

A Comparison of Māori and Non-Māori Patient Visits to Doctors

The National Primary Medical Care
Survey (NatMedCa): 2001/02
Report 6

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Executive Summary

Aims. The aim of the National Primary Medical Care Survey (NatMedCa) is to describe primary medical care in New Zealand, including the characteristics of providers and the practices they work in, the patients they see, the problems they manage and the investigation and treatment that they offer. The study included private general practices, community-governed (CG) providers, Māori providers, Accident and Medical (A&M) clinics and Emergency Departments.

This report presents findings describing the experiences of Māori patients during their visits to doctors.

Methods. The study was a nationally representative, multi-stage probability sample of private general practices, stratified by place and practice type. Each GP was asked to provide data on themselves and on their practice, and to report on a 25% sample of patients in each of two week-long periods separated by an interval of six months. In addition, and over the same time period, all CG primary health care practices in New Zealand were also invited to participate, as was a 50% random sample of all A&M clinics distributed over the country (and four representative hospital Emergency Departments – not reported here).

All practitioners within these participating practices and clinics were in turn asked to participate. Similar data collection methods were used as for the private GPs, except that A&M patient visit data were collected for one week from each clinic with clinics spread over the year. A number of Māori providers were recruited into the survey, but these providers were included through recruitment processes for CG and private GPs and not through a recruitment process specifically for Māori providers. The findings for Māori providers cannot, therefore, be considered to be representative of all Māori providers across the country.

Results. These results are presented in three parts:

- the experiences of Māori patients in general practices across the country
- the experiences of Māori in each of the three general practice provider types
- the experiences of Māori patients in A&M clinics.

The experiences of Māori patients in general practices across the country

Data were contributed by 199 private general practitioners (GPs), 24 doctors who worked in community-governed practices, and 21 doctors who worked with Māori providers. In total, the doctors logged 40,189 consultations, of which 12.2% were for Māori patients. The doctors provided detailed visit information about 9124 visits, of which 12.3% were for Māori patients.

The characteristics of Māori patients seen in general practices can be summarised as follows.

- Māori accounted for 12% of visits to GPs, a smaller percentage than in the general population.¹
- Māori were younger than non-Māori:
 - children aged 14 years or less accounted for 37.0% of Māori visits (compared to 21.4% of non-Māori visits)
 - nearly half of all Māori visits were for patients under 25 years of age (compared to only 29.9% of non-Māori visits).
- Māori were more likely to hold a Community Services Card than non-Māori.
- Very high proportions of Māori resided in areas with high deprivation: over 60% of Māori patients lived in areas within the three most deprived NZDep2001 deciles.

The relationship of patients with the practice and characteristics of the visit can be summarised as follows.

- About 90% of Māori (a similar percentage to non-Māori) regarded the practice they had attended as their usual source of care.
- Similar percentages of Māori and non-Māori were new to the practice or new to the doctor.
- Māori had a mean of 6.1 visits in the previous year (6.7 for non-Māori).
- Doctors reported lower levels of rapport with Māori patients.
- The mean length of consultation time for Māori patients was 13.7 minutes (15.1 for non-Māori).
- The percentages of Māori and non-Māori in each payment type (cash/GMS, ACC and maternity) were similar. However, a greater proportion of Māori visits were cash/GMS for children.

Problems managed during consultations had the following features.

- Higher urgency – 43.3% of Māori visits were judged as needing attention as soon as possible (“ASAP”) or “today”, compared to 31.1% of non-Māori.
- The distribution of severity was similar for Māori and non-Māori.
- The number of reasons-for-visit nominated by patients was slightly lower among Māori than in non-Māori. Respiratory reasons, actions and non-specific symptoms were the commonest reasons in both Māori and non-Māori patient groups, but the order of importance was different.

- The mean number of problems managed by the doctor during each visit was similar for Māori and non-Māori. Fewer Māori visits were for a long-term problem, and more were for a short-term problem, compared to non-Māori visits. Respiratory problems, actions and nervous system/sense organs were the three commonest problem types (as a percentage of all problems) for both Māori and non-Māori.

Management undertaken during consultations can be summarised as follows.

- Tests and investigations were ordered in 21.0% of Māori visits, compared to 25.4% of non-Māori visits. Laboratory tests were more commonly used than imaging and other tests.
- Age-specific rates of ordering blood lipid and glucose tests were lower for Māori in the 35–44, 45–54 and 55–64 years age groups.
- A slightly larger proportion of Māori visits resulted in the prescription of a drug (69.6% versus 65.9% of non-Māori visits), and the average number of prescription items was higher for Māori than for non-Māori. Māori and non-Māori received similar numbers of non-prescription treatments.
- Some of the findings in this report relating to the prescription of various drugs for various problems raise questions that require further investigation. For example, among patients with a diagnosis (either existing or new) of chronic obstructive respiratory disease during the visit, 62.6% of Māori received a prescription for a respiratory drug compared to 71.0% of non-Māori.
- Follow-up within three months was recommended for 54.6% of Māori and 57.5% of non-Māori visits. Referrals were slightly less common for Māori (14.7%) than for non-Māori (16.2%).

The experiences of Māori in each of the three general practice provider types

- A higher proportion of Māori patients attending private GPs were in the younger age groups.
- Overall, similar proportions of Māori patients were new to the practice (6% in CG, 10% in private GP and Māori providers), but the proportion within each age group who were new to the practice differed by provider type.
- The proportions of patients overall and by age group that were new to the practitioner varied between practice types, being higher in CG and Māori providers. Younger patients were more likely to be new to the practitioner.
- The mean duration of visit was longer in CG practices.
- The mean number of problems managed in each provider type was similar (though tended to be higher in CG providers). The mean number of visits increased with patient age.

