td>
<td>dip.</td>
<td>= Register</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>100 (2)</td>
<td>3 yrs</td>
<td>UE</td>
<td>Hospital</td>
<td>dip. + State Exam</td>
<td>= Register</td>
</tr>
<tr>
<td>Comprehensivene nursing</td>
<td>666 (10)</td>
<td>3 yrs</td>
<td>6th Form Cert</td>
<td>Health agencies</td>
<td>dip. + State Exam</td>
<td>= Register</td>
</tr>
<tr>
<td>Chiropody</td>
<td>15</td>
<td>3 yrs</td>
<td>UE</td>
<td>Clinic 50%</td>
<td>dip.</td>
<td>= Register</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>15</td>
<td>3 yrs</td>
<td>UE</td>
<td>hosp 66%</td>
<td>dip.</td>
<td>= Register</td>
</tr>
<tr>
<td>Med. Lab. technology</td>
<td>100 (5)</td>
<td>5 yrs</td>
<td>UE</td>
<td>Medical Lab 60%</td>
<td>NZCS = Register + COMLP</td>
<td></td>
</tr>
<tr>
<td>Dental technology</td>
<td>15</td>
<td>4 yrs</td>
<td>4 yrs high sch</td>
<td>Dental Labs 75%</td>
<td>Cert. = Register</td>
<td></td>
</tr>
<tr>
<td>Orthotic Prosthetic technology</td>
<td>18</td>
<td>3 yrs</td>
<td>school cert</td>
<td>Hospital &amp; art. limb</td>
<td>Cert. = Register</td>
<td></td>
</tr>
</tbody>
</table>

The intake of students has approximated 100 and the average number of successful graduates has been 60. The first year intake for 1983 has been set at 85. The educational pre-requisites required for entry is a minimum of University Entrance, but such is the demand for places and the academic level of the course, a 7th form year at a secondary school is advised and the bursary examinations of this year become a selection criteria. Some 300 applicants usually seek the 100 places.

The school offers short intensive post-graduate or upgrading courses at regular intervals. These courses are from three to 10 days duration. The demand is sufficient to require limitation of places.
MEDICAL TECHNOLOGY 1969

The course for the medical technologist qualification is one of five years duration. The first three years of the programme is the only part associated with the formal education system in technical institutes. The following two years of the study programme is a controlled internship with the syllabus set and examined by the Medical Technologists Board. The final award, a Certificate (now a Diploma) in Medical Technology, is made by the Medical Laboratory Technologists Board.

The formal education portion of the course is governed by the Authority for Advanced Vocational Awards. It is a New Zealand Certificate in Science, para-medical option. The Authority for Advanced Vocational Awards organises, with advice from representatives from the profession and employers, the writing of a syllabus and teachers notes. The authority also organises and controls the examinations, again drawing on representatives from the professional group to write the papers and to moderate the examinations. The subjects of the first year are general or basic science which may be undertaken by a wide variety of students following applied science vocations. The subjects of years two and three are specifically designed to meet the needs of the particular vocational group and the medical laboratory service. These subjects together with acceptable medical laboratory experience are the prerequisite for entry to the final two years of the course.

The students from medical laboratories who do not have a course available, usually attend the Central Institute of Technology and during a 12-week full-time block course complete the programme undertaken by part-time students. In general the part-time students are required to attend their local technical institute for approximately 12 hours in each week.

The student intake is governed by the medical laboratories who nominate their students for the course after having appointed them as medical technology trainees. The national intake of students approximates 80-100. Successful graduates from the New Zealand Certificate in Science part of the course number 80%. A further 10% (approx) are lost before final qualification as medical technologists.

The Medical Technologists Board established under the Medical and Dental Auxiliaries Act 1966 recognises the successful completion of the New Zealand Certificate in Science in subjects acceptable for medical technology by awarding a basic training certificate, the necessary prerequisite to the final two years of the five year course.

PODIATRY 1970

No formalised course for a qualification in Chiropody (now Podiatry) existed in New Zealand prior to 1970. Virtually all qualified podiatrists had overseas (principally United Kingdom) qualifications.

The Podiatry course is a three year full-time diploma at the Central Institute of Technology. The necessary concurrent clinical experience is supplied by having a clinic established at the institute capable of treating 16 patients which is open to the public. Some 2000 treatments per year are given by students under close supervision of tutors and the recognition of the clinic has grown to the extent where the majority of treatments are referrals from medical practitioners.

This school is small, with an average intake now of 15 students but with an approved intake of 20. The small intake is almost certainly governed by the employment opportunities being limited to private practice, but the anticipated introduction of a health benefit to allow the elderly to receive free podiatry treatment may well increase the demand for podiatrists in hospitals.
The educational pre-requisite of students for entry is University Entrance or equivalent. The award is a diploma and this is recognised for registration purposes by a statutory board also established under the Medical and Dental Auxiliaries Act.

OCCUPATIONAL THERAPY 1971

Prior to 1971 a national school in Occupational Therapy existed at a Psychiatric Hospital in Auckland. Following the recommendations of the Director-General of Health, a School for Occupational Therapy was established at the Central Institute of Technology.

The Diploma in Occupational Therapy is a three year full-time course with a University Entrance exam or its equivalent as an entry requirement. There is an annual enrolment of 90 students and with approximately 60 students receiving their diploma each year. From 1983 the first year intake will be 80. Students have an introductory clinical experience period of six weeks in base units during their first year. Base units established in a psychiatric hospital, a general hospital and the community are led by a tutor with appropriate experience. The clinical experience period increases during the second year until in the third year it occupies approximately two-thirds of the programme when students are directed to several health-care areas throughout the country where the appropriate clinical experience can be obtained. While at these clinical experience centres students have the supervision of clinical tutors who, in turn, are responsible to the School of Occupational Therapy at the institute.

An Occupational Therapy Board established under the Occupational Therapy Act of 1949 recognises successful graduates from the school for registration purposes.

PHYSIOTHERAPY 1973 AND 1975

As with Occupational Therapy the School of Physiotherapy was originally under the auspices of a hospital, in this case Dunedin Hospital. Because of a national need for a greater number of physiotherapists a second school was established in Auckland in 1973 at the Auckland Technical Institute. Subsequently the school at the Dunedin Hospital was transferred to the Otago Polytechnic in 1975, although the facilities at the hospital are currently still being used.

The entry pre-requisite is the University Entrance exam. The total first year intake divided equally between each school was 100 this year with a reduction to 84 in 1983.

Both schools offer a three year full-time Diploma course but, as with other health related courses, there is integrated into the programme a considerable component of directed and supervised clinical experience. The Auckland Hospital Board is sufficiently large to enable the students from the Auckland school to gain their clinical experience within the greater metropolitan area. The experience is able to be interwoven in the programme as half or one day sessions. Throughout the whole programme approximately 35% of the curriculum requirement is directed at supervised clinical experience during which students are responsible to tutors who have both a clinical supervision role plus a teaching role within the school.

The clinical experience available to the Otago Polytechnic School cannot all be obtained in the local health area and centres have been established at five metropolitan hospitals capable of giving the clinical experience for a group of students. In this case the programme is similar to that of the Occupational Therapy School. Virtually the whole of the third year is spent at a clinical experience centre.
under the supervision of clinical tutors who supplement the experience with a theoretical component. With the reduction in student intake, the clinical experience centres may diminish in number.

A diploma is awarded to graduates by the technical institute, once the student has successfully undertaken a state examination which is administered by the Physiotherapy Board established under the Physiotherapy Act 1949. Success is recognised for registration purposes by the board and by the Society of Physiotherapists for senior membership. Numerous short post-graduate courses are organised by the society and the Physiotherapy Board. A one-year full-time Advanced Diploma programme at the Auckland Technical Institute commenced in 1982, the entry prerequisite being registration, a current practising certificate and a minimum of one year's experience in the specialty of the selected option for the course. A number of physiotherapists have established private practices which has introduced a new dimension to the employment possibilities and in some respects to the course requirements.

