Nurses and Their Work in Primary Health Care

The National Primary Medical Care Survey (NatMedCa): 2001/02

Report 9

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Responsibility for the final product, however, rests ultimately with the authors.

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Executive Summary

Aims. The National Primary Medical Care Survey was undertaken to describe primary health care in New Zealand, including the characteristics of providers and their practices, the patients they see, the problems presented, the management offered. The study covered private general practices (i.e. family doctors), community-governed organisations, Accident and Medical clinics (A&Ms) and Emergency Departments.

It is intended to compare data across these practice types and between the present study and the Waikato Medical Care Survey (WaiMedCa) carried out in 1991/92.

Subsidiary aims included:

- gathering information on the activities of nurses in primary health care
- trialling an electronic data collection tool
- development of coding software.

This report provides a descriptive report on nurses working with private general practitioners (GPs) and A&Ms, and also nurses employed by practices affiliated with Health Care Aotearoa (HCA).

Methods. Nurses associated with medical practitioners in general practices and A&Ms completed questionnaires that identified the different activities undertaken and the degree of independence (i.e. activities undertaken without doctor referral). In addition, patient visit data were specifically collected from HCA nurses, where they were identified.

Results. Data were contributed by 167 nurses employed in GP practices or A&Ms, and by 27 HCA nurses, who altogether logged 1815 patient visits and 410 detailed consultations.

The nurses in the survey had a mean age of 46 years (45.8 for GP nurses, 46.3 for A&M), were all female and were predominantly non-Māori. All worked part-time. The mean number of years working as a practice nurse varied from 9 years among nurses in general practices, to 2.7 years in A&Ms, to 3.8 years in HCA clinics. The differences between nurses in rural and non-rural practices were not significant.

Educationally, only 10 nurses had an undergraduate degree, and postgraduate qualifications were confined to professional practice development certificates.

The majority of patients that see practice nurses do so by appointment. On average, there are five such appointments in a day, with a mean appointment duration of 16.7 minutes. Although A&Ms charge for nurse appointments, some of the activities undertaken by GP practice nurses are not charged separately from the GP.

The GP-based practice nurses provide a variety of clinics, primarily related to disease management (diabetes, asthma and hypertension). Immunisations, advice on child care, dietary and lifestyle advice, together with wound care and arranging repeat prescriptions account for the majority of patient contact activities. There are minor variations between rural and non-rural nurses, with non-rural nurses reporting a wider variety of services.

Nurses working in HCA clinics work primarily with the most deprived patients in high-decile population areas and with Māori or Pacific patients. Their activities focus predominantly on symptom control and disease management.

Conclusion and implications. The New Zealand Government's Primary Health Care Strategy envisages an expanded role for primary health care nurses. However, this survey finds nurses focused primarily on traditional nursing tasks. A lack of educational preparation for expanded roles in a workforce that is largely part-time and where the mean age is 45 years is evident. Although HCA practices provide for high social- and health-need populations, this survey has not shown that nurses are using a broad range of skills or have expanded roles in these practices. Establishing a career path and appropriate education standards for nurses are challenges for the primary health care workforce that must be addressed if nursing is to maximise its contribution.

1 Introduction

Primary health care covers a broad range of services, from health improvement and preventive services to generalist first-level consultations for treatment, advice and medications. In New Zealand, most of the 15 million primary health care visits each year arise from general practice consultations, although in some areas of the country nursing is developing first-point or first-level consultation services. Despite several reviews, nursing activity within this sector of health care is poorly documented and service provision varies from area to area and from practice to practice, due in part to the ways in which nurses are employed within the primary health care sector.

This report is the ninth publication from the National Primary Medical Care Survey (NatMedCa) undertaken in 2001/02, with funding from the Health Research Council of New Zealand. The purpose of the survey was to expand knowledge of the frequency and nature of the activities that comprise primary health care. The survey also intended to allow comparison of these activities across various settings and over time, and to investigate the feasibility of various methods of collecting such data on a routine basis. The data focusing on nursing activity provide a baseline for future evaluation as well as summarising the work undertaken in 2001 by nurses working in general practice, with Health Care Aotearoa (HCA), including Māori providers, and in Accident and Medical clinics in New Zealand.

1.1 Nursing and primary health care in New Zealand

In common with similar countries, primary health care in New Zealand has traditionally been delivered by private GPs operating within a small business model. Patients' costs have been subsidised by the government since 1941, but at present there are significant co-payments. Financial barriers to primary health care in New Zealand are high by OECD standards.[1]

Although the majority of primary health care is accessed through general practice, primary health care nurses contribute to the delivery of primary health care in many other ways. The term "primary health care nursing" refers to the practice of registered nurses who provide care in the community and outside the hospital in a variety of settings, including general practice, public health, Plunket, community-based clinics and people's homes. Therefore, primary health care nurses include public health nurses, Plunket nurses, practice nurses, district nurses, rural nurses, nurses providing care to specific groups (e.g. respiratory and diabetic patients), nurses in A&Ms and nurses working in Māori and Pacific health provider organisations.[2,3] The range of activities may be quite narrow for some of these nurses, while others will have broad roles encompassing health promotion, preventive and surveillance activities, home-based care, disease management and wellness care.[4]

The funding for the majority of general practices is through the General Medical Services (GMS) benefit, which has experienced a number of changes in the recent past and more are pending with the implementation of the Government's Primary Health Care Strategy. A subsidy was paid to GPs from 1970 to enable them to employ practice nurses to assist in the delivery of health services. Most patients self-refer to a GP for primary health care, and this remains the predominant point of entry to these first-line services, including those offered by nurses.

A New Zealand review in 1997 found that although there had been an increase in the numbers of practice nurses since the introduction of the practice nurse subsidy, there was little evidence of any subsequent health benefits to the population.[5] This review concluded that the increased use of practice nurses related to the subsidy rather than to any benefit to the community. Studies in the UK have shown a similar dramatic increase in the numbers of practice nurses with, in 1990, the GP contract boosting nurses' involvement in primary health care through additional new payments.[6,7,8]

Atkin et al.'s study also provides insights into the role of practice nurses in primary health care in the UK.[6] More than 80% of the 12,589 nurses who responded to the UK survey were engaged in immunisations, venepuncture, auroscopic examination and measuring respiratory functioning. Tasks such as taking cervical smears, breast examination, preparing clinical equipment for GPs and assisting with minor surgery were recorded as specific tasks by 60–78% of nurses, with several tasks overlapping. While consideration of "tasks" gives some understanding of the practice nurse's role, tasks are not necessarily independent of each other and do not give a complete picture of nurses' practice or role.[7] In addition to the tasks considered traditionally nursing tasks, Atkin found that nurses were involved in health promotion and home visiting as well as advice and consultancy.[6]

The contribution to primary health care of the practice nurses in this UK study varied considerably, with variation in nurse activities largely explained by practice characteristics such as size, location and number of GPs. Although a study undertaken in one region of the North Island of New Zealand, at about the same time as that of Atkin et al., provided localised information about practice nurse activities, which, in fact, closely resembled that highlighted in Atkin et al.'s findings,[9,10,11] similar data related to practice nurse activity in other parts of New Zealand were not available at the time this current study was undertaken. By generating a picture of nursing activity in primary health care settings the NatMedCa study will enable simple comparisons to be made in the future with UK data.

In New Zealand, although the majority of primary health care is provided by private general practices, community-based groups such as HCA and Māori providers have, since 1980, developed services focusing on high-need groups. These services may use salaried GPs, extend the role of primary health care nurses and provide access to other services, such as dentistry and physiotherapy. These organisations, complementing the private and governmental provision of care, are usually called third-sector or community-governed practices. Nurses in these organisations are salaried employees. These practices, established and governed by community groups, aim to provide inexpensive care for populations with high social need. The aim is that nursing skills within these groups are comprehensively used. It needs to be shown, however, that these groups do attract high social- and health-need populations, and that nurses do use a broad range of skills or have expanded roles.

From the late 1980s A&Ms were developed by entrepreneurial doctors to provide urgent or acute care in the community. Within these primary health care clinics, nurses are salaried employees and, as such, theoretically have a greater opportunity to offer more independent services than their practice nurse counterparts. These organisations are included in the NatMedCa research project reviewing primary health care nurse activity and the characteristics of the nurses who work in general practice, A&Ms and, to a limited extent, the nurses with Health Care Aotearoa.