- The number of prescription items per 100 problems appeared similar in private GP and Māori providers, but slightly lower in CG providers. However, the number of other treatments items appeared higher in CG providers.
- Rates of emergency and non-medical referrals were similar across all three provider types. However, rates of medical/surgical referral appeared to be higher in CG providers.

The experiences of Māori in A&M clinics

- Māori made up 9.0% of patients attending A&Ms. It appeared that a greater proportion of patients were Māori during usual working hours (11.2%) than during other hours (8.0%).
- Māori patients attending A&Ms were younger than non-Māori. Children made up the greatest proportion of Māori visits, and this proportion was higher than that seen in the non-Māori group. The proportion of children attending in other hours was higher than that attending in usual working hours.
- Visits for ACC-eligible problems were more common during usual working hours than during other hours. Injury/poisoning was the commonest problem type during usual working hours and respiratory problems were commonest in other hours.
- Māori received fewer tests/investigations than non-Māori, and this difference was most marked during usual working hours.
- Compared to non-Māori patients, Māori received fewer prescription items (per 100 problems) during usual working hours, and more during other hours, than non-Māori. There were no ethnic differences in the rate of other treatment item use (per 100 problems).
- Follow-up arrangements were made for a lower percentage of Māori than non-Māori. Some smaller differences in the rates of referral were also observed.

Conclusions. While there are caveats regarding the conclusions that can be drawn from the results of this survey, there were a number of findings of interest. Some findings suggested that Māori may experience reduced access to care, and significant differences in the processes and outcomes of care, particularly in relation to the known burden of disease that Māori experience. Other findings raise questions about disparities in the quality of care provided to Māori and non-Māori. Further analyses are required to elucidate many of these questions more fully.

1 Introduction

The National Primary Medical Care Survey (NatMedCa) was a nationally representative survey of primary medical care services across Aotearoa/New Zealand. Data were collected in 2001 and 2002 from a total of 244 general practitioners (GPs) across the country. The practices these practitioners worked in were divided into three types: Māori providers,⁵ community-governed (CG) providers and private practices. A range of information was collected about every patient visit during the data collection period (6384 Māori patient consultations and 33,805 non-Māori consultations). More detailed information about visits (e.g. the problems seen, tests and investigations ordered and referrals made) was collected from one in every four consultations (1447 Māori and 7677 non-Māori consultations). The methodology used to undertake the survey is described briefly in section 2 but has been fully described elsewhere.²

The purpose of this report is to present information about the key features of visits to GPs by Māori patients. It is the first national report of this type. Following the preliminary sections, the report's results are divided into three parts. The first part (sections 4 to 12) describes (at a national level) the key characteristics of encounters between Māori patients and their doctors and compares these with the characteristics of encounters by non-Māori patients. The data in this section were obtained from visits made to the GP during "usual working hours" (Monday–Friday, 8 am–6 pm).

The second part (section 13) describes the experience of Māori within each provider type (Māori, CG and private practice). These data were also obtained from visits made to the GP during "usual working hours" (Monday–Friday, 8 am–6 pm).

The third part (section 14) describes the experiences of Māori and non-Māori patients attending Accident and Medical (A&M) clinics. This section includes data collected during usual working hours and other hours (Monday–Friday, 6 pm–8 am, and Saturdays and Sundays).

The report contains information about:

- the doctors working in the services that participated in the survey
- the patients who visited practitioners during the survey
- the relationship of the patients to the practice and practitioner
- the characteristics of the visit
- the components of the visit (reasons-for-visit, diagnoses made, investigations ordered, referrals made, etc).

⁵ As defined by Ministry of Health criteria for Māori provider funding.

The information contained in this report must be considered descriptive. Tests of statistical significance have not been undertaken so it is not possible to state whether any differences noted in this report between the experiences of Māori and non-Māori patients (parts 1 and 3), or in the experiences of Māori patients within the three different types of practices (part 2) are “real” and have significance. In part 2 there are additional constraints on the data because the sample of Māori providers included in the study was not nationally representative. Therefore, data presented about “Māori providers” in this report cannot be generalised to all Māori providers. Furthermore, in both parts 2 and 3 the numbers of patients and/or visits included in many analyses are so low that interpretation of any apparent differences is extremely difficult and no firm conclusions about any differences can be drawn.

Unless otherwise indicated, missing data were excluded from the tables in this report. Percentages in tables may not add up to 100% due to rounding.

1.1 The experience of Māori patients in primary care

The Waikato Medical Care Survey (WaiMedCa) was undertaken in 1991/92, and a full report of the findings of WaiMedCa was published in 1994.³ The report described the age and sex distributions for three groups of patients: Māori, Pacific and European/other, but did not provide further analyses by ethnic group. Subsequent papers from this and other studies have addressed ethnic group differences in utilisation (see, for example, Davis 1986, 1987a, 1987b; Malcolm 1996; Davis et al 1997)^{4,5,6,7,8} but have not provided detailed information on the nature and frequency of activities within primary medical care consultations.

Literature examining the processes and outcomes of primary care for Māori and non-Māori patients is more limited. Arroll et al (2002)⁹ published results of a study into the prevalence of depression and the use of anti-depressants at an Auckland general practice. The prevalence of depression measured using the Beck Depression Inventory was 13.8%, and GPs picked up 51% of cases. Māori patients were no more likely to be depressed than non-Māori patients, but fewer Māori were receiving or had received anti-depressants.