NURSING 1973/74/75/78/80/81/82

Of all the health service personnel, nurses make up the greatest proportion. The transfer of nursing education from the responsibility of hospitals and the Department of Health to the Department of Education is a major undertaking. A beginning was made in 1973 with the establishment of two Schools of Nursing at Christchurch and Wellington, with a further school at Nelson in 1974, and in Auckland in 1975. The Waikato Technical Institute in Hamilton and the Southland Community College in Invercargill began courses in 1978. Manukau Technical Institute and Palmerston North Technical Institute offered courses from 1980 and Hawkes Bay this year, 1981. Approval was given for a course at Taranaki Polytechnic to begin in 1982 while planning approval for further courses in Northland and Otago in 1983 and 1984 respectively has also been given.

The education prerequisite for entry to the technical institute courses of nursing is laid down within the regulations to the Nurses Act 1971 administered by the Nursing Council. The student is required to hold a School Certificate or better, but such is the demand for places at the technical institute Schools of Nursing that students invariably have University Entrance or subjects at sixth form certificate level or better. All the technical institute courses are three year full-time diploma programmes. Approximately half the course is applied to selected and supervised clinical experience. Care has been taken to only establish programmes where adequate, broad spectrum clinical experience is available to the students, where hospitals boards have declared support and where institute facilities and resources are available or are to be established. In all cases the clinical experience is selected and supervised by tutors from the technical institute.

The total number of students in the technical institute three year comprehensive nursing courses currently stands 1673 with an enrolment this year of 666 new students. Not all established courses have completed their year programme so the current output figure of 260 registered represents a portion of graduates only.

In 1973 the first of the developing Post Basic Education Programmes was established in Auckland, Wellington and Christchurch institutes. Each of these Advanced Diploma programmes offers a particular clinical specialist option. These institutes broadened the options in 1980 and were joined by Waikato Technical Institute.

Applicants for entry to the Advanced Diploma must be registered as a comprehensive nurse or hold a registration in the option selected together with two years of practice of which one year has been in the specialty of the course.
DENTAL TECHNOLOGY 1975

The dental technicians had an apprenticeship education system prior to 1975. Dental laboratory operators are almost entirely from the private employment sector with only a very few in the hospital service. A manpower planning exercise demonstrated a serious need for dental technicians throughout the country and also demonstrated that the apprenticeship system did not meet the standards being demanded for national dental care.

A cadetship was established in 1975 when the requirement was an eight week full-time block course each year at the Central Institute of Technology throughout a period of four years. The remainder of the four years is spent with the employer gaining the appropriate practical experience. School Certificate is the educational prerequisite. The course is laboratory or workshop orientated and is heavily practical. The theoretical component is slowly being increased to meet the higher level of knowledge required by dental laboratory operators. An annual enrolment of 12-15 students results from employer nomination.

The standard of dental mechanics and prosthesis in New Zealand is such that a two-year full-time course has been discussed, but a more acceptable modification to the course structure has been introduced allowing three 12-week block courses within the four year cadetship term.

As well as a registration board established under the Medical and Dental Auxiliaries Act which recognises the institute certificate, a Dental Technicians Training Council has also been established by an Act. The council governs all facets of the cadetship in the employment environment and is administered by the Department of Labour.

THERAPEUTIC RADIOGRAPHY 1978

This course, a three year diploma course, requires the first year to be one of full-time study followed by two years of supervised clinical experience at a recognised training hospital in each year of which is a 12 week block course of extending theoretical study at the institute. The course is established at the Central Institute of Technology under a specialist tutor. Allied health science tutors teach the supporting subjects. The educational prerequisite is University Entrance and the qualification is recognised by the Medical Radiation Technologists Board for registration purposes.

A recent manpower study indicates that the intake of 15 students per year should meet the demand for therapeutic radiographers. The students are nominated by the hospitals where a therapy department is established. The student intake is supplemented by a further small percentage of students enrolled by the institute to meet losses during the course and to maintain anticipated graduate/employment balance.

ORTHOTICS, PROSTHESES AND SURGICAL FOOTWEAR 1978

A certificate course in orthotics, prostheses and surgical footwear at the Central Institute of Technology has an annual enrolment of 15 to 18 students. The students require four years secondary education to commence and are nominated by the hospitals from departments of surgical footwear, splint making and artificial limb preparation. Previous education programmes separated the three specialist areas and were of an apprenticeship type. Examinations available under the old system had two grades of certificate, A and B, each issued by the appropriate association. Education programmes, however, were of variable standard, were heavily practical and had comparatively little theoretical backing.
The construction of the new course differs slightly from the rule. In the first year there are two block courses—one a course of six weeks of an introductory nature; in the same year, at a later stage, a second 12 week block course has both theoretical and practical components. In the second year a further 12 week block course, and in the third an 18 week block course which centres around projects applied to the three discipline areas with the opportunity to specialise in one. The graduate is awarded a certificate which is recognised by the Department of Health. Subsequently a registration board is to be established made up of the three disciplines. A second advanced stage has now been established. It has a much larger clinical component, and is aimed at a patient assessment, ‘prosthesis design and fitting’ role by the technician.

OTHER HEALTH SERVICES

Two major areas of health related science education are not yet established in formal education. One is the collection of bio-medical technicians who in general, are made up of many small groups. An education concept discussed for this group and perhaps for others, is a one year full-time course of basic sciences with the opportunity to undertake short intensive block courses in options for their specialty area. A programme with a variety of options when accumulated could be sufficiently elastic to be applied to various specialty groups of technicians.

The other group is the diagnostic radiographers. After a number of years of repeated meetings agreement was reached with the Authority for Advanced Vocational Awards (AAVA) for a New Zealand Certificate in Science option. With AAVA support syllabus committees were established and the basis of a sound course was written in terminal objectives. The Society of Radiographers at the eleventh hour withdrew and chose to contract with the Conjoint Board of Radiologists and Radiographers of Australia to act as a branch school in Auckland at Auckland Hospital. Other branch schools have since been established at other hospitals. The course content prepared at the AAVA committees, however, has been able to be used and a curriculum has evolved for a three year course consisting of 30% theory and 70% practical training.

COURSE OVERSIGHT

For most programmes in technical institutes, both employer and employee has been influential in the establishment, the content and more importantly the outcome of the education programmes.

Within the Authority for Advanced Vocational Awards (AAVA), course committees are established. These committees have representatives of the user group plus representatives of the vocations whose members and trainees undertake the courses. Hence the science course committee recommends on matters relating to subjects contained within the various New Zealand Certificates of Science. Examiners and moderators are chosen or confirmed and their reports are considered. The syllabuses are reviewed at regular intervals and appropriate sub-committees are appointed to undertake this task. The commitment of resources from Vote: Education is accounted for and the number of students requiring the course and the on-going demand for such a course are their concern.

Perhaps patterns on these course committees are the advisory committees within technical institutes. Almost without exception each course described in this paper has an advisory committee whose terms of reference surround the principle of advising the council of the institute on any relevant matter pertaining to the provision of a particular vocational training for health service be it nursing, pharmacy or other allied health science.
The membership of an advisory committee is the responsibility of the council of the institute. Again, it does vary from course to course and institute to institute but several criteria have been established in common. In general, the council is represented by a member who in many cases chairs the meeting in order to establish a direct link with his council. The principal or his nominee, often the senior administrator responsible for the course, is a member. Those groups able to reflect the progress of the course, the achievement of its objectives and the suitability of the course content for the service demanded of its graduates, are represented on the membership. A sample representation is as follows:

- The technical institute - the principal (or nominee)
- Head of department or course supervisor
- Hospital board(s) - may be a chief nursing officer or her nominee - or a representative of the Hospital Boards' Association
- Professional association or society (e.g., Nurses Association or Association of Occupational Therapists) - often the branch representative
- New Zealand Medical Association
- Department of Health - usually the principal public health nurse (may include a head office representative)
- Department of Education - Education Officer, Continuing Education
- A student representative.