1.2 21st century primary health care nursing in New Zealand

In 2001 a survey of the primary health care and community nursing workforce in New Zealand was undertaken to ascertain the characteristics of primary health and community nurses and to identify obstacles to their contributing fully to policies and strategies in the Government's Primary Health Care Strategy.[3] The survey was sent to 7763 nurses, and 3562 responded (46% response rate). A number of issues were identified.

- Māori and Pacific nurses – low numbers are recruited and retained.
- Ageing primary health care nursing workforce – nurses here are older than the general workforce, with relatively few recruits from the younger age groups.
- Geographic distribution – Wairarapa, Counties–Manukau and Waitemata District Health Boards (DHBs) have significantly fewer primary health care and community nurses than other DHBs.
- Role fragmentation – primary health care and community nurses cover a broad range of roles, with 13 distinct work types.
- Postgraduate educational opportunities – while theoretically available, education is inaccessible to some nurses because of a lack of time, finance and/or relief staff.

- Clinical career pathways – these were unavailable to the majority of the nurses who participated in the survey.
- Management structures and leadership roles – these were not accessible to nor attainable for nurses in many organisations, although on a practical level nurses have input into service planning and resource allocation, which formal structures may not recognise.
- Communication and collaboration – this is an issue across professions.

Of the workforce, 92.4% were female, with the largest groups falling into the 40–44 and 45–49-year-old age groups. The 1992 UK study also reported the practice nurse workforce as being predominantly female (99%), with a mean age of 42.4 years overall (70% were aged 30–49 years).[7] It found that the majority (72%) of nurses had worked for five years or less as practice nurses, with more than one-third (37%) having joined practices at the time of increased funding 2.5 years before the survey. In contrast, the New Zealand study found that between five and nine years' experience was reported in primary health care or community nursing by 24% (836), and 10 to 14 years by 21% (753) of nurses responding to the survey.[3]

In New Zealand the majority (69.3%) of primary health care and community nurses gained their initial qualification in hospital-based training, with only 4.5% (160) having an undergraduate nursing degree. Postgraduate study or study to further qualifications was reported by 19.5% of respondents.[3] Postgraduate study data were not collected in the UK study, but insufficient training of primary health care nurses in expanded roles was highlighted.[6]

In 2002 an expert advisory group on primary health care nursing was established in New Zealand.[2] Its initial report and recommendations were published in 2003 and provided a vision, goals and objectives for the development of the primary health care nursing workforce. It was envisaged that the health care environment should enable nurses to provide integrated comprehensive care to individuals and population groups in New Zealand primary health care settings in order to strengthen and enhance the primary health care team.[2] The associated goals included aligning nursing practice with community need, and developing funding streams, employment arrangements and service delivery patterns that would support nurses in adopting an integrated approach to practice and incorporate population and personal health strategies into service delivery. The advisory group recognised the need to develop innovative models of nursing within primary health care settings that would improve access to primary health care services, and contribute to improved health outcomes and reduced health inequalities for individuals, families/whānau and communities/ iwi.

In relation to governance, earlier conclusions reached through the workforce survey in 2001 led to the goal that in the future, primary health care nurses will be equal partners alongside other professional groups and community representatives in the governance of primary health care. The primary health care advisory group recommended that there should be positive discrimination to enable nursing participation in primary health care management and governance.[2] Nurses will also have clear, accessible, integrated nursing leadership to encourage and promote change and facilitate the development of new roles and models of practice. To achieve some of these goals, the difficulties identified in the workforce survey pertaining to education and career development need to be addressed; in 2002, the first step towards this occurred when the Ministry of Health announced support for the development of primary health care nursing in the form of funding for nursing innovations and postgraduate scholarships.

At about the same time as these reviews were taking place (including the NatMedCa study), the Nursing Council of New Zealand, the body responsible for ensuring safe and competent care from nurses, developed competencies and standards for a new level of nurse in New Zealand, that of nurse practitioner.[12] Nurse practitioner endorsement by the Council formally recognises the contribution that advanced nursing practice makes to health outcomes, and is in keeping with the changing focus of the New Zealand health care system: from illness and traditional practice to health, evidence and outcomes. Nurse practitioners will have expanded roles, including independent prescribing of medicines. The Ministry of Health primary health care nursing advisory group recommended that nurse practitioner roles be established in primary health care services, positioning nursing to align with community need and to directly deliver enhanced nursing services to the public.[2]

The data collected from the NatMedCa study provide a baseline for future evaluation of the role of nurses within primary health care, which should include the ongoing development of nurse practitioner roles in this sector of health care.

1.3 Implications of provider changes

A number of variations on the private general practice have emerged over the last 40 years. In addition to the community-based groups and A&Ms, capitated contracts for primary health care were introduced in the 1990s into some areas, with funding determined by the number and type of people enrolled within a service. There is some international evidence that budget holding (whether for visits, tests or drugs) may alter clinician behaviour.[13,14] On the positive side, visits may be better targeted (e.g. test results given over the telephone), nursing skills better used, unnecessary tests reduced and cheaper drugs used, where appropriate. On the negative side, patients may be under-serviced for visits, tests or treatments. International precedents may or may not apply in New Zealand,[15] and what studies have been

undertaken here have expressed caution in relating contractual changes to health care improvements.[16] Research in relation to better utilisation of nursing skills in New Zealand has not yet been undertaken.

As we have seen, the aim of the HCA practices, or community-based groups, is to provide inexpensive care for populations with high social and health needs. The capitated funding model encourages greater flexibility in service provision, and accordingly some HCA practices have introduced innovative nursing models of care. However, more evidence needs to be collected before it can be concluded that these groups do attract patients with high social needs, and that enhanced nursing practice contributes to high-quality care and improved population health outcomes in these settings.

1.4 Changing role of primary health care nurses

The expansion of the nursing role in primary health care is intended to enhance the effectiveness and efficiency of health care in improving health outcomes. The international evidence for this suggests, however, that expanded nurse roles are under-evaluated, particularly in terms of their cost-effectiveness. Sibbald et al. provide a framework for considering changing the roles of nurses, in terms of:

- substitution – for the doctor's role
- delegation – doctors disinvesting in those activities that can be delegated and instead giving their time to activities that only they can perform
- enhancement – where nurses add value to services and improve the quality of care for patients.[17]

Although the evidence is limited, nurses acting as doctor substitutes in the management of patients in the UK have been shown to have more effective interpersonal skills than, and achieve equivalent health care outcomes to, doctors.[18,19,20] In terms of activities, however, there is some evidence to suggest that, when compared to doctors, nurses have longer consultation times, order more tests and investigations, and may recall patients more often.[20,21]

Enhancement of services to improve the quality of patient care includes nurses taking an extended role in health promotion. For example, nurses may be responsible for carrying out well-patient checks and providing lifestyle and other interventions.[6] In chronic disease management, where care is structured and protocol-driven, treatments delivered by nurses have been shown to be effective and to improve the quality of patient care.[22] Other studies conclude that while nurses are able to deliver high-quality care, the benefits to patients do not outweigh the costs.[23,24] Evidence is minimal about the overall cost-effectiveness of expanding nurses' role in primary health care.

1.5 This report

This report provides an overview of the methodology for the overall NatMedCa study and gives the characteristics of the nurses in primary health care practices – specifically, private general practices and A&Ms. Limited data are provided on the characteristics of nurses working in Health Care Aotearoa clinics. Data are also reported on their patients' visits during "office hours" (Monday to Friday, 8 am to 6 pm), including the characteristics of the patients, reasons-for-visit and problems managed, and non-drug treatments.

Self-reported activities carried out by the nurses in private and A&Ms are included and discussed in relation to independent activities and overall nurse activities.

Data on characteristics of practices are included (see Appendix F) to provide a better understanding of the environment in which primary health care nurses worked and the populations they worked with in 2001/02.

While the data set is limited, it will provide a baseline for future evaluation of the changing characteristics and roles of nurses in primary health care, and the patients and groups they work with.