The 1997 National Nutrition Survey included measurement of blood pressure and collection of information about the use of anti-hypertensive medication. Twenty percent of participants had hypertension (were hypertensive at the time of the interview, or had normal blood pressure at the time of the interview but were taking anti-hypertensive medication). About 10% of participants were taking anti-hypertensive medication. Nearly half of this group (4.2% of participants) were hypertensive and on medication. Greater proportions of Māori and Pacific participants were hypertensive while on anti-hypertensive medication.¹⁰ The apparent reduced effectiveness of anti-hypertensive medication for Māori and Pacific people may be related to patient factors (less than ideal compliance), differences in physiological response to anti-hypertensive

medication, or to differences in the quality of care (e.g. less monitoring, and/or inadequate adjustment of medication when blood pressure is not well controlled).

This study is the first to provide comprehensive information about the experiences of Māori and non-Māori patients visiting GPs in Aotearoa/New Zealand. Published material about Māori providers has been largely narrative, with little information about outcomes of care.^{11,12} Although NatMedCa provides this information, great care must be taken when interpreting and using the information. The data here can only be considered to represent what occurs in the Māori providers that participated in the survey and cannot be generalised to all Māori providers.

2 Methodology

2.1 Organisation

The research, funded by the Health Research Council of New Zealand, was undertaken by a project team within the Centre for Health Services Research and Policy, School of Population Health, Faculty of Medical and Health Sciences, University of Auckland. Advice and support were provided by a research team representing the Departments of General Practice and/or Public Health at each of the four New Zealand Medical Schools.

2.2 Research design

The research followed the general methodology developed by the National Ambulatory Medical Care Survey (NAMCS) in the United States and previously used in New Zealand by Scott et al (1980),¹³ the Royal New Zealand College of General Practitioners (RNZCGP 1984)¹⁴ and McAvoy et al 1994 (WaiMedCa).³ Practitioners at the selected general practices and A&M clinics were asked to complete reports on every fourth consultation for a period of one week.

2.3 Questionnaires

Copies of the questionnaires are provided in the appendices. The log questionnaire (Appendix A), completed for all patients seen during the data collection period, recorded gender, date of birth, ethnicity and Community Services Card status. It also provided the means for recording the address of the fourth patient, which was detached (at the practice) and sent to an independent agency for coding to the New Zealand Index of Deprivation (NZDep2001), a measure of residential area deprivation.

The visit questionnaire (Appendix B) recorded data about the patient, his or her problem(s) and the management recommended.

The practitioner questionnaire (Appendix C) obtained data on practitioner background and current activities.

The expanded practice questionnaire (Appendix D) covered hours of access, services provided, equipment on-site, personnel employed and various aspects of practice management. In particular, the history and the contractual arrangements within the practice were recorded.

2.4 Ethnicity

Previous studies of general practice have been criticised for having inaccurate data on patient ethnicity. In the present study, copies of the ethnicity question used in the 2001 Census were provided for use with each patient. Multiple choices were allowed, although mutually exclusive categories are reported here with prioritisation of Māori and Pacific peoples.

2.5 Sampling

The National Primary Medical Care Survey (NatMedCa) was undertaken in 2001/02. Further details of the sampling process for GPs (private and community-governed) and A&M clinics are provided elsewhere.^{2,15,16,17}

A nationally representative, multi-stage probability sample of private GPs, stratified by place and practice type, was drawn. A sampling frame of all active GPs was generated from telephone White Pages listings. Overall, 70% of private GPs responded. Each GP was asked to provide data on themselves and their practice, and to report on a 25% sample of patients in each of two week-long periods separated by an interval of six months.

Over the same period, all community-governed (CG) primary health care practices in New Zealand were invited to participate, as was a 50% random sample of all A&M clinics distributed over the country. Overall, 70% of CG practices and 55% of A&M clinics responded. All practitioners within these participating practices and clinics were in turn asked to participate. Similar data collection methods were used for the private GPs, CG and A&M practices.

CG organisations were defined as fulfilling at least two of the following criteria: they had a community board of governance (i.e. board members who were not health professionals); there was no equity ownership by GPs or others associated with the organisation; and there was no profit distribution to GPs or others working for the organisation. A&Ms were defined as: having X-ray equipment on-site; open extended hours until at least 8 pm; open seven days a week; and being community- rather than hospital-based. Data collection from A&Ms was undertaken for one week, spread over the year and over geographical areas.

A random sample was drawn from the private GP population so that those GPs who worked for Māori providers had the same opportunity to be selected to participate in the survey as all others. In addition to this sampling strategy for private GPs, all CG non-profit organisations in primary health care were listed and approached. A good number of these organisations qualified as Māori providers. We believe this sampling process was able to generate a cross-section of Māori providers.

Practices were defined as Māori providers if they met the following four Ministry of Health criteria:

- Is the practice an independent Māori health provider?
- Are the services targeted towards Māori?
- Does the practice (primary health provider) have a Māori management structure?
- Does the practice have a Māori governance structure?

A total of 244 GPs (from 167 private, six CG and 14 Māori provider practices) and 67 A&M practitioners from 26 clinics participated and provided patient visit data.

2.6 Data

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

Data classification. Patients' addresses were collected and coded using the NZDep classification of Census mesh blocks into one of ten deprivation categories (1 = lowest, 10 = highest deprivation).

Reasons-for-visit and diagnoses were also coded, using READ version 2 (READ2). A significant number of visits to GPs do not result in a clear pathological diagnosis, and READ2 makes provision for symptoms, administrative functions, intended actions and other types of entry. Practitioners entered the variables as free text, and coding was performed electronically. Drugs were coded (according to the Pharmacodes/ATC system) using similar software, as were other therapeutic actions.