If thought necessary, more than one representative from any of the above may be included.

The committee serves a useful purpose internally by acting as a sounding-board for the actions of the head of department, the tutors, the students and the progress of the course. These matters are most often covered by a head of department report which includes such information as staff changes, student intake and loss, student achievement, course needs including equipment, and suitability of facilities. Opportunity is taken through this report to draw the attention of the committee to student difficulties within the course and the consideration of any recommendations for a student to seek an alternative vocation.

Sometimes associated with the committee is a sub-committee which endorses student selection and an examinations committee to review examination results. Any changes to curriculum including evaluation procedures are tabled at these meetings and matters concerning clinical experience and liaison with hospitals is often included.

The value of these committees is that it gives the "user group" the opportunity to reflect the needs of the service in the field to maintain a line of communication with their own professional groups and in addition it creates the opportunity for the course staff to have their considerations on the course debated and supported.

Matters of significance can be directed to the council of the institute by recommendation. Council will consider any report and if appropriate, action the recommendations.

Through an advisory committee it is therefore possible for those concerned to implement change, to maintain the required standard and so meet or influence the requirements of the health care service.
As an example of one committee function, the following is a list of agenda items from an established nursing advisory committee:

1. Arising from the Minutes
   - Report on an open day
   - Public relations and brochure design
   - Contracts between health agencies and the college
   - Travel costs of students

2. Admission of students to the course
   - number of applicants
   - criteria for selection
   - area for recruitment

3. Evaluation methods

4. Examination results

5. Result publication

Yet another group of controlling authorities are the registration boards. With the exception of the orthotic and prosthetic technicians, all the graduates from health science courses in technical institutes are registered by a statutory board or council. Criteria are established by the statutory bodies for the graduate to register and to practice.

Nurses, physiotherapists, occupational therapists and pharmacists have authorities governed by separate Acts, while the remainder function within the Medical and Dental Auxiliaries Act.

The wording within each of these Acts when referring to the functions of the board or council varies but the principles are the same. In summarised form they are:

1. To make recommendations (usually to the Minister of Health) with respect to (education) programmes in order to meet the minimum standards necessary for registration

2. To promote high standards of education and conduct

3. To exercise disciplinary powers

4. To conduct and direct examinations as necessary

5. To receive applications, authorise registration and issue a licence to practice.

In effect, the first of these (1) is to approve education courses which will lead to registration.

The regulations of each Act detail the minimum standards required for registration and to that end may state the expected broad content of the education programmes such as subject headings or the minimum time to be spent in a clinical practice situation. There may be a post-graduation practice requirement as for pharmacy or the required passing of a national examination set and administered by the board as for nursing or physiotherapy. The board may even conduct part of the education programme; write syllabuses, direct experience requirements, examine the candidates and issue the diploma, as is the case for medical laboratory technology. Within the Education Act and the Technical Institute Regulations, however, the responsibility for
selecting students, governing the courses in technical institutes, directing the method of teaching, graduating students and awarding success rests with the council, principal and tutors of the technical institute. Clearly there is a constant and well established forum for communication required. In most cases, the existing advisory committees meet this need.

No Act or set of regulations give registration boards or councils directions for considering manpower control. Some boards have accepted some responsibility for employment opportunity for those being registered.

Recommendations have been forwarded to the Department of Education seeking reduced student intake in an effort to more closely balance the number of registerable graduates with employment opportunities and health care needs.

No course may be offered in a technical institute without the approval of the Director-General of Education, or where the case is for major commitment of funds from Vote: Education, by the Government. That approval, under the Education Act, can be revoked if the course no longer meets the criteria for which it was established. Equally, approval can be re-issued and through regulations a new schedule established. As initial approval for health-related courses considers health service needs and the related course size as a major criteria there is within this Act the machinery for manpower control. It is not a process undertaken lightly.

Many courses in technical institutes are related directly to employment. Some health related courses also fall into this category. The potential student must first obtain a position with an employer be it a hospital board or in private practice. The employer than releases or sponsors the students to an education programme. Although this casues peaks and troughs to student intake, it is a response to manpower needs. The major difficulties arise where the national requirement for the particlar vocation is small. The viability of a course becomes threatened and there is an inevitable lag between the reaction to the demand and the real situation.

POST BASIC TRAINING

In all the courses described the aim has been to enable the graduate to register and to practice. The learning process does not stop, however. More and more there is a demand for additional or continuing education particularly in the various specialist areas of practice.

The question arises now - where is this post basic education to take place? Because it is "advanced" should it be university or technical institute?

The nursing profession has given a lead. There is available from Massey University a variety of papers related to nursing which with other appropriate papers leads to a BA and from 1982 to a masterate. Presumably a doctorate will follow. Also available at four technical institutes is an advanced Diploma in Nursing Studies.

An advanced diploma programme for registered physiotherapists began at Auckland Technical Institute in 1982 while serious discussion for similar programmes for pharmacy and occupational therapy are actively under way.

The growth in the translation or interchange between tertiary education systems mentioned early in this paper is based at the moment on the recognition by universities of the study undertaken for these courses in other tertiary institutions. The three year Diploma in Pharmacy is credited fully towards the Otago University four year pharmacy degree. The Diplomas in Nursing have considerable cross credit toward various university degrees and the possibility of developing a nursing degree to which the diploma is the prerequisite is being seriously considered. The medical
technologists are pursuing a programme for qualification which is part technical institute, part university. In this case it is considered that the result, if achieved, would give the best of both systems and more importantly would best meet the needs of the service of medical technology. Universities several years ago recognised alternate university teaching and study environments in teachers colleges. The possibility of a similar recognition for a technical institute was recently challenged unsuccessfully by the School of Pharmacy.

A recent effort by the author to recognise the influences or the appropriateness of universities and technical institutes as sites for post-basic education by writing criteria proved impractical. Criteria by this notice can only exist in a more or less black and white situation. This is clearly not the case for health-related education. In the above exercise it became evident that while there was a trend, namely that vocational practice specialties seemed more appropriately placed in technical institutes associated with the basic training and that study in depth of subjects for a leadership or educational role might be the university, no firm rules could be stated.

What did begin to emerge was that again Dr Beeby's view, as quoted at the beginning of the paper, was valid. Any formula to determine automatically where to train a new occupational group was difficult if not impossible. Also emerging was the recognition that New Zealand could be fortunate in its tertiary education system. Within this system it could or should be possible to move in any direction taking advantage of skills, resources and facilities already established whether in the university or the technical institute. What is required, however, is an extended acceptance of Dr B C Lee's university-technical institute relationships [4] of cross credits escalation and co-operation - not competition. The view that in New Zealand there is a tertiary education system with more than one stream is one which must be accepted. The student must be able to recognise, indeed encourage to move from one stream to another, making use of the educational opportunities to reach a goal which most efficiently meets his need and that of the industry or the community in which he will work. Tertiary education authorities have the potential for even greater growth in the next decade than in the last; not volume growth but the development of education opportunity capable of meeting the vocational, industrial and academic needs of the whole country.

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12 REVIEW OF SUBMISSIONS

- a working paper for the Health Manpower Planning Workshop,
  Rotorua, September 1982 -

prepared by E M Morris
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INTRODUCTION

At its first meeting in December 1981 the Planning Group for the workshop decided to seek submissions from interested parties on the health manpower planning process in New Zealand.

In February 1982 information about the workshop was sent to all organisations and agencies with a direct interest in health manpower planning (see p 87-91). Submissions were called for by 1 May 1982.

In all, 37 submissions were received. A list of those organisations and individuals making submissions is included on p 92 and 93.