2 Methodology

Following is a summary description of methods used in the NatMedCa survey. A more detailed account of the background to the study and the methods used is given in the first report in this series.[25]

NatMedCa was carried out during 2001/2002 with a nationally representative, multi-stage probability sample of private GPs, stratified by geographical location and practice type. A sampling frame of all active GPs was generated from telephone White Pages listings. Each participating GP provided data on themselves, and reported on a one-in-four sample of patients seen in each of two week-long periods separated by an interval of six months. Overall, 70% of private GPs responded. Further details of the results from the private GPs (or "family doctors") can be found in Reports 1 and 4.[25,26] Data were obtained on the characteristics and activities of nurses working in GP practices (one nurse associated with each sampled GP) (see Table 2.1).

Over the same period, all primary health care practices affiliated with HCA were invited to participate, as was a 50% random sample of all A&Ms distributed over the country. Similar data collection methods were used for the GP, HCA and A&M practices, although A&M practitioners reported on their patients for one week only, with participants spread over the year.

Overall, 70% of HCA practices and 55% of A&Ms responded. Further details of the results from the HCAs and A&Ms can be found in Reports 2, 3 and 5.[27,28,29] Data were obtained on A&M nurses (one nurse associated with each sampled A&M clinic). The HCA nurses provided data on themselves and on their patient visits that occurred during "office hours" (Monday to Friday, 8 am to 6 pm) (see Table 2.1).

The results for the nurses are presented in this report (the study questionnaires are shown in Appendices A–E).

Table 2.1: Numbers of participating nurses and patient visits by provider type

	Provider type		
	HCA* (N)	**Private GP (N)**	**A&M clinic (N)**
Nurses	27	160	7
Log of visits †	1815	–	–
Visit consultations ‡	410	–	–

* Patient log and visit data were only collected for HCA nurses.

† "Log" data comprised socio-demographic characteristics for all patients seen during the data collection period.

‡ Detailed "visit" data were collected for 1 in 4 patients seen.

Private GP practices were defined as rural providers if their score on the Rural Ranking Scale was greater than or equal to 35 (the criterion for the Ministry of Health's rural health benefits eligibility). Points are allocated on the basis of the frequency of on-call responsibilities, the requirement to be on-call for major trauma, the occurrence of regular peripheral clinics, and the times required to travel to the nearest hospital, the nearest colleague, and the most distant boundary.

A&Ms were defined by their having X-ray equipment on site, extended open hours (at least until 8 pm), open seven days a week, and being community-based rather than hospital-based.

Data on private GP and HCA practices, and A&Ms, were also collected (presented in Appendix F).

Nurse and practice weights were calculated to take account of different sampling probabilities. The proportions and means given in this report are estimated using analytic approaches that take account of the stratified, multi-stage sampling scheme, the weights associated with each stratum, and clustering at different sampling stages.

No statistical tests are applied in this report. Any comparative judgements made are indicative only and do not carry the weight of statistical significance. The tables in this report exclude missing data unless otherwise indicated. Note that percentages may not add up to exactly 100% due to rounding.

3 Characteristics of General Practice and Accident and Medical Nurses

One hundred and sixty practice nurses working in general practices, and seven working in A&Ms, completed questionnaires. The characteristics of these nurses are reported in Table 3.1. Not surprisingly, these data support the data reported in the 2001 workforce survey undertaken by the Ministry of Health, referred to in chapter 1.[3]

The practice nurses in both types of providers were older nurses, generally over 35 years of age, non-Māori, and female. Most appeared to work part-time, with the majority of this time spent in direct patient contact. They were experienced primary health care nurses, who had been working in that field of practice for more than six years.

All, with one exception, were registered nurses, although four initially entered the enrolled nurse register and then converted after further study to become registered nurses. The data revealed that one enrolled nurse was working as a practice nurse, raising professional competency issues that are outside of the scope of this paper but remain important and need further investigation.

Educationally, few of the practice nurses were graduates, with just 10 overall indicating that they had a BA, BHSc or BN. Approximately 25% had gained professional practice certificates related to their employment, but these were not at postgraduate level (see Table 3.2). Topics studied at this level can be split into three main groups: disease management/control, screening, and prevention activities. Three nurses reported that they had undertaken certificates in management, but the use of these qualifications in the workplace cannot be deduced. The focus on professional certificates rather than advanced postgraduate study is not unique to this sample of practice nurses. Studies undertaken in the UK draw attention to the lack of requirements for formal qualifications to work as a practice nurse and the difficulties practice nurses have in accessing further study.[6,7,30] The employment structure of these nurses, the part-time nature of their work and the lack of dedicated funding for ongoing education may all contribute to this phenomenon.

No differences were noted between the rural and non-rural nurses with respect to these characteristics (see Table 3.3).

Table 3.1: Characteristics of participating GP and A&M nurses

Nurse* characteristics		GP (N = 160)	A&M (N = 7)
Ethnicity (%) †	New Zealand European	86.6	100.0
	Māori	3.8	0
	Pacific	0.8	0
	Asian	3.4	0
	Other	5.4	0
Gender (%)	Female	100.0	100.0
Age (%)	< 35	12.7	0
	35–44	30.9	42.9
	45–54	39.3	57.1
	55–64	16.2	0
	> 65	0.9	0
	Mean (years)	45.8	46.3
Initial qualifications (%)	RCpN	21.3	14.3
	RGON	56.0	57.1
	RGN	20.8	0
	Other	1.8	28.6
Undergraduate qualifications (%)	BA/BHSc/BN	2.3	28.6
Further training (%) (for details see Table 3.2)		29.2	57.1
Years as a nurse (%)	< 6	2.7	0
	6–15	43.1	20.0
	16–25	33.7	60.0
	> 25	20.6	20.0
	Mean (years)	18.4	21.2
Years as a practice/clinic nurse (%)	< 6	31.5	85.7
	6–15	58.6	14.3
	16–25	9.9	0
	> 25	0	0
	Mean (years)	9.0	2.7
Professional membership (%)	NZNO	83.0	100.0
	College of Nursing	10.7	0
	Other	13.5	57.1
	None	11.6	0

* Excludes nurses employed by practices affiliated with Health Care Aotearoa (HCA).

† Ethnicity was self-reported, with multiple categories allowed. One ethnic category was then assigned per nurse according to prioritisation of Māori and Pacific peoples.

Table 3.2: Examples of further training undertaken by practice nurses

Further training: description	Level	Postgraduate topic
Practice Nurse Certificate	Certificate/diploma	–
Practice Nurse Asthma Certificate	Certificate	Disease management
Vaccination	Certificate	Prevention
Cervical screening	Certificate	Screening
Family planning	Certificate	Prevention
Diabetes management	Certificate	Disease management
Management	Certificate/diploma	–
Counselling	Certificate	–
Plunket Society	Certificate	–
Teaching	Certificate	–

Table 3.3: Characteristics of participating rural and non-rural GP nurses

Nurse* characteristics		**Rural (N = 34) †**	**Non-rural (N = 126)**
Ethnicity (%) ‡	New Zealand European	94.0	84.7
	Māori	0	4.7
	Pacific	0	1.0
	Asian	0	4.3
	Other	6.1	5.2
Gender (%)	Female	100.0	100.0
Age (%)	< 35	12.4	12.8
	35–44	31.2	30.8
	45–54	44.2	38.1
	55–64	12.2	17.2
	> 65	0	1.1
	Mean	46.0	45.8
Initial qualifications (%)	RCpN	21.6	21.3
	RGON	63.3	54.2
	RGN	11.4	23.2
	Other	3.8	1.4
Undergraduate qualifications (%)	BA/BHSc/BN	0	2.9
Further training (%) (for details see Table 3.2)		16.0	32.5
Years as a nurse (%)	< 6	0	3.4
	6–15	57.6	39.4
	16–25	24.4	36.0
	> 25	18.0	21.2
	Mean	17.6	18.6
Years as a practice nurse (%)	< 6	28.4	32.3
	6–15	65.4	56.9
	16–25	6.2	10.9
	> 25	0	0
	Mean	8.0	9.3
Professional membership (%)	NZNO	85.0	82.5
	College of Nursing	4.4	12.3
	Other	14.9	13.1
	None	9.8	12.1

* Excludes nurses employed by practices affiliated with Health Care Aotearoa (HCA).

† Based on a score ≥ 35 on the Ministry of Health rural ranking scale.