2.7 Grouping reasons-for-visit and problems, and drugs

READ2 is a hierarchical system and classifies reasons-for-visit and diagnoses either into pathology-based groups identified by a letter or, when specific pathology has not been reported, into numbered categories which include symptoms and proposed actions. The primary (first-digit) categories are given in Table 2.1. In reporting the frequency of the various categories, the first digit of the code was used as a grouper (e.g. H = respiratory system). Where a group of problems, indicated by the second digit, reached a threshold of 0.5% (e.g. H3 = chronic obstructive airway disease), these are also reported.

However, all the numbered action, investigation and administration categories (see Table 2.1) are treated as a single category and the value of the number is used as the second-level grouper. Where a symptom was system-specific (e.g. cough), the case was assigned to the equivalent lettered category.

Table 2.1 READ2 chapter headings

Pathology-based categories	Other categories
A. Infectious/parasitic	1. History and symptoms
B. Cancers/neoplasms	2. Examination
C. Endocrine/nutritional/metabolic/immunity	3. Diagnostic procedures
D. Blood/blood-forming organs	4. Laboratory tests
E. Mental	5. Radiology
F. Nervous system/sense organs	6. Preventive procedures
G. Cardiovascular/circulatory	7. Surgical procedures
H. Respiratory system	8. Other procedures
J. Digestive system	9. Administration
K. Genito-urinary system	
L. Pregnancy/childbirth/puerperium	
M. Skin/subcutaneous tissue	
N. Musculoskeletal/connective tissue	
P. Congenital	
Q. Perinatal	
R. Symptoms	
S/T. Injury/poisoning	
Z. Unspecified conditions	

Drugs were classified using the Pharmacodes/ATC system. The categories are anatomically based. However, anti-bacterials, which may be used across systems, make up their own sub-group under anti-infective agents (see Table 2.2). Analgesics, which may also be used across systems, are included in drugs affecting the nervous system. In general, each group has a variety of sub-groups, which may be quite disparate. We have followed the system consistently even when reassignment of drug groups might have been possible (e.g. lipid-lowering drugs could have been put under the cardiovascular system but were left in metabolic).

Table 2.2 List of level 1 categories (Pharmacodes/ATC system)

Drug group	
1	Alimentary tract and metabolism
4	Blood and blood-forming organs
7	Cardiovascular system
10	Dermatologicals
13	Genito-urinary system
14	Systemic hormone preparations (excludes oral contraceptives)
16	Infections – agents for systemic use
19	Musculoskeletal system
22	Nervous system
25	Oncology agents and immunosuppressants
28	Respiratory system and allergies
31	Sensory organs
38	Extemporaneously compounded preparations and galenicals
40	Special foods

3 Recruitment and Data Collection

Nationally, log book data were collected from 40,189 consultations; 6384 (15.9%) of these consultations were made by Māori and 33,805 (84.1%) by non-Māori patients. More detailed information (visit questionnaires) was collected from a sub-sample (9124) of the consultations: 1447 (15.9%) Māori and 7677 (84.1%) non-Māori consultations.

Data described in this section relate to the total number of consultations; that is, the log questionnaires.

The majority of Māori visits took place with private GPs (4641/6384, 72.7%). Visits to Māori providers accounted for 21.1% (1350/6384) of Māori visits and visits to CG practices accounted for the remaining 6.2% (393/6384). This was markedly different from the non-Māori sample. The majority of non-Māori visits occurred at private providers (31,122/33,805, 92.1%). Five percent (1681/33,805) of non-Māori visits occurred at CG practices and 2.9% (1002/33,805) at Māori providers.

Table 3.1 presents the numbers of questionnaires submitted for Māori and non-Māori, by region. Differences in the distribution of geographical location were observed: greater proportions of Māori visits occurred in small towns (849/6384; 13.3%) than did non-Māori visits (2599/33,805; 7.7%). A smaller proportion of Māori visits (2379/6384; 37.3%) occurred in cities than did non-Māori visits (16,795/33,805; 49.7%). The proportion of visits occurring in rural areas was similar for Māori (1582/6384; 24.8%) and non-Māori (8266/33,805; 24.5%).

Table 3.1 Number of general practice log (and visit) questionnaires submitted

Area	Private		Community-governed		Māori provider		All	
	Māori	Non-Māori	Māori	Non-Māori	Māori	Non-Māori	Māori	Non-Māori
Auckland	666 (173)*	7477 (1717)*	84 (18)	346 (74)	168 (33)	100 (27)	918 (224)	7923 (1818)
Hamilton	278 (72)	1633 (374)	–	–	449 (102)	86 (24)	727 (174)	1719 (398)
Wellington	116 (25)	2072 (468)	268 (56)	942 (208)	135 (34)	426 (96)	519 (115)	3440 (772)
Christchurch	131 (30)	2742 (629)	41 (10)	393 (97)	–	–	172 (40)	3135 (726)
Dunedin	43 (9)	578 (138)	–	–	–	–	43 (9)	578 (138)
City total	1234 (309)	14,502 (3326)	393 (84)	1681 (379)	752 (169)	612 (147)	2379 (562)	16,795 (3852)
Small town North Island	468 (111)	1922 (424)	–	–	372 (77)	299 (79)	840 (188)	2221 (503)
Small town South Island	9 (1)	378 (87)	–	–	–	–	9 (1)	378 (87)
Small town total	477 (112)	2300 (511)	–	–	372 (77)	299 (79)	849 (189)	2599 (590)
Rural North Island	1182 (246)	5277 (1186)	–	–	226 (51)	91 (22)	1408 (297)	5368 (1208)
Rural South Island	174 (36)	2898 (629)	–	–	–	–	174 (36)	2898 (629)
Rural total	1356 (282)	8175 (1815)	–	–	226 (51)	91 (22)	1582 (333)	8266 (1837)
WaiMedCa – Hamilton	282 (50)	2028 (459)	–	–	–	–	282 (50)	2028 (459)
WaiMedCa – rural	1292 (313)	4117 (939)	–	–	–	–	1292 (313)	4117 (939)
All New Zealand	4641 (1066)	31,122 (7050)	393 (84)	1681 (379)	1350 (297)	1002 (248)	6384 (1447)	33,805 (7677)

* After-hours visits for all areas and provider types were excluded.