The response to the call for submissions was greater than expected. Some excellent submissions were received which were useful in planning the workshop and in preparing the working papers. Not all submissions addressed the broad health manpower planning issue. Some were rather narrowly focussed on the interests of individual occupational groups. In particular, some of the smaller occupations took the opportunity to make a case for their greater visibility - greater awareness by planners and administrators of their existence, their training needs and their role in the delivery of health care.

In reviewing the submissions the material is presented under four headings. These are:

- **Planning in general.**
  Included here are observations on the general topic of planning and the relationship between health planning and health manpower planning.

- **Manpower planning.**
  Summarised under this heading are the observations and suggestions made about health manpower planning structures and process.

- **Education and Training**
  Material relating to all aspects of education and training are included here.

- **Specific occupational comments.**
  Included here is material of direct concern to manpower planning for individual occupations.

While it is not practical to provide a complete set of submissions for each participant, sets will be available for reference at Rotorua. Copies of individual submissions will be provided to participants on request.

COMMENTS ON PLANNING IN GENERAL

Most of the submissions had some general comments on planning. There was complete acceptance of the idea that planning is both desirable and necessary if our health services are to move towards best use of resources... 'every organisation must strive towards effective and efficient use of the resources available if it is to remain viable'.

There were many comments on the need to undertake manpower planning in a broader context of health planning. Doubts were expressed that the latter had proceeded sufficiently far at this stage to make this possible but it was thought that perhaps pressure to plan the workforce would lead to more earnest efforts to develop planning in all health areas.
One comment was received asking that future planning be carried out for a 'workforce', not 'manpower' because of its sexist connotations.

For the purpose of this review of submissions the more detailed statements of planning philosophy are not covered in full. The issues extracted from them by the planning group as being key factors in planning are outlined here and applied more specifically to manpower planning issues in chapter 3.

As several groups told us, the first task in planning is to establish the current position, and the difficulty of doing so should not be underestimated. Much planning activity is concerned with the gathering, classification, analysis and presentation of data.

Then, if planning is to be effective, the current social needs and expectations, and economic and political circumstances have to be taken into account. To be practicable, all objectives should be broadly based and not attempt to go into fine detail, leaving maximum room for flexibility because parameters are constantly changing. The rate of change and eventual results are difficult to forecast with accuracy, and some of the changes inevitably are outside planning control.

Other comments included pleas for 'service guidelines' which give consideration to the combination of services appropriate to different levels of care, with regard to the planned development of area health boards. 'Some national guidelines are needed soon, to not waste time, money and effort if actions are incompatible.' Service guidelines and the manpower to provide the services are inextricably linked. It was stated that, ideally, these should be based on needs, not on demands, but it was also acknowledged that there is no easy way to determine needs. 'Needs are whatever the politicians say they are' was one remark made.

Clearly, it was thought that it is time to try to identify which demands are a responsibility of the health services and which should be dealt with by other government departments or other agencies.

'Paradoxically, the problem of defining specific areas of responsibility is increased by the current emphasis on all aspects of health promotion which involve broader social, rather than clinical definitions of health care.'

Several submissions referred to the desirability of community input on health needs at local and regional levels. A few of these went on to say that, as things stand, it is difficult for those involved in planning and decision-making to take community comment into account without being affected by undue pressure from minority group interests.

It was also commented that the current system of funding hospital boards from year to year, with the definitive budget for any year not known until after the Budget presentation to the House, makes long-term planning impossible. In whatever way funding may be carried out in future, it has to be remembered that practical planning depends on what we can afford, and we know this only in the short-term. Practical planning is likely to consist of attempts to move a given situation in a desired direction rather than efforts to reach a highly specific goal.

Finally, it was pointed out that for the workshop to succeed, indeed for all consequent activity to succeed, good communication and cooperation are the most essential requirements. Consultation with affected groups is desired, and centrally-imposed solutions emphatically rejected.
MANPOWER PLANNING

Process

"As this Association sees it the planning process has already begun in the task of health manpower planning in New Zealand. The problem has been identified and the collection and analysis of data is proceeding; the determining of alternative solutions and the formulation of options for action being the crunch part of the plan."

This quote from one of the submissions sums up neatly the point health manpower planning has now reached in New Zealand within various occupations.

The same submission commented that 'the three major disciplines: administration, medicine and nursing, are progressing through various stages of identifying what sort of people are needed where, and in what numbers. Not all disciplines can or should use the same process. The present exercise, therefore, is concerned with how the various activities can be integrated at regional and local levels and developed to provide a national health manpower plan'.

The first step in the process was widely seen to be collecting standard quantitative data. A mix of centralised and decentralised activities is required here and at other stages of the planning process. It was felt that data should be collected at local level where possible but to a common format based on national guidelines to achieve compatibility of results when coordinated at the national level.

Timing of surveys of staff can be important, given certain influxes to the workforce and departures due to times of qualifying, hiring policies and favourite times of year for departure overseas. There can be significant differences in the apparent workforce availability at various times of year. When administrators are questioned about their staff needs, the actual numbers of staff available affects the needs as perceived by them.

The manpower planning process needs to be sensitive to:

Changes in the workforce:
(a) need for new positions; or
(b) the reorganisation of existing ones.

Distribution of positions:
(a) geographically;
(b) institutionally.

Typical of positions and any special additional qualifications needed to fill these.

Time required for
(a) basic education and training;
(b) post-basic education and training;
(c) retraining.

The process needs to be amenable to the needs of a numerically small workforce and sufficiently reliable to produce projections to enable educators to train appropriate types of workers at the right time to meet employers' requirements.

There was general concern that no sudden, large changes to student intakes should be made because they can only be corrected by equally large changes.
Currently manpower forecasts tend to be based on supply because 'need' levels have not been established.

The various methods of planning manpower were referred to in some submissions. (These methods have been described in background paper 5.3.) Overall, the service targets method was felt to be the preferable way.

Structure

It was suggested that in order to improve the information base now available it is time to establish a national focus for health manpower planning. Suggestions included the establishment of a central body to:

- provide information on demographic data, health planning, health status;
- collect information from all professional groups;
- provide support and expertise to all involved;
- promote and collaborate in research activities;
- coordinate manpower plans and integrate into a national health manpower plan.

Associated with this focus it was thought that there should be an advisory board, representative of health professions, government departments, major employers and consumer groups. The functions of such a board would be to:

- encourage the professions to collect statistical information in a standard and meaningful way;
- support the professions with specialist advice and computer resources;
- encourage the professions to plan ahead and develop programmes to meet anticipated needs;
- assist in funding research;
- assist the professions to prepare submissions on manpower matters.

The board should be a national body, with similar bodies at regional levels to coordinate and initiate further action. At a national level, it should formulate policy on numbers and location and the mix of public and private practice.

These were the points raised in submissions to the planning group. No doubt there will be considerable discussion along these lines at the workshop.

Some of the structure suggested already exists, in the Management Services and Research Unit of the Department of Health. The publication 'Health Manpower Resources' recently issued by the unit in updated form is becoming a comprehensive document. 'Just keep building on it' said one submission. Some technical assistance is already being given to professions. It seemed to be generally agreed by respondents to the planning group that the Department of Health has the major role in health manpower planning and if it were strengthened could become the national focus referred to above.

It was recommended that hospital boards should be encouraged to involve themselves, as principal employers, in planning their workforce - not just management of the workforce they happen to have. Because hospital board functions vary so much,
according to the needs they perceive, they should work towards having common objectives tailored to local needs although they should not be asked to define national objectives. The workforce should be tailored to meet the objectives.

**Main factors influencing health manpower**

Submissions identified the main factors believed likely to influence the shape and size of the future workforce. These are presented briefly here.

An increase is expected in the proportion of the population over the age of 65. All else being equal it is reasonable to assume a growing demand for health services from this group.