‡ Ethnicity was self-reported, with multiple categories allowed. One ethnic category was then assigned per nurse according to prioritisation of Māori and Pacific peoples.

3.1 Practice nurse activities

The majority of the patients that see practice nurses do so by appointment. On average, five such appointments are made each day, with a mean duration of 16.7 minutes; obviously, some patients may be seen for longer than others (see Table 3.4). The patient activities captured by the survey suggest that these appointments serve to free up GPs' time, enabling them to see other patients, and also increase the total number of patients seen each day. Research has raised questions about the cost-effectiveness of nurse-led clinics,[6,20,30] due in part to the longer appointment times for patients seen by nurses when compared with appointment times for GPs, but it is important to consider these other benefits arising from nurse-led services, as well as quality indicators such as patient satisfaction with service provision, and time available to see a health care professional.

All A&Ms make a charge for appointments with nurses, but in the GP practices some of the activities undertaken by nurses are not charged separately from those of the GPs (see Table 3.4).

Table 3.4: Activities of participating GP and A&M nurses

Nurse* activities		GP (N = 160)		A&M (N = 7)	
Average hours spent per week	Total †	30.9		24.4	
	Direct patient contact	16.3		11.6	
	Patient contact by phone	5.9		2.4	
	Administration	6.4		10.0	
	Housekeeping	2.5		5.1	
	Other duties	3.4		1.8	
Patients make appointments specifically to see nurse (at GP) or see nurse only (at A&M) (%)		87.5		71.4	
If so, number of appointments (at GP) or times (at A&M) in average week (mean)		24.6		3.4	
Usual time allocated for GP nurse appointment (mean minutes)		16.7		NA	
Practice/clinic charges a fee for nurse appointment (GP) or nurse visit (A&M) (%)		76.4		100.0	
Practice nurse clinics offered (%)	None	23.9		NA	
	Hypertension	32.3		NA	
	Diabetes	58.0		NA	
	Contraception	19.4		NA	
	Smears	50.0		NA	
	Asthma	40.3		NA	
	Immunisation	59.5		NA	
	Antenatal	11.0		NA	
	Other	33.0		NA	
Patient contact activities carried out (%)		**All**	**Independent ‡**	**All**	**Independent**
	Immunisations	98.3	78.7	100.0	85.7
	Child care advice	92.5	80.5	85.7	42.9
	Cervical screening	50.3	42.2	28.6	28.6
	Contraception	66.8	34.6	42.9	0
	Dressings	98.4	59.3	100	28.6
	Suturing	24.4	6.2	42.9	0
	Counselling	63.8	51.4	42.9	28.6
	Dietary/lifestyle advice	97.8	86.8	71.4	42.9
	Repeat prescriptions	81.1	27.7	42.9	0
	Blood taking	56.8	41.5	100.0	42.9
	Group education	12.2	7.5	NA	NA
	Home visiting	52.2	28.3	NA	NA

* Excludes nurses employed by practices affiliated with Health Care Aotearoa (HCA).

† Reported hours spent on specific duties do not necessarily sum to the total because of missing data.

‡ No doctor referral. Independent activities are a subset of all activities.

NA = not applicable, because not included in A&M questionnaire.

A limited picture of nurses' activity can be gained from the questionnaire responses. Within their working week nurses are engaged in patient contact activities more than 50% of their time. The average hours spent on various aspects of their work (see Table 3.4) support the results of previous UK research, even though these studies were undertaken in the previous decade.[6,30] All these activities appear to be common to those reported in the studies cited previously and reflect a generic focus to the practice nurse role.

The GP-based practice nurses offered patients a variety of clinics, with the majority of these being related to disease management, detection and prevention (see Table 3.4). Some activities are undertaken without prior referral to the GP, but these are generally limited to the provision of advice about child care, lifestyle and diet. Immunisation services were also offered without prior referral to a GP, although practice nurses would have been vaccinating under the direction of a medical practitioner unless they had undergone further training that authorised them to practise vaccination independently. The degree of independence of these activities cannot be determined from the data, although similar variations in responsibility were noted in Hirst et al.'s study.[7]

Almost all the nurses carried out wound dressings for patients, in both the GP practices and the A&Ms. Interestingly, this activity was identified as being of poor value by a clinical manager in a recent UK study.[31] This person, when questioned about utilisation of resources, considered that the practice nurse was overqualified to undertake basic dressings, which could be delegated to someone with less expertise and knowledge, which consequently would cost less. When a purely task-orientated, cost-focused model is applied to primary health care, the more subjective and less quantifiable aspects of service quality and satisfaction are not taken into consideration, and these are two issues where nursing scores highly.[20]

Clearly there were some minor variations in activity between rural and non-rural practices (see Table 3.5). For example, immunisation clinics were offered by more rural practices than non-rural, possibly reflecting the prevalence of other providers in the immediate area of non-rural practices. Similarly, more disease management clinics appeared to be offered in rural areas, including the monitoring of blood pressure and blood glucose, although these differences were small in percentage terms.

The non-rural practices appeared to offer a wider variety of services than their colleagues in rural areas (see Table 3.5). These activities offered under the category of 'other' in the non-rural practice focused on:

- travel vaccinations, as opposed to normal preventive screening
- smoking cessation clinics
- other lifestyle clinics, which included weight loss, exercise, and diet issues
- enuresis clinics
- sexual health.

However, in rural practices, few of these services were offered.

Table 3.5: Activities of participating rural and non-rural GP nurses

Nurse* activities		Rural (N = 34) †		Non-rural (N = 126)	
Average hours spent per week	Total ‡	26.9		31.9	
	Direct patient contact	16.7		16.2	
	Patient contact by phone	3.8		6.5	
	Administration	5.5		6.7	
	Housekeeping	1.9		2.7	
	Other duties	3.8		3.3	
Patients make appointments specifically to see nurse (%)		88.0		87.4	
If so, number of appointments in average week (mean)		24.6		24.6	
Usual time allocated for a nurse appointment (mean minutes)		16.6		16.8	
Practice charges a fee for nurse appointment (%)		75.8		76.6	
Practice nurse clinics offered (%)	None	18.1		25.4	
	Hypertension	44.4		29.2	
	Diabetes	65.9		55.9	
	Contraception	25.9		17.7	
	Smears	62.5		46.9	
	Asthma	38.1		40.9	
	Immunisation	73.8		55.8	
	Antenatal	11.6		10.9	
	Other	14.1		37.9	
Patient contact activities carried out (%)		**All**	**Independent+**	**All**	**Independent**
	Immunisations	100.0	74.9	97.8	79.7
	Child care advice	97.7	76.0	91.2	81.7
	Cervical screening	58.9	49.2	48.2	40.5
	Contraception	57.2	33.8	69.2	34.8
	Dressings	97.1	45.2	98.7	62.8
	Suturing	37.1	19.8	21.2	2.8
	Counselling	65.0	48.6	63.5	52.1
	Group education	9.8	7.0	12.9	7.7
	Dietary/lifestyle advice	97.1	78.9	97.9	88.8
	Repeat prescriptions	83.2	29.3	80.6	27.3
	Blood taking	77.0	58.3	51.7	37.3
	Home visiting	46.7	18.9	53.6	30.6

* Excludes nurses employed by practices affiliated with Health Care Aotearoa (HCA).

† Based on a score ≥ 35 on the Ministry of Health rural ranking scale.

‡ Reported hours spent on specific duties do not necessarily sum to the total because of missing data.

\+ No doctor referral. Independent activities are a subset of all activities.

With regard to patient contact activities, again variations were noted between rural and non-rural practices. Almost all the nurses indicated that their practices carried out patient dressings, but a greater percentage of the non-rural nurses undertook this activity as independent practitioners without prior referral to a GP. Conversely, the rural nurses appeared to carry out over 20% more blood sampling than their non-rural colleagues. Once again this may reflect the need to provide services locally to the clinic population. The rural practices also appeared to be providing some emergency services, as reflected in the greater amount of activity related to suturing when compared with the non-rural practices. The limitations in alternative providers may also account for the slightly higher provision of cervical screening, immunisations, and childcare advice in rural areas.