Table 3.2 provides information about the GPs working in each of the three practice types. Māori provider practices had lower percentages of New Zealand European doctors than both CG and private practices. CG and Māori providers had similar percentages of Māori GPs working for them. Māori (9.5%) and CG (8.3%) practices had higher proportions of doctors who identified Māori ethnicity than private practices (0.8%). A very small percentage of GPs working in private services were of Māori or Pacific ethnicity. GPs of Asian and “other” ethnicities accounted for a higher proportion of GPs in Māori providers.

When compared with doctors working in private GP practices, the doctors working in Māori provider and CG practices were more often female (66.7% in Māori providers and 70.8% in CG, versus only 37.5% in private). A higher proportion of GPs within Māori providers were less than 35 years, and over 55 years of age, compared with private practices. GPs working in CG practices were all under 55.

Doctors in private practices had worked in general practice for a longer time than those working in Māori and CG practices (mean times were 15.6 years in private practices, 11.6 years in Māori provider practices and 9.0 years in CG practices) and had also worked in the current practice for a longer time (mean time 11.1 years in private practices versus 4.2 years in Māori and 4.3 years in CG practices).

About two-thirds of GPs working in Māori providers (61.9%) had graduated in New Zealand, Australia or the United Kingdom. In comparison, 80.2% of doctors in private practice and 79.1% of doctors in CG services had graduated in one of these three countries.

A greater proportion of doctors working in Māori providers (81.3%) had completed or were undertaking vocational training with the RNZCGP, compared with 78.0% of doctors in private practices and 59.1% of doctors working in CG practices.

Māori provider practices had an average of 2.5 full-time equivalent (FTE) doctors working in the practice. Each doctor worked on average 7.4 half-days per week, seeing an average of 86.5 patients per week during daytime hours. That is, on average, doctors saw 86.5 patients over the 7.4 half-days they worked (on average 11.7 patients per half-day).

Private GP practices had a slightly lower number of FTE doctors (2.1), who worked slightly longer at an average of 7.8 half-days per week and saw an average of 103.2 patients during those 7.8 half-days (on average 13.2 patients per half-day). CG practices employed an average of 2.9 FTE doctors who worked an average of 6.6 half-days per week and saw on average 63.3 patients per week (9.6 patients per half-day).

Table 3.2 Characteristics of participant general practitioners (GPs)

GP* characteristic	Private (N=199)	Community-governed (N=24)	Māori provider (N=21)	All (N=244)
Ethnicity %				
New Zealand European	69.3	66.7	42.9	68.9
Māori	0.8	8.3	9.5	1.0
Pacific	0.8	0	4.8	0.8
Asian	11.2	12.5	14.3	11.3
Other	18.0	12.5	28.6	18.1
Total	100%	100%	100%	100%
Sex %				
Female	37.5	70.8	66.7	38.2
Male	62.5	29.2	33.3	61.8
Total	100%	100%	100%	100%
Age %				
< 35	9.4	21.7	19.0	9.7
35–44	43.6	56.5	28.6	43.4
45–54	34.0	21.7	23.8	33.8
55–64	9.1	0	19.0	9.1
> 64	4.0	0	9.5	4.0
Total	100%	100%	100%	100%
Mean	45.1	39.8	45.0	45.1
Years in practice %				
< 6	7.6	37.5	38.1	8.5
6–15	48.4	41.7	28.6	47.9
16–25	31.9	20.8	14.3	31.6
> 25	12.1	0	19.0	12.1
Total	100%	100%	100%	100%
Mean	15.6	9.0	11.6	15.5
Years this practice %				
< 6	29.1	69.6	81.0	30.1
6–15	43.3	30.4	19.0	43.0
16–25	20.6	0	0	20.1
> 25	7.0	0	0	6.9
Total	100%	100%	100%	100%
Mean	11.1	4.3	4.2	10.9
Place of graduation %				
New Zealand	65.6	70.8	52.4	65.4
UK	12.2	8.3	9.5	12.2
Australia	2.4	0	0	2.3
Other	19.8	20.8	38.1	20.1
Total	100%	100%	100%	100%
% RNZCGP	78.0	59.1	81.3	78.0
% NZMA	52.6	37.5	26.3	52.3
Size of practice (mean FTE doctors)	2.1	2.9	2.5	2.2
(N)	(167)	(6)	(14)	(187)
Mean daytime patients/week	103.2	63.3	86.5	102.5
Mean half-days/week	7.8	6.6	7.4	7.8
Mean daytime patients per half-day	13.2	9.6	11.7	13.1

* GPs who provided visits data.

4 Characteristics of Patients

Tables 4.1 to 4.6 present information on the characteristics of Māori and non-Māori patients. Log information was collected for all visits undertaken during the data collection period. More detailed visit information was collected in visit questionnaires for a sub-sample of the visits. Visits described in this report occurred during normal working hours (Monday–Friday, 8 am–6 pm). As can be seen in Table 4.1, the percentages of Māori who had log and visit questionnaires completed were similar. Similarly, the ethnicity breakdown among the non-Māori patients was similar in the log and visit samples. It can be concluded that there is no sample or response bias between log and visit samples with respect to ethnic group.