The degree of public awareness of a service and general acceptance of its importance has a marked effect on the level of demand for it.

The need to conserve and better manage health resources is likely to affect the 'mix' of services and service-providers. Also, finance to hospital boards influences intakes in some health occupations.

The introduction of health benefits and subsidies, or new social legislation eg for the Accident Compensation Corporation, has potential impact on the health services, the effects of which have to be estimated. As well as national policies, the policies and priorities set by hospital boards affect the nature and number of services.

Moves towards regionalisation of services are likely to affect distribution of personnel as well as numbers and mix.

Programmes oriented towards or based on 'community' have contributed in large part to the increase in social workers employed. It is likely that a shift in emphasis towards primary health care - health promotion, self-help, community involvement, early detection and management of health problems in the community - will affect many health occupations.

The present pattern of division of labour is unlikely to return to a former state. It is much more likely to become further fragmented, causing more duplication. There should be an on-going process of identification and understanding of the roles of the various health professions and the appropriateness of their contributions to the health service. This requires detailed knowledge. Current practices do not necessarily indicate the potential scope of a profession's contribution: they may only reflect controls. When groups working together in a particular field are being compared, every effort must be made to eliminate undue influences from well-organised pressure groups. Undoubted overlaps exist. Can they be reduced?

For future progress in health manpower planning each professional group must define the unique area of its practice and what it sees as its relationship to other health disciplines. No one group can decide what another should do and therefore there will be a great need for the recognition and acceptance of the unique function of each discipline by each discipline.

This implies that some 'trade-off' situations may emerge and that consultation and negotiation may be required if boundary disputes are to be avoided. Health professionals will have to learn to consult and share with each other. It will not be easy but it must be attempted.

Several submissions made mention of the fact that decisions made by, and about, medical manpower have a strong influence on decisions made elsewhere.
It is expected that thrusts to attain independent practitioner status (for example, in physiotherapy) are likely to result in a different workforce composition. Also, the versatility of occupational groups and hence their flexibility to change according to changing circumstances affects planning.

An increasing proportion of women in many of the health occupations means an associated reduction in the mean professional life and therefore an associated increase in total numbers needing to be trained.

There is no overall retirement policy which applies to all health workers. It is easier to forecast future workforce requirements when the age of retirement is known than when some practitioners work 'until they die'.

New Zealand's health occupations are affected to varying degrees by the manpower situation in other countries. When there is a worldwide shortage of certain skills this has an effect on the workforce turnover if the New Zealand qualifications are acceptable overseas. Whilst portability of qualification overseas should not be an over-riding concern of planners, it is very important within various professions. There is a fine balance between unintentionally training New Zealanders to supply an overseas job market and encouraging a healthy interchange of skills with other countries. Keeping track of workforce movement is a very important part of overall planning.

TRAINING AND EDUCATION

Student intakes

For many courses there are now more applicants than in previous years and so a higher educational level at entry is occurring. This potentially affects the numbers likely to qualify; even if the intake numbers remain constant there may be more who qualify, with the result that supply increases.

Fragmentation of training - courses provided at more than one institution (for example, for clinical psychologists) - makes it much harder to balance numbers trained with numbers for whom there is work available unless there is excellent communication between teaching bodies. This aspect needs consideration when new courses are established in more than one location.

On matters affecting student intake numbers, the consultative process operating in technical institutes seems to function so that changes in supply requirements can be responded to by the institution. Indeed, for courses recently established, such as nursing, there is central control over intake numbers. No comparable process of consultation or central control exists in universities.

Consultation with the universities and the University Grants Committee is, it was submitted, essential on matters affecting student numbers and formal mechanisms to ensure this should be established. The universities, the University Grants Committee and the particular university faculty involved, should all be included in discussions. It was suggested, for instance, that on matters affecting the intake of medical students, those involved in discussions should include: University Grants Committee, universities, medical faculties, Treasury, Department of Health, professional interests, consumer interests, Medical Council and Clinical Colleges. No doubt there would be different 'mixes' suggested by others but the general intention here might receive wide approval.

It seems clear that where there is central funding for a specific course, central control over intake numbers is possible. Where there is no central control it was felt that there should be a means whereby the situation can be influenced in acknowledgement
of a changing work situation. Some informal means exist. When employers are involved in training (for example, when the Department of Health pays subsidies on trainees' salaries) they are well able to influence student numbers. Where training is arranged through hospital boards there is constant feedback concerning numbers needed and succeeding intakes are adjusted accordingly. The varying use made by hospital boards of study awards for in-post training clearly affects numbers in training and the question which arises is how the boards can be influenced towards long-term goals.

It was submitted that the basis for discussion of student intakes should be that intakes should roughly balance with job opportunities. As things stand, various occupational groups have opinions on desirable numbers to be trained in that occupation but these numbers are of uncertain origin and almost always imply required growth in manpower numbers.

Course content

It is not just the numbers that are an important consideration in planning manpower: it is the nature of the training and the environment in which it is done. Yet on the whole, especially in the universities, educationalists have little structured contact with the service side of their discipline.

The question was posed: in what kind of forum could there be an input into university curricula from professionals outside the discipline and the faculty, and from those involved in health planning and administration of health services - as well as 'consumer' input? The machinery at technical institutes is fairly clearly defined but it is mostly directed towards establishing minimum standards required for registration. There is no control over professions' drive to get as high a standard of training as possible.

Courses are established with insufficient regard to their effects on other groups. People planning courses need to be aware of potential conflicts of jurisdiction.

The question was asked: when courses are being decided, what thought is given to the health care needs of isolated areas which cannot sustain a multiplicity of professionals with highly specialised skills but require someone with a broad background knowledge?

At present, the approach to organising courses differs. For some a 'national school' is felt to be the best way; for others there is fragmentation into small courses in several centres with, possibly, a coordinated national syllabus.

Retraining opportunities are widely thought to be urgently needed, as more women are returning to the workforce after an absence of some years, but the numbers that should be catered for, and the timing of courses, are largely unknown.

The quality of a syllabus is often affected by the desire for reciprocal agreements with other countries - not necessarily a bad thing. Alongside this is an issue the Nursing Council is currently facing which may extend to other occupations: the development of the potential of Pacific Island-trained nurses for registration in New Zealand.

From the health services' point of view the chief areas in need of improvement in course curricula at the moment are:

a lack of understanding of the roles of other health professions, mainly due to isolation in training and in clinical placement. All professions would gain from close liaison at all stages of their education and practice;
a lack of training in leadership roles, leading to wasted time, energy and manpower;

a lack of cost-awareness built into training programmes.

When, and how, clinical training should take place concerns many groups. Some mentioned the desirability of shared clinical experience with other occupations. Also, some foresaw the development of clinical training placement problems, especially as staff turnover becomes less. It was suggested that some positions be designated as training positions rather than permanent positions to help overcome this.

Policies for each occupation's postgraduate needs should be determined. The rapid growth in technology affects some groups more than others and sophisticated equipment calls for postgraduate training. The universities need feedback about likely future requirements. In medicine, some specialist colleges control their training posts; others do not. Who should decide which way is right? It is then the responsibility of hospital boards to establish a balance between training of health personnel and service.

Certain groups are almost totally self-trained subsequent to their degree qualifications; (for example, biomedical engineers and medical physicists). Should efforts be made to structure this training?

Professions which issue annual practising certificates are concerned about the circumstances under which they are reissued. In some cases they are automatically issued to those who remain on the register but who have had no further education - and possibly not much practice - for many years.

Finally, reported here is the suggestion that perhaps a higher level of qualification for any group may mean that fewer persons trained to that level are needed. Certainly, thought needs to be given to such questions concerned with the division of labour and the quality and costs of care.