4 Characteristics of Health Care Aotearoa (HCA) Nurses

There were only a few nurses working in community-governed providers affiliated with Health Care Aotearoa, so only limited information can be deduced from the survey data (just 27 were included in the analysis). For this reason, any apparent differences in characteristics or service provision between HCA Māori and HCA Union providers have not been included.

Nurses working for HCA practices reflected the age and gender characteristics of the GP and A&M clinic nurses. These nurses also tended to be employed on a part-time basis (see Table 4.1).

Table 4.1: Characteristics of participating HCA nurses

Participant characteristics*		HCA nurses (N = 27) †
Ethnicity (%)	New Zealand European	55.6
	Māori	11.1
	Pacific	22.2
	Asian	3.7
	Other	7.4
Gender (%)	Female	100.0
Age (%)	< 35	14.8
	35–44	29.6
	45–54	48.2
	55–64	7.4
	> 64	0
	Mean (years)	45.1
Years in practice (with HCA) (%)	< 6	90.9
	6–15	9.1
	16–25	0
	> 25	0
	Mean (years)	2.6
Years this practice (%)	< 6	81.5
	6–15	14.8
	16–25	3.7
	> 25	0
	Mean (years)	3.8
Place of graduation (%)	New Zealand	74.1
	UK	14.8
	Other	11.1
College of Nursing (%)		11.1
NZNO		100.0
Mean daytime patients/week		50.2
Mean half-days worked per week		7.1
Mean patients per half-day		7.1

* Nurses who provided visits data.

† Nurses employed by HCA-affiliated (union or Māori) practices. All were registered nurses.

4.1 Characteristics of patients visiting HCA nurses

The majority of patients visiting the HCA nurses identified themselves as being of Māori descent and were aged between 15 and 54 years (see Tables 4.2 and 4.3).

Table 4.2: Percentage distribution of all patients, by age and gender (from log data)

Age group (years)	Males	Females
0–14	33.9	21.3
15–24	8.2	14.1
25–44	20.2	31.0
45–64	24.9	20.5
65+	12.5	12.3
Missing	0.4	0.8
Total (N)	**100% (768)**	**100% (1045)**

Note: Socio-demographic characteristics were logged for all patient visits. Gender data were missing for four patients.

Table 4.3: Percentage distribution of all patients, by ethnicity and card status (from log data)

	Percent of all visits (N = 1817)
Ethnicity*	
New Zealand European	10.4
Māori	35.6
Pacific	36.3
Asian	4.1
Other	11.7
Missing	1.9
Total	**100%**
Card status	
No card	25.0
Community Services Card	65.3
High User Health Card	0.4
Both cards	4.2
Missing	5.0
Total	**100%**

* Ethnicity was self-reported, with multiple categories allowed. One ethnic category was then assigned per patient according to prioritisation of Māori and Pacific people.

Two-thirds of these patients possessed a Community Services Card (see Table 4.3), with many of the patients seen by the nurses in the HCA clinics falling into the higher decile groups (i.e. higher level of deprivation). Almost 20% of these were not fluent in spoken English; however, the language of choice was not noted. Given the ethnicity data, it can be assumed that most spoke Māori or Pacific Island languages.

Table 4.4: NZDep2001 of residence and fluency in English: percentage of all patients (from visit data)

Decile	Percent of visits*
1	2.2
2	1.4
3	1.0
4	4.8
5	5.9
6	7.3
7	9.8
8	9.8
9	50.0
10 (highest deprivation)	50.0
Total (N)	**100% (358)**
% Not fluent in English (N)	19.1 (371)

* Detailed data were collected for 1 in 4 patient visits. Results are presented for visits that occurred during "office hours" (Monday to Friday, 8 am to 6 pm).

4.2 Patients visiting HCA nurses: relationship with practice

The nurses indicated that they generally had a high level of rapport with their patients (see Table 4.5). The literature acknowledges that practice nurses find the contact with patients to be rewarding and a key motivator for them. Nurses perceived their work to be beneficial for the patient in relation to the services offered, and that they were more accessible than the doctor, with more time to listen to the patient.[8]

Table 4.5: Nurse-reported rapport: percentage distribution

Rapport	Percent of visits
Low	1.6
Medium	34.6
High	63.8
Total (N)	**100% (367)**

The patient visit data reveal that patients visiting these practices did so frequently, with over seven visits each year being a common feature (see Table 4.6).

Table 4.6: Patient-reported number of visits to practice in previous 12 months: percentage distribution

Number*	Percent of visits
1–3	31.4
4–6	24.9
7+	43.8
Total (N)	**100% (370)**
Maximum	50
Mean	8.3

* Includes the current visit.

4.3 Patients visiting HCA nurses: reasons-for-visit

The visit data reveal that the HCA nurses allocated between 10 and 20 minutes for each consultation and that just over one-third of visits took longer than 20 minutes (see Table 4.7). They also tended to rate the urgency of patient needs quite highly, with the perception being that many of their patients needed to be seen by the nurse the same day as the appointment request was made (see Table 4.8), even though the nurses indicated that they thought many of their patients had only self-limiting or minor illnesses. These findings have support in the literature: in a study of requests for "same-day" consultations, the majority of those whose care was managed solely by the nurse were presenting with less acute symptoms.[32]

Table 4.7: Duration of visit: percentage distribution

Duration of visit	Percent of visits
Shorter < 10 minutes	2.6
Average 10–15 minutes	43.7
Longer 16–20 minutes	19.4
Longest > 20 minutes	34.3
Total (N)	**100% (391)**
Mean (minutes)	24.8

Table 4.8: Nurse-assessed urgency and severity of worst problem: percentage distribution

Urgency	Percent of visits
As soon as possible	13.1
Today	36.2
This week	35.7
This month	15.0
Total	**100%**
(N)	**(367)**
Severity	
Life-threatening	3.1
Intermediate	18.2
Self-limiting	35.9
Severity NA	42.7
Total	**100%**
(N)	**(351)**

When reasons for visiting were explored further, it was clear that most patients attending the nurse clinics did so for action-related interventions (see Tables 4.9 and 4.10). These data were generated from the initial presentation by the patient, and, although limited in detail, they appear to focus on symptom control and disease management.

The HCA nurses mainly saw patients who, on assessment, were classified as having self-limiting problems (these were defined to include colds and minor sprains) (see Table 4.8), or who had a single problem to treat (see Table 4.11). Some of these were related to long-term or chronic conditions (see Table 4.12) which required the provision of health advice and other activities related to the screening, investigation and follow-up of such conditions (see Table 4.13).

Table 4.9: Frequency of reasons-for-visit (RfV) grouping: rate per 100 visits

RfV grouping READ2 chapter*	RfV grouping: rate per 100 visits†
Actions	51.7
Investigations	16.3
Symptoms non-specific	16.1
Respiratory	9.3
Unspecified conditions	7.1
Injury/poisoning	6.6
Endocrine/nutritional/metabolic/immunity	6.1
Nervous system / sense organs	5.9
Skin / subcutaneous tissue	5.9
Musculoskeletal / connective tissue	5.1
Genito-urinary	4.6
Cardiovascular/circulatory	3.4
Infectious/parasitic	3.2
Digestive	2.4
Mental	1.2
Pregnancy/childbirth/puerperium	0.7
Blood / blood-forming organs	0.5
Not coded	4.6
Total reasons per 100 visits (618 reasons; 410 visits)	**150.7**

* Major groupings are based on READ2 chapters. Where possible, symptoms from chapters 1 and R have been attributed to the corresponding body system (chapters A to Q). Chapters 1 to 5 have been broadly classified under "Investigations", and chapters 6 to 9 and a to v under "Actions".

† Up to four reasons as given by the patient could be recorded per visit.

Table 4.10: Reason-for-visit (RfV) components: percentage of all reasons

RfV component*	Percent of all reasons
Disease	22.8
Symptoms	19.9
Treatments	14.9
Prevention †	14.6
Investigations	10.8
Administrative	4.9
Unspecified conditions	4.7
Injury/poisoning	4.4
Not coded	3.1
Total (N)	**100% (618)**

* READ2 chapters have been further grouped to form "components".

† Prevention = contraception/family planning, antenatal care, birth details, child development, immunisation, chronic disease monitoring, counselling/health education, screening/health check, exams/medicals.