Māori accounted for about 12% of visits to the GP. NZ European patients accounted for 75.1%, Pacific peoples 4.0%, Asian people 4.0%, and other ethnic groups the remaining 4.7%.

Table 4.1 Percentage distribution of GP logs and visits, by patient ethnicity

Ethnic group*	Logs [†]		Visits (M–F, 8 am–6 pm) [†]	
Māori	12.2	(6384)	12.3	(1447)
Non-Māori	87.8	(33,805)	87.7	(7677)
New Zealand European	75.1	(27,392)	74.7	(6196)
Pacific	4.0	(2293)	4.2	(536)
Asian	4.0	(2086)	4.1	(497)
Other	4.7	(2034)	4.6	(448)
All (N)	100%	(40,189)	100%	(9124)

* Ethnicity was self-reported, with multiple categories allowed; one ethnic category was then assigned per patient according to prioritisation of Māori and Pacific peoples. Patients with missing ethnicity data were excluded.

† Percentages have been weighted, where appropriate, to adjust for sample design while numbers of patient logs or visits (in brackets) are actual.

Table 4.2 presents information on the age of Māori and non-Māori patients, by sex. The Māori sample (all participants) was younger than the non-Māori sample, with children aged 14 years or less accounting for 37.0% of visits (versus 21.4% of non-Māori patients in this age range). The 45–54 years age group accounted for similar percentages of visits for both Māori and non-Māori patients. However, the older age groups made up a smaller percentage of Māori visits compared with non-Māori. This was particularly marked in the 65–74 and over 75 years age groups.

Table 4.2 Distribution of Māori and non-Māori patients, by age and sex, as percentage of all visits (from log)

Age (years)	Māori*				Non-Māori†			
	Missing	Males	Females	All	Missing	Males	Females	All
< 1	10.2	9.5	6.1	7.6	3.9	4.8	3.2	3.9
1–4	1.5	18.7	12.8	15.4	5.4	10.9	7.5	8.9
5–14	18.9	15.8	12.6	14.0	3.8	10.7	7.2	8.6
15–24	10.2	9.2	14.0	11.9	1.5	7.5	9.2	8.5
25–34	30.9	9.4	14.7	12.3	10.7	8.3	11.7	10.3
35–44	3.1	11.1	13.8	12.5	12.7	11.1	12.4	11.9
45–54	1.5	10.2	9.4	9.8	11.2	11.8	12.5	12.2
55–64	0	8.3	8.0	8.1	15.7	11.6	10.7	11.1
65–74	1.5	4.8	5.4	5.1	7.5	11.8	10.7	11.1
75+	0	2.6	2.7	2.7	24.8	10.9	14.6	13.1
Missing	22.0	0.5	0.6	0.6	2.7	0.5	0.4	0.5
Total (N)	100% (14)	100% (2800)	100% (3570)	100% (6384)	100% (61)	100% (14,073)	100% (19,671)	100% (33,805)

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

† Patients with missing ethnicity data were excluded.

The ratios of NatMedCa patients to the national population for both Māori and non-Māori are presented in Table 4.3. For all age groups combined (“all ages”), the ratio of Māori in NatMedCa to Māori in the general population was lower than the equivalent ratio for non-Māori. This suggests a relative under-utilisation of primary care by Māori, compared to non-Māori. While there were some differences between Māori and non-Māori in ratios across the age groups, generally speaking the pattern across the age groups was similar for Māori and non-Māori. For Māori, the ratios were lower in the younger, and higher in the older, age groups.

Table 4.3 Ratio of Māori and non-Māori patients to national population, by age and sex (log data)

	All ages	0–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+
Māori										
Male	0.76	1.60	0.47	0.40	0.51	0.65	0.93	1.34	1.52	2.71
Female	0.90	1.38	0.48	0.73	0.83	0.88	1.00	1.48	1.88	2.46
Non-Māori										
Male	0.88	2.09	0.64	0.49	0.54	0.62	0.74	1.04	1.44	1.98
Female	1.17	2.09	0.64	0.87	0.98	0.91	1.08	1.32	1.71	2.31

Table 4.4 presents information about card status for Māori and non-Māori patients. Higher proportions of Māori held Community Service Cards (CSCs) (59.9% versus 39.8% of non-Māori). A slightly lower percentage of Māori held High User Health Cards (1.3% of Māori versus 2.9% of non-Māori).

Table 4.4 Percentage distribution of Māori and non-Māori patients, by card status (from log)

	Māori	Non-Māori
Card status		
No card	34.8	54.0
CSC	59.9	39.8
HUHC	1.3	2.9
Both cards	2.3	2.3
Missing	1.7	1.0
Total (N)	100% (6384)	100% (33,805)

Table 4.5 presents information on patients' level of social support (as perceived by the doctor) and New Zealand Index of Deprivation (NZDep2001) scores, by ethnicity. Greater proportions of non-Māori were perceived by the doctors to have very good social support. Conversely, greater proportions of Māori were perceived to have average, poor or very poor social support. Care must be taken when interpreting these data as they rely on doctors' perceptions, rather than information from the patient or a specific measure of social support.

The distribution of deprivation scores varied markedly between Māori and non-Māori. Māori were over-represented in high deprivation deciles and under-represented in low deprivation deciles (Table 4.5).