**SPECIFIC OCCUPATIONAL COMMENTS**

This chapter provides brief summaries of the comments received dealing with matters specific to some of the individual occupations but believed to be important to planning of their numbers and to the makeup of the workforce in general.

**Chiropractors**

Only overseas training is available and there is no financial assistance towards it. Therefore, no planning of this group is possible. Overseas graduates can be controlled through immigration procedures.

It is believed that currently about 100 are practising in New Zealand and that substantial growth is unlikely. Increasing medical and physiotherapy interest in spinal manipulation as a treatment modality ensure that an alternative service is available.

**Clinical biochemists, chemical pathologists**

They are university graduates, placed on the Hospital Scientific Officer Scale. Progression up the scale is determined by personal achievement. At present there is no recommended training course leading to a postgraduate qualification and commitment of hospital boards to training of their graduate staff varies greatly.
Training in the discipline needs encouragement. The number of registrar posts in pathology has declined significantly over the last two years and only three training registrars are showing an interest in chemical pathology.

In laboratories now, automation is enabling more work to be done with no increase in staff, but is requiring different skills. Kitsets also are reducing the need for personnel, as are microprocessors and computers used for data handling.

Dental nurses

Numbers are being reduced because of decreasing numbers of children and declining treatment needs. The Department of Health controls student intake numbers and numbers employed.

Because of shrinking employment opportunities, some have aspirations to extend their role in dentistry.

Dental technicians

Most work in private laboratories but some work in government services. They are subject to registration and principally engaged in supplying services to dentists but may deal directly with the public for denture repair.

Some deal (illegally) with the public, doing work other than repairs. They are actively seeking a legal right to do this. If they succeed, this will affect dentist manpower.

Dentists

There is a special advisory committee on dental manpower.

The need and demand for adult dental care is likely to increase because the decline in caries in children and adolescents leads to retention of teeth beyond middle age. Also, any economic improvement is likely to increase demand.

An increasing proportion of the workforce is female and the workforce availability effects of this are unknown.

(Dental assistants are employed to assist dentists at chairside but no data are available on their numbers.)

Dietitians

Increased retention, increased re-entry to the workforce are current trends, the numerical effects of this being partially offset by increased part-time and fewer full-time workers.

Health administrators

No single body represents the large group of administrative executive staff who form 25-30 per cent of the health services workforce.

In the future they may have a more distinctly 'health professional' role.

There is a SACHSO (Special Advisory Committee on Health Services Organisation) proposal for harmonising Department of Health and hospital board staffing structures into a national career service.
Hospital administrators refer to the general lack of educational programmes on specific aspects of administration at tertiary level, except in accounting. On-the-job training programmes on specific aspects of administration are needed.

Health inspectors

The Department of Health is well-placed to influence the supply and qualifications of inspectors, as it is the biggest employer of trainees and is involved in the examining authority and the Board of Health. Medical officers of health oversee the work of all inspectors and subsidies are paid to local authority-appointed trainees.

There are sometimes geographical distribution problems but there is currently no major problem.

Hospital pharmacists

Currently very few have postgraduate qualifications, mainly because there are no accessible locally-based courses, but a few have completed the Diploma of Health Administration, or Australian courses. They believe that there is an urgent need for an advanced diploma in pharmacy so that persons in senior positions in the hospital services are appropriately trained.

In hospitals, a basic staff establishment level does not allow for the introduction of more advanced services from the pharmacists - which could release nursing time and they are keen to provide. Commonly a basic 5-day 40-hour week is worked at present.

Any recruitment problems are mainly of geographical distribution.

Hospital physicists and biomedical engineers

They constitute a small group (about 25) of scientists employed in the hospital sector. They are graduates in physics and/or engineering and almost all have higher degrees. For their hospital profession they are almost totally self-trained. They feel strongly that their training needs should be recognised.

There is a world-wide shortage and so turnover tends to be frequent.

The workload is increasing due to rapid growth in high cost technology such as radiology, nuclear medicine and medical computing.

Hospital psychologists

They are trained in several universities which train independently of one another. Good communication between them is needed to reduce the risks of over or under supply.

Health service training placements are difficult to find in some centres and it would be desirable to designate some positions as training posts rather than permanent positions.

Hospital scientists (see also clinical biochemists, hospital physicists)

They make a strong plea for recognition of their distinct role in the health services so that they are not overlooked in planning.
Medical laboratory technologists

Training is controlled by the Medical Technologists Board.

Directors of employing laboratories make decisions on required staffing levels.

Medical practitioners

There is an Advisory Committee to the Minister of Health on Medical Manpower.

The problem areas for manpower planning identified in submissions are:

- control of entry to medical courses
- undergraduate and postgraduate training
- maldistribution (geographical and by specialty) of trained doctors.

A national overview of policy is needed.

Medical radiographers

The existence of one larger, five smaller, schools of radiography means that training is fragmented. If surplus supply means that intake numbers have to be reduced, the smaller schools may not be viable.

Nurses

The New Zealand Nurses Association has been interested in nurse manpower planning for some years and sought the establishment of a national nursing manpower committee - now formed.

The Nursing Council of New Zealand has installed a computer system which enables a variety of data on nurses to be listed and analysed by several variables.

The Division of Nursing within the Department of Health has responsibility for manpower planning for nursing and collects additional information from employing agencies and schools of nursing.

Occupational therapists

Postgraduate specialisation within mainstream therapies is preferred to fragmentation and development of splinter therapies.

Evaluation of the need for services is recommended. More integrated training for the professions in medicine at university level with appropriate core subjects held in common is recommended. Also, a better interface than at present between the Departments of Health and Education.

As patient bed-days are reduced, the need in the community will increase. Numerous areas of current development in occupational therapy and likely development are listed.
Optometrists

The area is described as a unique clinical science, neither ancillary to medicine nor paramedical, in which the optometrist operates independently with full responsibility for clinical decisions of diagnosis, treatment and management.

The profession makes a strong plea for recognition as part of the health care system and full use made of the range of services available.

Orthotists

It was submitted that orthotics can be divided into two distinct types of manpower - those who function in a technical role and those who are trained to function in a clinical information gathering and dissemination role.

Regionalisation of services would affect the type and numbers required.

Pharmacists

The Pharmaceutical Society has conducted surveys to obtain information on the workforce.

The proportion of women in pharmacy intakes is increasing and may have substantial effects on the workforce.

Account should also be taken of pharmacy assistants when looking at pharmacy manpower requirements.

Physiotherapists

The New Zealand Society of Physiotherapists has not been involved in manpower planning as this has traditionally been managed by the Department of Health.

Establishment of the Accident Compensation Corporation has meant that physiotherapy services have been in greater demand than when there was a financial barrier.

The society has a firm policy of achieving full university status for its undergraduate and postgraduate programmes.

Physiotherapists are increasingly being used in education and industry, in preventative and rehabilitative areas.

Social workers (health)

The Social Work Training Council covers curriculum and training standards and has assessed the number of graduates required from courses, and course locations.

Basic professional training is the same for all social workers - including those in the health area.

All health social workers provide services in the community regardless of where they are based. Their scope was markedly increased by the recent emphasis on community health care.
Hospital boards have a higher proportion of trained staff than other sectors. At 31 March 1981, 40.6 per cent of the 522 employed by boards held social work qualifications. Until recently there has been such a shortfall in graduates that detailed planning estimates were not required. Recently a significant change has occurred in the number of graduates which is only now beginning to be reflected in recruitment and staffing statistics.

Speech therapists

The great majority are school-based. Only 16 part-time and 16 full-time therapists are hospital based.
INFORMATION FOR SUBMISSIONS

The following information was sent to organisations and agencies (as listed) inviting submissions on the health manpower planning process.

Background

Manpower is the most important and costly resource in the provision of health care. Three out of every four dollars of health expenditure go on wages and salaries. In spite of this, manpower planning has in the past not received the attention it warrants.