Table 4.11: Percentage distribution of number of problems per visit

Number of problems*	Percent of visits
No problem	1.0
1 problem	53.9
2 problems	25.6
3 problems	14.9
4 problems	4.6
Total **(N)**	**100%** **(410)**
Mean problems per visit	1.68

* Up to four problems as diagnosed by the nurse (or doctor) could be recorded per visit.

Table 4.12: Percentage distribution of problem status

Problem status	Percent of all problems
New problem	25.4
Short-term follow-up	12.9
Long-term follow-up	24.3
Long-term with flare-up	7.7
Preventive	11.6
(Not given)	18.1
Total **(N)**	**100%** **(690)**

Table 4.13: Non-drug treatments (per 100 visits)

Non-drug treatments	Rate per 100 visits
Health advice	56.3
Investigation/examination/screening	42.0
Referral	15.9
Follow-up	15.6
Immunisation	9.3
Other procedure	8.0
Minor surgery	7.6
Administration	6.1
Dressing	5.1
Complementary medicine	0.2
Physical medicine	0.2
Total treatments per 100 visits **(N treatments)** **(N visits)**	**166.3** **(682)** **(410)**

These findings have support in the literature. Activities for which the doctor indicated a willingness to delegate to nurses included those related to advice or reassurance, screening, and treatment of skin complaints.[33] Similarly, in a study of requests for same-day consultations, the majority of those whose care was managed solely by the nurse were presenting with less acute symptoms.[32]

5 Summary and Discussion

The purpose of this part of the NatMedCa survey was to expand knowledge of the frequency and nature of the activities that comprise primary health care nursing. The data focusing on nursing activity provide a baseline for future evaluation as well as summarising the work undertaken in 2001/02 by nurses working in general practice, with Health Care Aotearoa (including Māori providers), and in Accident and Medical clinics in New Zealand.

5.1 Results

The nurses who participated in this survey were all registered nurses (with the exception of one, who was an enrolled nurse and did not indicate that she had undergone any further training to join the New Zealand Nursing Council Register). The results confirm those found in previous research in New Zealand and elsewhere: primary health care nurses are an ageing workforce, with the majority of participants falling into the 45+ age group. Only 12.7% of the practice nurses were under the age of 35 years, and so establishing a career path and attracting young nurses into the primary health care workforce remains a challenge.

Educationally, only a small minority of the nurses had undertaken any post-registration or further education programmes. In general, certificate-level professional practice or continuing education courses were cited as further education.

The roles of the practice nurses reported here are diverse but quite task-focused in nature. Three key areas of activity were identified: chronic disease management, health promotion and health screening. Practice nurses offered clinics in diabetes, hypertension and asthma management. Health promotion activities included dietary and lifestyle advice, child-care advice (as well as immunisations), and, to a lesser extent, cervical screening, which contributes to health screening. Also, half of the practice nurses reported making home visits.

The activities in which the primary health care nurses engaged reflect those identified in the New Zealand WaiMedCa regional study of 1991/92,[9,10,11] as well as those from the larger-scale study undertaken 10 years ago in the UK.[6] This is not unexpected given the similarities in the services with regard to funding and employment status. The important factor behind this part of the NatMedCa survey is that it provides a descriptive baseline that captures activity in the various roles of practice nurses throughout New Zealand in 2001/02. Major changes occurred in this health sector soon after the survey was undertaken and an extensive evaluation of these is currently taking place. These data will help to inform that project.

The nurses in this study could all be described as generalist, which is to say their practice integrated aspects of the public health nurse, district nurse and Plunket nurse into the practice nurse role. They focused on health promotion, disease prevention and management across the life-span, although they did not have the educational preparation for such broad roles. In the UK, services provided by practice nurses have been extended to include the treatment of minor illness and chronic disease management, and these have become firmly established in the primary health care settings.[33] For these additional services to be effective, however, sufficiently well-educated, knowledgeable practitioners are required. A systematic review suggests that services provided by nurse practitioners in primary health care enhance patient satisfaction with service provision and quality of care.[20]

While the Government's Primary Health Care Strategy[34] envisages an expanded role for primary health care nurses, the diversity of the roles of the nurses in this study complicates clarifying the professional contribution these nurses make to primary health care. Where a specialty approach can be taken, with a nurse caring for particular population groups, or specific conditions, or disease states, this would be clearer. All the nurses in this survey – with the exception of those in HCA-affiliated practices – were employees of GPs and thus had limited opportunities to expand their practice.

There were many innovative initiatives planned for primary health care at the time of writing. The roles of primary health care nurses are changing, and in some areas of the country have changed since this survey was undertaken. It is clear that nurses are vital to the success of the Primary Health Care Strategy. However, current and anticipated changes in primary health care services, alongside shortages in the medical and nursing workforce, require changes to occur in the educational preparation of primary health care nurses.

International studies demonstrate that nurses with enhanced roles have positive effects on the quality of patient care in community settings and on patient satisfaction with service provision.[20] Primary health care nurses are considered to have the potential for a major role in chronic disease management,[2] with supporting evidence that nurses do make a difference to patient outcomes in chronic diseases such as asthma, hypertension and diabetes.[35,36] The development of nursing within the primary health care setting has begun, and already nursing innovations are evident following the funding of scholarships and projects by the Ministry of Health in 2002. However, research is still needed to determine the cost of nurse-led services, and other benefits arising from such services, and to evaluate the impact of such services on patient outcomes in New Zealand.

5.2 Strengths of this survey

- The study included primary health care nurses working in both rural and non-rural areas of New Zealand.
- Stratification ensured that private GPs, community-governed providers (including Māori and Union providers), and A&Ms were represented, although the numbers for some of these sub-groups were too small to enable comparisons to be made.
- Previous similar surveys in New Zealand and Australia ensure comparability across time and between nations.
- Ethnicity has been reported using a method comparable to the national census.
- The data collected will be valuable for future evaluations of changes produced in response to the Government's Primary Health Care Strategy.

5.3 Limitations of this survey

- There were no data collected from non-participating nurses. If these nurses in busy practices differed in some systematic way in their activities, this may have biased the results.
- The survey of patient visits was practitioner- rather than population-based. Thus data referred to the actual work of HCA nurses rather than to population utilisation or to the needs of the population.
- Data were cross-sectional and dealt with visits rather than episodes of illness.
- The reliability and validity of the information provided by nurses were not confirmed by independent measurement, but previous research does support the picture of activity presented here.
- Data from after-hours services were excluded.

5.4 Conclusions

The National Primary Medical Care nurses survey set out to describe the characteristics of and activities undertaken by nurses in GP-based practices, HCA practices and A&Ms in New Zealand. This report has presented the methodology and the findings.

These findings have been contexualised through reference to previous research undertaken in New Zealand and elsewhere, and provide a baseline against which future evaluations of primary health care initiatives can be gauged. This survey finds nurses focused primarily on traditional nursing tasks. There is clearly a lack of

educational preparation for expanded roles in a workforce that is largely part-time and where the mean age is 45 years.

The types of activities undertaken by the nurses in the GP practices, A&Ms and HCA organisations were not unexpected. The data suggest that non-rural practice nurses provide a greater range of clinics than their rural counterparts, but due to the limited nature of the data collected only minimal inferences can be drawn from the findings. However, this should be explored further, especially as the Government's Primary Health Care Strategy[34] envisages that innovative services led by nurses should be developed.