Table 4.5 Social support and NZDep2001 of residence: percentage of Māori and non-Māori patients

	Visits*	
	Māori	Non-Māori
Social support		
5. Very good	31.0	49.9
4. Good	30.6	27.4
3. Average	21.3	14.8
2. Poor	10.1	4.2
1. Very poor	1.3	0.6
Unknown	5.7	3.1
Total (N)	100% (1433)	100% (7628)
Decile		
1	2.1	12.0
2	3.8	10.7
3	3.7	9.9
4	6.0	11.2
5	5.0	11.5
6	7.5	9.3
7	9.6	9.4
8	15.0	9.9
9	17.3	7.9
10	30.0	8.4
Total (N)	100% (1261)	100% (6537)

* GP visits Monday–Friday, 8 am–6 pm.

Table 4.6 documents the relationship between perceived social support and several measures of socioeconomic deprivation. Part A documents the relationship between holding a CSC and NZDep2001 quintile. For both Māori and non-Māori, increasing deprivation (quintiles 4 and 5) was associated with a greater proportion of the population having a CSC. In all NZDep2001 quintiles, a higher proportion of Māori had a CSC than non-Māori.

Perceptions of social support also varied by CSC holding status (Part B). About half (49.9%) of Māori and nearly a third of non-Māori patients (29.7%) perceived to have very good social support had a CSC, whereas 80.1% of Māori and 72.4% of non-Māori perceived to have very poor social support had a CSC. Similar findings relating to perceived social support and NZDep2001 quintile can be observed in Part C, with greater proportions of the patient populations in low deprivation quintiles (quintiles 1 and 2) perceived to have very good social support compared with high deprivation quintiles. Higher proportions of patients living in high-deprivation quintiles were perceived to have average, poor and very poor levels of social support.

Table 4.6 Relationship between measures of deprivation

A. Percent possessing a Community Services Card, by NZDep2001 quintile					
Quintile	1	2	3	4	5
Card %					
Māori (N)	40.8 (51)	53.4 (104)	52.3 (149)	59.4 (281)	68.1 (655)
Non-Māori (N)	25.7 (1335)	31.2 (1263)	42.1 (1268)	48.1 (1286)	61.8 (1283)

B. Percent possessing a Community Services Card, by level of social support						
Social support	5 Very good	4 Good	3 Average	2 Poor	1 Very poor	Unknown
Card %						
Māori (N)	49.9 (435)	60.6 (451)	69.2 (294)	75.7 (125)	80.1 (16)	61.4 (89)
Non-Māori (N)	29.7 (3619)	44.5 (2079)	58.8 (1112)	65.7 (364)	72.4 (64)	35.1 (273)

C. Percent social support, by NZDep2001 quintile					
Quintile	1	2	3	4	5
Māori					
5. Very good	43.8	43.0	40.4	23.6	25.7
4. Good	37.5	30.4	33.3	30.6	29.2
3. Average	15.3	12.9	11.5	27.1	24.0
2. Poor	3.0	5.1	8.5	12.9	11.7
1. Very poor	0	3.3	0	2.3	1.2
Unknown	0.5	5.4	6.4	3.6	8.3
	100%	100%	100%	100%	100%
Mean score	4.2	4.1	4.1	3.6	3.7
Non-Māori					
5. Very good	61.7	52.8	48.4	46.6	32.3
4. Good	24.3	26.7	27.9	29.5	32.1
3. Average	9.2	14.4	15.4	15.2	22.6
2. Poor	1.6	3.3	5.2	5.5	6.2
1. Very poor	0.4	0.4	0.6	0.5	1.8
Unknown	2.8	2.5	2.5	2.7	5.0
	100%	100%	100%	100%	100%
Mean score	4.5	4.3	4.2	4.2	3.9

5 Relationship with Practice

Section 5 presents information about the relationship between patients and the practice they visited. Few patients (10.6% of Māori and 7.6% of non-Māori) stated that the practice they visited on the day of data collection was not their usual source of care (Table 5.1). Similar percentages of Māori (10.0%) and non-Māori (7.0%) were new to the practice on the day of the visit. A higher percentage of Māori (16.1%) were new to the doctor they saw at the visit, compared with non-Māori (11.9%).

Table 5.1 Relationship with practice: three measures

	Māori	Non-Māori
% new to practice	10.0	7.0
% new to practitioner	16.1	11.9
% not usual source	10.6	7.6
(Minimum N)	(1411)	(7567)

For both Māori and non-Māori patients, age was associated with being new to the doctor. A greater percentage of younger age groups had visits to practitioners they had not seen before. For example, 25.6% of Māori and 22.5% of non-Māori under-one-year-olds were new to the doctor. The percentages of patients who were new to the doctor in each age group were similar between Māori and non-Māori with the exception of the 15–24 years age group. In this age group, a higher percentage of Māori (35.4%) were new to the doctor than non-Māori (21.4%) (Table 5.2).

Similar findings were noted for patients who were new to the practice. For both Māori and non-Māori, higher percentages of the younger age groups were new to the practice compared with the older age groups. The percentages in each age group were similar between Māori and non-Māori with the exception of the 15–24 and 45–54 years age groups. In these groups higher percentages of Māori were new to the practice.

Table 5.2 New patients: percentage of age group

Patient age group (years)	Percent of age group new to doctor		Percent of age group new to practice	
	Māori (N = 1424)	Non-Māori (N = 7570)	Māori (N = 1429)	Non-Māori (N = 7582)
< 1	25.6	22.5	16.8	15.2
1–4	13.8	12.0	6.0	5.6
5–14	15.1	15.8	10.8	8.4
15–24	35.4	21.4	22.3	15.7
25–34	14.2	17.7	9.6	11.4
35–44	12.1	13.5	4.6	8.2
45–54	12.0	9.6	11.3	5.3
55–64	4.8	9.4	4.3	4.5
65–74	8.5	3.8	7.3	2.1
75+	0.9	4.3	0	2.2

Patients were asked how many times they had visited the doctor in the previous 12 months. The percentage of Māori and non-Māori reporting each number of visits, and the mean number of visits, were similar for Māori and non-Māori (Table 5.3).