Over the last 20 years the size of the health workforce has increased generally in keeping with the growth in health expenditure. In 1966 4.3 per cent of the total labour force were employed in the health sector. By 1976 this had risen to 5.3 per cent and by 1981 to 5.7 per cent.

Now that growth in health expenditure has been constrained and continuing restraint seems likely, growth in the expenditure on manpower must be limited. For most occupations this means that a significant increase in the numbers employed is unlikely. This presents problems because decisions made in the late 1960s and early 70s to increase the production of health workers are now resulting in what could be a serious oversupply situation in some areas.

Added to this immediate oversupply problem are the longer standing problems of the availability and distribution of health workers (both by discipline and by geographic location) and the changing manpower requirements of the evolving health services. Despite the general prospect of oversupply there are still difficulties in recruiting and retaining appropriately trained health workers to situations in which they are needed.

On the issue of changing requirements there are two new imperatives. First, emphasis is increasing on all aspects of primary health care - on health promotion, self help, community involvement and on the early detection and management of health problems in the community. Second, there is the need to conserve and better manage health resources. This is something which must involve all health workers not just the managers. Both imperatives have direct implications for manpower planning.

Manpower planning in New Zealand

There was little in the way of formal manpower planning in the health area in New Zealand before the middle 1970s. Prior to that most planning had been done by ad hoc groups within the various occupations. By and large the information available to these groups for planning purposes was fragmentary and generally inadequate.

Since the early 1970s the coverage and quality of the statistics available for manpower planning have improved for most occupations. National manpower planning workshops have been held in the fields of medicine, nursing, dentistry and health administration and structures created to gather data and undertake ongoing planning. Now it is time to try to draw these threads together in an effort to establish a national process for integrated manpower planning in the health sector.

The Workshop

Stated briefly the plan is to hold a residential workshop for a representative group of 35 people to agree on proposals to establish a national structure to encourage and support health manpower development and integrated planning across the health sector.
In December 1981 a planning group started work on the project. Members of the group are:

Dr R M Williams recently retired as Chairman of the State Services Commission and previously Vice Chancellor of the Australian National University and the University of Otago.

Mr J Ferguson, Secretary/Registrar, Pharmaceutical Society of New Zealand.

Mrs G C Foster, Division of Nursing, Department of Health.

Mr J R Martin, Deputy Director-General of Health (Admin).

Mr R I Parker, Chief Executive, North Canterbury Hospital Board.

Dr D E Richmond, Department of Medicine, School of Medicine, University of Auckland.

Dr G C Salmond, Director, Management Services and Research Unit, Department of Health.

Servicing and research support are being provided by the Department of Health's Management Services and Research Unit.

The group's terms of reference are:

- to prepare a proposal for an integrated and ongoing health manpower planning process in relation to future health programmes in New Zealand;
- to gather, analyse and present information to support the proposal;
- to present the proposal to a suitable representative workshop of leaders in the various health occupations;
- to report on the workshop and initiate implementation of recommendations.

The prime concern of the workshop is with the manpower planning process - with how health manpower is and can be planned. It will look at how responsibility for the various steps in the planning process can be shared between the various agencies of the government and the other organisations involved. The object is to agree upon an integrated planning process. The workshop will not produce a national plan with manpower targets for each occupation.

Two overseas consultants have been engaged to assist with the project. Dr Tom Hall, (Director, Puget Sound Health Systems Agency) and his wife Mary (University of Washington) from Seattle, USA are internationally recognised experts and consultants in the field of health manpower. Dr Hall was the principal consultant to the Medical Manpower Planning Workshop held in Wairakei in 1976. As well as attending the workshop the Halls will undertake a programme of briefing visits to various parts of the country in the fortnight immediately preceding the workshop.

The workshop will be held at the DB Hotel in Rotorua 13-17 September 1982. Participants will be invited to represent the various organisational and occupational interests in health manpower planning. Formal invitations will be issued in June.

All travel and accommodation expenses involved in attending the workshop will be met by the organisers.
Submissions

One of the tasks of the planning group is to gather the information needed to prepare a set of working papers for the workshop. Reasonable statistical information is now available on the supply of most types of health workers. For a number of occupations manpower forecasts are now available. A digest of this material, "Health Manpower Resources 1980", will be published by the Department of Health in June 1982.

What is more difficult to obtain is information on manpower requirements - quality, quantity and distribution. What is even more difficult is to determine how these requirements can be met, given the need to integrate the planning of the various groups, to be fair to all concerned and to make best use of the resources available. It is upon these particular issues that submissions would be most welcome.

All submissions, on any aspect of the topic, be they on behalf of organisations or individuals will be welcome. Submissions will not be directly quoted in the workshop papers without the permission of the authors.

The closing date for submissions is 1 May 1982.

Please send submissions to:

Dr G C Salmond
Health Manpower Workshop
Management Services and Research Unit
Department of Health
PO Box 5013
WELLINGTON

If further information is required please contact Dr Salmond.

List of those invited to make submissions:

Director-General
Department of Health

Deputy Director
Division of Hospitals
Department of Health

Director
Division of Public Health
Department of Health

Director
Division of Dental Health
Department of Health

Director
Division of Clinical Services
Department of Health

Advisory Dietitian
Division of Public Health
Department of Health

Senior Advisory Physiotherapist
Department of Health

Advisory Occupational Therapist
Department of Health

Senior Advisory Social Worker
Department of Health

Assistant Director
(Inspection Services)
Division of Public Health
Department of Health

Director-General
Department of Education
Chairman
University Grants Committee

Vice-Chancellor
Massey University

Vice-Chancellor
University of Otago

The Chief Executive
Hospital Boards Association of New Zealand

Chairman
New Zealand Medical Association

Chairman
Colleges Liaison Committee

Dean
University of Otago Medical School

Dean
Christchurch Clinical School

Executive Director
Nursing Council of New Zealand

President
New Zealand Institute of Health Administrators

The Secretary
Dental Council of New Zealand

Secretary
New Zealand State Dental Nurses Institute

Dean
School of Dentistry

Chiropodists Board
Department of Health

The Secretary
New Zealand Dietitians Board
Department of Health

Chairman
Social Work Training Council

Vice-Chancellor
University of Auckland

Vice-Chancellor
Victoria University of Wellington

Vice-Chancellor
University of Canterbury

Chairman
Medical Council of New Zealand

Chairman
New Zealand Council for Postgraduate Medical Education

Dean
School of Medicine
University of Auckland

Dean
Wellington Clinical School of Medicine

Chairman
New Zealand Resident Medical Officers Association

Executive Director
New Zealand Nurses Association

President
Hospital Chief Executives Association

Secretary
New Zealand Dental Association

Secretary
New Zealand Institute of Dental Technology

Secretary/Registrar
Pharmaceutical Society of New Zealand

Secretary
New Zealand Society of Podiatrists

Secretary
New Zealand Dietetic Association

Secretary
New Zealand Association of Social Workers
The Secretary
Occupational Therapy Board
Department of Health

The Secretary
Physiotherapy Board
Department of Health

The Secretary
Medical Technologists Board
Department of Health

Secretary
New Zealand Association of
Clinical Biochemists Inc

Honorary Secretary
New Zealand Society of Radiographers

Secretary
New Zealand Optometrical Association

Secretary
Optical Dispensers Association

Secretary
New Zealand Association of Hospital
Psychologists Inc

General Secretary
New Zealand Public Service
Association

Secretary
Medical Superintendents Association

Hon Secretary
New Zealand Hospital Physicists
Association Inc

Secretary
New Zealand Association of
Occupational Therapists Inc

General Secretary
New Zealand Society of
Physiotherapists Inc

National President
New Zealand Society of Biomedical
Technicians Inc

The Secretary
Medical Radiographers Board
Department of Health

Secretary
New Zealand Institute of Health
Inspectors

The Secretary
Opticians Board
Department of Health

Acting President
New Zealand Orthotic Association

Secretary
New Zealand Psychological Society

Executive Officer
Federation of Voluntary
Organisations

Correspondence Secretary
Speech Therapists Association
List of those who made submissions:

Dental Council of New Zealand

Department of Health:
  Advisory Dietitian
  Division of Clinical Services
  Division of Dental Health
  Division of Nursing
  Inspection Services, Division of Public Health
  Senior Advisory Occupational Therapist
  Senior Advisory Physiotherapist
  Senior Advisory Social Worker

Hospital Boards Association

National Radiation Laboratory

New Zealand Association of Clinical Biochemists

New Zealand Association of Hospital Psychologists

New Zealand Association of Occupational Therapists

New Zealand Association of Social Workers

New Zealand Hospital Pharmacists Association

New Zealand Hospital Physicists Association

New Zealand Institute of Health Administrators

New Zealand Nurses Association

New Zealand Optometrical Association

New Zealand Psychological Society

New Zealand Social Work Training Council

New Zealand Society of Biomedical Technology

New Zealand Society of Physiotherapists

New Zealand Speech Therapists Association

New Zealand State Dental Nurses Institute

Nursing Council of New Zealand

Pharmaceutical Society of New Zealand

School of Dentistry, University of Otago

University Grants Committee
Personal Submissions:

Ms K Austin, Ms S Lennie, Ms C Ngan, Occupational therapists

Professor W J Gillespie, Orthopaedic surgery

Professor J D Hunter, Dean, Christchurch Clinical School

Ms Anne Hyde, health worker

Mr C K Pullar, Consultant Orthotist, New Zealand Disabilities Resource Centre

Dr C W Small, Department of Clinical Biochemistry, Green Lane Hospital

Assoc. Professor C Watts, Department of Clinical Biochemistry, Otago Medical School

A number of replies acknowledging the request for submissions were also received from various bodies who wanted to make known their support for the workshop even though they had no specific comments to make.
APPENDIX

WORKSHOP PROGRAMME

MONDAY 13 SEPTEMBER

Participants arrive in the afternoon

6.15 pm Welcome by the Minister of Health
7.00 pm Workshop Dinner
8.30 pm Opening address by the Minister

TUESDAY 14 SEPTEMBER

Introduction and Opening Statements

Chairman - Dr H J H Hiddlestone

9.00 am Welcome by the chairman
9.10 am Outline of the workshop - Dr G C Salmond
9.30 am Introduction and opening statements by the participants (Not more than two minutes per person.)

10.10 am Organisational arrangements
10.15 am Tea/Coffee
10.45 am Prospects in Health Manpower Planning - Professor T Hall
          A formal address followed by a period of discussion

12.30 pm Lunch

The Planning Environment

Chairman - Mrs M C Bazley

2.00 pm Keynote speakers - 15 minutes each

  o Health goals and objectives - Dr H J H Hiddlestone
  o Organisation and resources -
     - a national viewpoint - Mr J R Martin
     - a hospital board viewpoint - Mrs V O'Sullivan
  o A health profession viewpoint -
     - medicine - Dr D E Richmond
     - social work - Mrs J M MacKenzie

3.15 pm Tea/Coffee
3.45 pm Panel discussion
5.00 pm    Closure
7.00 pm    Dinner
8.30 pm    An address by Sir Frank Holmes

WEDNESDAY 15 SEPTEMBER

Health Sector - Education Sector Interaction

Chairman - Mr J R Martin

8.30 am    The session will be built around the two workshop papers on the health/education topic: one by Dr R M Williams (8.2) the other by Mr H E Hutchings (8.1). Four discussants will open the session with comments on the papers - up to 10 minutes each.

Discussants:
- Dr A T Johns (UGC)
- Miss Y T Shadbolt (Nursing)
- Professor J B Howie (Medicine)
- Mr R I Parker (Hospital Board)

9.15 am    Panel discussion
Panel to include the discussants together with Dr Williams and Mr Hutchings

10.15 am    Tea/Coffee

Roles and responsibilities in Health Manpower Planning - A workshop

Chairman - Dr R M Williams

10.45 am    Introduction by Professor T Hall and Dr G C Salmond

11.15 am    Work in groups

- Group A: The manpower planning roles and responsibilities of professional organisations and registration bodies.
  Chairman: Mr C B Ross
  Reporter: Dr D E Richmond
  Members: Buckle, Burrell, Gordon, Nicholson, Philip, Potaka, Tucker, Williams and Wood

- Group B: The manpower planning role and responsibilities of employers and employer organisations.
  Chairman: Mrs V O'Sullivan
  Reporter: Mr R Parker
  Members: Boyd, Bruce, Buchan, Murphy, Ng, Shadbolt, Short, Sinclair

- Group C: The manpower planning role and responsibilities of central government.
Chairman: Dr H J H Hiddlestone  
Reporter: Mr J R Martin  
Members: Bazley, Foster, Howie, Hutchings, Johns, Kings, MacKenzie, Salmond

12.30 pm  Lunch  
2.00 pm  Work in groups  
3.15 pm  Tea/Coffee  
3.45 pm  Work continues at the discretion of the group  
7.00 pm  Dinner  
8.30 pm  An address by Professor Margaret Clark

THURSDAY 16 SEPTEMBER

Reporting back on "roles and responsibilities" workshop.

Chairman - Dr R M Williams

Report by the reporter from each group with comments from the chairman and any other members of the group followed by general discussion.

8.30 am  Professional organisations and registration bodies  
9.30 am  Employers group  
10.15 am  Tea/Coffee  
10.45 am  Employers group  
11.00 am  Central government group  
12.00 pm  A synthesis by Professor Hall followed by discussion  
12.30 pm  Lunch


Chairman - Dr H J H Hiddlestone

2.00 pm  Introduction by Professor Hall and Dr Salmond  
2.15 pm  Work in groups  
   o  Group A

   Chairman: Mr David Buckle  
   Reporter: Mrs G C Foster  
   Members: Buchan, Gordon, Hiddlestone, MacKenzie, Ng, O'Sullivan, Salmond, Shadbolt, Williams

   o  Group B
Chairman: Mr O R Nicholson
Reporter: Mr D Philip
Members: Bruce, Kings, Martin, Murphy, Richmond, Short, Sinclair, Wood

Group C
Chairman: Miss Sue Burrell
Reporter: Mr H E Hutchings
Members: Bazley, Boyd, Howie, Johns, Parker, Potaka, Ross, Tucker

3.15 pm Tea/Coffee
4.00 pm Report back in groups and plenary discussion
5.00 pm Closure
7.00 pm Dinner followed by informal discussion

FRIDAY 17 SEPTEMBER
8.30 am Check out of hotel
9.00 am Presentation of a draft report and discussion
10.15 am Tea/Coffee
10.45 am Outstanding issues
11.45 am Summing up - Dr Hiddlestone
12.15 pm Formal closure
12.30 pm Lunch
Afternoon Participants depart
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<th>Title</th>
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<td><strong>1</strong></td>
<td>An Experimental Bidet Unit</td>
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<td>A Clinical Study of Aged Persons in Old People's Homes and Hospitals in Hawke's Bay</td>
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<td><strong>3</strong></td>
<td>Proceedings of the Second Seminar on Electronic Computers in Hospitals</td>
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<td>Simplification of the Drug Distribution System in a Geriatric Hospital</td>
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<td>Persons with Mental Retardation in Auckland and Northland: A Report on an Accommodation Survey</td>
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<td>Executive Personnel in the New Zealand Health Services</td>
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<td>New Zealand Medical Manpower Statistics 1981 and 1982 Data Supplement</td>
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<td><strong>17</strong></td>
<td>The Nursing Workforce in New Zealand 1982 (Issued by the Division of Nursing)</td>
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**Note:** Series 1 to 10 not formerly numbered.