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Appendix A: GP Nurse Questionnaire

NATMEDCA

National Primary Medical Care Survey

(E) PRACTICE NURSE SURVEY

Practice Nurse Study ID number_____ Practice Study ID number _____

BACKGROUND INFORMATION

1. **Age at last birthday (years)** _____

2. **Gender** Male ☐
   Female ☐

3. **What is your ethnicity?** (tick the space or spaces that apply to you)
   - (1) New Zealand European ☐
   - (2) Māori ☐
   - (3) Samoan ☐
   - (4) Cook Island Māori ☐
   - (5) Tongan ☐
   - (6) Niuean ☐
   - (7) Chinese ☐
   - (8) Indian ☐
   - (9) Other ☐

4. **What were your initial qualifications?**
   - (a) RGN ☐
   - (b) RGON ☐
   - (c) RCpN ☐
   - (d) EN ☐
   - (e) RM ☐
   - (f) BA/BHSc/BN ☐
   - (g) Other ☐

5. **Please give any post-graduate qualifications** _____

6. **How long have you worked as a nurse?**
   (approximate full-time equivalent years) _____

7. **How long have you worked as a practice nurse?**
(approximate full-time equivalent years)_____

8. **Please indicate if you have a membership in a professional organisation.**

(a) NZNO ☐
(b) College of Nursing ☐
(c) Other (please specify) _____
(d) None ☐

ACTIVITIES

9. **How many hours do you work at the clinic in an average week?**
hours/week_____

10. **Approximately how many hours do you spend on the following duties in an average week?** (Use decimals if appropriate, e.g. 2.3 hours)

(a) **Direct patient contact** _____ hours
(b) **Patient contact by phone**_____ hours
(c) **Administration**_____ hours
(d) **Housekeeping**_____ hours
(e) **Other duties** _____ hours
(Specify) _____

11. (a) **Do your clients make appointments specifically to see you?**

Yes ☐
No ☐

(b) **If yes, how many appointments would you take in an average week?** _____

12. **How long is usually allocated for a nurse appointment?** _____ minutes

13. **Does your practice charge a fee for nurse appointments?**

Yes ☐
No ☐

14. **What practice nurse clinics are offered at your practice?**

(a) None ☐ (b) Hypertension ☐
(c) Diabetes ☐ (d) Contraception ☐
(e) Smears ☐ (f) Asthma ☐
(g) Immunisation ☐ (h) Antenatal ☐
(i) Other ☐ Specify:_____

15. **Which of the following patient-contact duties do you *carry out* ? (A) and which may be undertaken without *immediate* doctor referral? (B)**

ACTIVITY TYPE	CARRY OUT (A)		INDEPENDENTLY (B)	
	Yes	No	Yes	No
(a) Immunisations	☐	☐	☐	☐
(b) Child care advice	☐	☐	☐	☐
(c) Cervical screening	☐	☐	☐	☐
(d) Contraception	☐	☐	☐	☐
(e) Dressings	☐	☐	☐	☐
(f) Suturing	☐	☐	☐	☐
(g) Counselling	☐	☐	☐	☐
(i) Dietary/lifestyle advice	☐	☐	☐	☐
(j) Repeat prescriptions	☐	☐	☐	☐
(k) Blood taking	☐	☐	☐	☐
(m) Triage	☐	☐	☐	☐

Many thanks for helping us by completing this questionnaire.

The contribution of Rose Lightfoot in selecting these questions is acknowledged.

Appendix B: A&M Nurse Questionnaire

NATMEDCA

National Primary Medical Care Survey

(E) A&M NURSE SURVEY

A&M Nurse Study ID number _____ A&M Clinic Study ID number _____

BACKGROUND INFORMATION

1. **Age at last birthday (years)**_____

2. **Gender** Male ☐
   Female ☐

3. **What is your ethnicity?** (tick the space or spaces that apply to you)
   - (1) New Zealand European ☐
   - (2) Māori ☐
   - (3) Samoan ☐
   - (4) Cook Island Māori ☐
   - (5) Tongan ☐
   - (6) Niuean ☐
   - (7) Chinese ☐
   - (8) Indian ☐
   - (9) Other ☐

4. **What were your initial qualifications?**
   - (a) RGN ☐
   - (b) RGON ☐
   - (c) RCpN ☐
   - (d) EN ☐
   - (e) RM ☐
   - (f) BA/BHSc/BN ☐
   - (g) Other ☐

5. **Please give any post-graduate qualifications**_____

6. **How long have you worked as a nurse?**
   (approximate full-time equivalent years)_____

7. **How long have you worked as an A&M nurse?**
(approximate full-time equivalent years) _____

8. **Please indicate if you have a membership in a professional organisation.**

(a) NZNO ☐
(b) College of Nursing ☐
(c) Other (please specify)_____
(d) None ☐

ACTIVITIES

9. **How many hours do you work at the clinic in an average week?**
hours/week _____

10. **Approximately how many hours do you spend on the following duties in an average week?** (Use decimals if appropriate, e.g. 2.3 hours)

(a) **Direct patient contact**_____ hours
(b) **Patient contact by phone** _____ hours
(c) **Administration** _____ hours
(d) **Housekeeping** _____ hours
(e) **Other duties**_____ hours
(Specify) _____

11. (a) **Do any clients see only you (not the doctor)?**

Yes ☐
No ☐

(b) **If yes, how many in an average week?** _____

12. **Does the clinic charge a fee if the client sees only you?**

Yes ☐
No ☐

13. **Which of the following patient-contact duties do you *carry out* ? (A) and which may be undertaken without *immediate* doctor referral? (B)**

ACTIVITY TYPE	CARRY OUT (A)		INDEPENDENTLY (B)	
	Yes	No	Yes	No
(a) Immunisations	☐	☐	☐	☐
(b) Child care advice	☐	☐	☐	☐
(c) Cervical screening	☐	☐	☐	☐
(d) Contraception	☐	☐	☐	☐
(e) Dressings	☐	☐	☐	☐
(f) Suturing	☐	☐	☐	☐
(g) Counselling	☐	☐	☐	☐
(i) Dietary/lifestyle advice	☐	☐	☐	☐
(j) Repeat prescriptions	☐	☐	☐	☐
(k) Blood taking	☐	☐	☐	☐
(m) Triage	☐	☐	☐	☐

Many thanks for helping us by completing this questionnaire.

The contribution of Rose Lightfoot in selecting these questions is acknowledged.

Appendix C: HCA Nurse Questionnaire

NATMEDCA

National Primary Medical Care Survey

(D) NURSE QUESTIONNAIRE

Practitioner Study ID number _____ **Practice Study ID number** _____

Nurses and midwives, please complete.

1. **Age at last birthday (years)** _____

2. **Gender** Male ☐
   Female ☐

3. **What is your ethnicity?** (tick the space or spaces that apply to you)
   (1) New Zealand European ☐
   (2) Māori ☐
   (3) Samoan ☐
   (4) Cook Island Māori ☐
   (5) Tongan ☐
   (6) Niuean ☐
   (7) Chinese ☐
   (8) Indian ☐
   (9) Other ☐

4. **How many years in this practice?** _____

5. **How many years as an independent practitioner?**
   (i.e. HCA nurse practitioner) _____

6. **What are your post-graduate qualifications?**
   (Specify) _____

7. **How many hours per month do you spend on CME?** _____hours

8. **Are you a member of:**

(a) NZNO ☐
(b) College of Nursing ☐
(c) College of Midwives ☐
(d) Other ☐
(Specify) _____

9. **Where did you qualify?**

(a) New Zealand ☐
(b) Australia ☐
(c) United Kingdom ☐
(d) Asia ☐
(e) North America ☐
(f) Other ☐
(Specify) _____

10. **What are your employment arrangements?**

(a) Self-employed/profit sharing ☐
(b) Salaried ☐

11. **Number of half days worked per week?** _____

12. **Average number of patients per week?** _____

13. **Are you a registered nurse?**

Yes ☐
No ☐

14. **Are you a registered midwife?**

Yes ☐
No ☐

Appendix D: Patient Log Form

NATMEDCA

National Primary Medical Care Survey

(F) LOG OF VISITS

Practitioner Study ID Number _____ Questionnaire Number _____

Please complete this log for <u>all</u> patients. Fill in the visit form <u>ONLY</u> for the <u>fourth</u> patient.
Start Here

Patient One
Gender male ☐ female ☐
Date of birth: day____mth____yr___
Ethnicity:
(see options on cover, tick the space or spaces that apply)
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐
Com'ty Services Cd yes☐ no ☐
High user card yes☐ no ☐

Patient Two
Gender male ☐ female ☐
Date of birth: day____mth____yr___
Ethnicity:
(see options on cover, tick the space or spaces that apply)
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐
Com'ty Services Cd yes☐ no ☐
High user card yes☐ no ☐

Patient Three
Gender male ☐ female ☐
Date of birth: day____mth____yr____
Ethnicity:
(see options on cover, tick the space or spaces that apply)
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐
Com'ty Services Cd yes☐ no ☐
High user card yes☐ no ☐

<u>Patient Four</u>
Gender male ☐ female ☐
Date of birth: day____mth____yr___
Ethnicity:
(see options on cover, tick the space or spaces that apply)
1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐
Com'ty Services Cd yes☐ no ☐
High user card yes☐ no ☐
Please complete report for this visit.

➔ **Please enter address here for patient number 4**

Questionnaire number_____

_____ _____
number Street

Town/Suburb_____

COMPLETE REPORT FORM ➔

Appendix E: Patient Visit Form

Practitioner ID Number _____ **NATMEDCA** **(G) VISIT REPORT** **Questionnaire number**

1 **Date of visit** - day _____ month _____ year_____ **Time of visit** _____

2 **REASON(S) FOR VISIT** (persons own words)

1._____

2._____

3._____

4._____

3 **Was there a problem or issue that the person wanted to have dealt with but had difficulty mentioning** (apart from the reason(s) for visit)**?** yes ☐ no ☐ unknown ☐

4 **How would you assess this person's level of social support? (Please circle)**

|_____|_____|_____|_____|

(1) very poor (2) (3) (4) very good (5) unknown ☐

5 **What is this person's marital status**? married ☐ de facto ☐ single ☐

If single, please specify: separated ☐ divorced ☐ widowed ☐ never married ☐

6 **Please include all issues** (well person care, psycho-social difficulties, practitioner identified issues etc.) **as problems and mention all interventions under treatment** (scripts, immunisation, smears, certification, reassurance, counselling etc.)

***Please give Drug name, dose, interval, duration as on prescription**

DIAGNOSIS/PROBLEM 1_____

Status of problem: new ☐ short-term FU ☐ long-term FU ☐ long-term with flare-up ☐ preventative ☐

***Action, treatment, drugs** for this problem:

DIAGNOSIS/PROBLEM 2_____

Status of problem: new ☐ short-term FU ☐ long-term FU ☐ long-term with flare-up ☐ preventative ☐

***Action, treatment, drugs** for this problem:

DIAGNOSIS/PROBLEM 3_____

Status of problem: new ☐ short-term FU ☐ long-term FU ☐ long-term with flare-up ☐ preventative ☐

***Action, treatment, drugs** for this problem:

DIAGNOSIS/PROBLEM 4_____

Status of problem: new ☐ short-term FU ☐ long-term FU ☐ Long-term with flare-up ☐ preventative ☐

***Action, treatment, drugs** for this problem:

7 **INVESTIGATIONS ORDERED**

☐ FBC ☐ Culture
☐ E Sed Rate ☐ Pap Smear
☐ Fe etc, B12, folate ☐ ECG
☐ Serum glucose ☐ Plain X-Ray
☐ Creatinine/urea ☐ Contrast etc
☐ Liver function ☐ Ultrasound
☐ Lipids ☐ Spirometry
☐ Thyroid ☐ Other
☐ Other chemistry

DISPOSITION

Follow-up within 3/12? yes ☐ no ☐

Referred on? yes ☐ no ☐

If yes, (please specify)

_____

Sent to Acute Assessment Unit or Emergency Dept. yes ☐ no ☐

8 **GENERAL**

Is person new to practice? yes ☐ no ☐

Is patient new to practitioner? yes ☐ no ☐

Is practice usual source of care? yes ☐ no ☐

Number visits to practice in previous 12 months: _____

Has/will person also see nurse today? yes ☐ no ☐

Has/will person also see doctor today? yes ☐ no ☐

Source of payment? Cash/GMS ☐ ACC ☐

Duration of visit? _____minutes

9 **Was patient (child's caregiver) fluent in English**? yes ☐ no ☐

EVALUATION (for worst problem)

Practitioner perception of urgency of this visit?

ASAP ☐ today ☐ this week ☐ this month ☐

Severity? Life-threatening ☐ intermediate ☐ self-limiting ☐ NA ☐

Disability? Extent: none ☐ minor ☐ major ☐

Type: temporary ☐ permanent ☐

Uncertainty as to diagnosis or management?

none ☐ low ☐ medium ☐ high ☐

General rapport achieved? low ☐ medium ☐ high ☐

Appendix F: Characteristics of Practices by Provider Type

Practice characteristics	Provider type		
	Private GP (N = 167)	A&M* (N = 12)	HCA† (N = 14)
Personnel (mean number)			
Full-time equivalent (FTE) doctors	2.1	2.7 (+0.8 rostered)	2.5
FTE nurses	1.5	3.2	2.4
FTE community workers	0	0	0.4
Access			
Hours open per week (mean)	48.9	118.1	44.3
Offering evening surgery hours (%)	41.9	100.0	30.0
Offering weekend surgery hours (%)	33.3	100.0	30.0
Offering booking system (%)	97.0	8.3	100.0
Ethnicity of patient population (%)			
Māori	14.5	15.9	46.6
Pacific	5.6	10.1	25.4
Services provided (%)			
Doctors providing maternity care	63.1	58.3	50.0
Independent nursing consultations	75.4	NA	84.6
Complementary/alternative services	38.6	NA	46.2
Group health promotion	25.5	16.7	71.4
Community worker services	4.3	0	71.4
Computerisation (%)			
Computerised patient records	70.7	25.0	64.3
Governance (%)			
Separate, or external, management structure	7.6	83.3	100.0
Patient representation in management	1.1	0	76.9
Legal practice structure (%)			
Sole trader	35.7	0	0
Partnership	24.1	16.7	0
Community trust	2.0	0	21.4
Other trust	3.5	0	0
Incorporated society	1.1	0	64.3
Limited liability company	27.8	83.3	7.1
Other	5.8	0	7.1
Practice needs (%)			
Formal community needs assessment	20.1	0	42.9
Locality service planning	17.1	0	42.9
Inter-sectoral case management	11.4	0	57.1

Practice characteristics	Provider type					
	Private GP (N = 167)		A&M* (N = 12)		HCA† (N = 14)	
Quality management (%)						
Written policy on complaints	59.3		100.0		100.0	
Written policy for quality management	29.0		58.3		71.4	
Standard fees (mean $)	**Card‡**	**No card**	**Card‡**	**No card**	**Card‡**	**No card**
Child (0–5 years)	0.70	1.00	6.90	6.90	0.00	0.00
Child (6–17 years)	13.50	19.10	21.80	26.70	1.20	2.60
Adult (18 years and over)	22.60	38.30	34.40	47.50	6.20	18.30
Funding regime (%)						
Capitated	26.1		0		92.9	
Budget holding	18.2		0		7.1	
Location (%)						
Urban (population > 100,000)	52.4		91.7		57.1	
Town (30,000–100,000)	16.5		8.3		14.3	
Rural area (< 30,000)	31.0		0		28.6	

* Accident and Medical.

† Health Care Aotearoa.

‡ Combines both High User and Community Services cards.

NA = not applicable, as not included in A&M questionnaire.

Glossary and List of Abbreviations

A&Ms: Accident and medical clinics – these provide extended-hours primary health care cover and allow access without an appointment. The majority are situated in Auckland or Hamilton.

BA: Bachelor of Arts.

BHSc: Bachelor of Health Science.

BN: Bachelor of Nursing.

Community-governed practices: primary health care providers whose governance rests with a community body and in which the practitioners and other workers do not share profits.

CSC: Community Services Card – allows access to government subsidies for primary health care and medication; eligibility depends on economic need.

EN: Enrolled nurse.

FTE: Full-time equivalent.

GP: General practitioner.

HCA: Health Care Aotearoa.

HUHC: High User Health Card – allows access to government subsidies for primary health care and medication; eligibility depends on frequent use of primary medical care.

NatMedCa: National Primary Medical Care Survey 2001/02, of which this document is the ninth report.

NZNO: New Zealand Nurses' Organisation.

Rapport: a GP's perception of the quality of the relationship with the patient during consultation.

RCpN: Registered comprehensive nurse.

RfV: Reason-for-visit – the statement of a patient's reason for visiting the nurse.

RGN: Registered general nurse.

RGON: Registered general and obstetric nurse.

RM: Registered midwife.

Severity: a GP's assessment of the capacity for harm of the most severe of the patient's problems; this covers life-threatening (applies only to a new problem), intermediate and self-limiting.

Visit: an interaction between nurse and patient; synonymous with consultation and encounter.

WaiMedCa: Waikato Medical Care Survey 1991/92 – the previous survey similar to that reported on here.