Table 5.3 Patient-reported number of visits to practice in previous 12 months: percentage distribution

Number*	Māori	Non-Māori
1	19.9	16.4
2	11.8	9.5
3	10.6	10.5
4	10.8	10.6
5	7.5	8.4
6	8.6	9.4
7	4.0	4.5
8	5.8	6.0
9	2.7	2.9
> 9	18.2	21.9
Total (N)	100% (1403)	100% (7449)
Maximum	144	154
Mean	6.1	6.7

* Includes the current visit.

Table 5.4 presents findings relating to the level of rapport achieved between the doctor and the patient, as reported by the doctor. A smaller proportion of visits by Māori patients (58.4% versus 70.1% non-Māori) were rated as achieving high rapport, and more were rated as achieving medium rapport (39.8% Māori versus 28.6% non-Māori). Similar percentages of Māori and non-Māori visits were rated as low rapport.

Table 5.4 Practitioner-reported rapport: percentage distribution

Rapport	Māori	Non-Māori
1. Low	1.8	1.3
2. Medium	39.8	28.6
3. High	58.4	70.1
Total (N)	100% (1419)	100% (7558)

6 Visit Characteristics

Section 6 presents information about the characteristics of the visits. Similar percentages of visits by Māori and non-Māori were for ACC or maternity-related matters. Higher percentages of Māori visits where payment was by cash/general medical subsidy (GMS) were for children (29.5% under six years and 16.4% of “child”) compared with non-Māori (16.5% under six years and 9.8% of “child”). This is likely to reflect the different age structures of the Māori and non-Māori populations. CSC holders made up a higher percentage of Māori child (9.8%) cash/GMS visits compared with non-Māori child visits (3.8%). Similar percentages of Māori (34.5%) and non-Māori (36.5%) adult cash/GMS visits were made by CSC holders (Table 6.1).

Table 6.1 Source and type of payment cited, as percentage of visits

Source of payment*	Māori	Non-Māori
% visits cash/GMS	86.1	89.0
Under 6 (Y)	29.5	16.5
Child, card (J1)	9.8	3.8
Child, no card (J3)	6.6	6.0
Adult, card (A1)	34.5	36.5
Adult, no card (A3)	19.6	37.2
Total cash/GMS	100%	100%
% visits ACC payment	10.2	8.9
% visits maternity care	3.7	2.1
Total (N)	100% (1357)	100% (7352)

* Categories are mutually exclusive, with maternity or ACC taking precedence over cash/GMS where more than one was cited.

Table 6.2 presents information on the length of visits by ethnic group. A higher percentage of Māori visits were short (less than 10 minutes) (18.4% versus 11.1% of non-Māori visits), and smaller proportions of Māori visits were 15–20 minutes or over 20 minutes in duration.

Table 6.2 Duration of visit: percentage distribution

Duration	Māori	Non-Māori
Shorter < 10 minutes	18.4	11.1
Average 10–15 minutes	60.3	61.8
Longer 15–20 minutes	12.3	15.5
Longest > 20 minutes	9.1	11.6
Total (N)	100% (1394)	100% (7445)
Mean duration (minutes)	13.7	15.1

Table 6.3 presents information on the urgency and severity of the visits, as rated by the doctor. A higher percentage of Māori visits (43.3%) were assessed as requiring a visit that day, compared with non-Māori visits (31.1%). Correspondingly lower percentages of Māori visits were assessed as less urgent (this week or this month). Mean urgency (urgency requiring a visit as soon as possible = 4; low urgency, see this month = 1) (see Table 6.6) was similar but slightly higher for Māori across all age groups, between the two sexes and within each deprivation group.

The distribution of severity was similar between Māori and non-Māori visits. Mean severity (life-threatening = 4; self-limiting = 2) (see Table 6.6) was similar for both Māori and non-Māori, although the mean severity scores were slightly higher for Māori in all age groups and in each sex group.

Table 6.3 Urgency and severity of visit: percentage distribution

	Māori	Non-Māori
Urgency		
4. ASAP	6.1	5.0
3. Today	43.3	31.1
2. This week	39.2	44.3
1. This month	11.4	19.6
Total (N)	100% (1433)	100% (7603)
Severity		
4. Life-threatening	1.3	2.1
3. Intermediate	45.1	40.7
2. Self-limiting	36.8	34.0
1. Not applicable	16.9	23.3
Total (N)	100% (1419)	100% (7552)

Table 6.4 presents information about the level of disability for each visit, by ethnic group. A slightly higher proportion of Māori visits were associated with minor disability (59.5% versus 54.4% of non-Māori visits), with smaller proportions associated with no or major disability. Of the visits that were associated with disability, the majority of both Māori (80.9%) and non-Māori (74.5%) visits were associated with temporary disability. A smaller proportion of Māori visits were associated with permanent disability (19.1% versus 25.5% of non-Māori visits).

Table 6.4 Level of disability as percentage distribution

Level of disability	Māori	Non-Māori
None	30.8	34.4
Minor	59.5	54.4
Major	9.7	11.2
Total (N)	100% (1420)	100% (7551)
Temporary	80.9	74.5
Permanent	19.1	25.5
Total (N)	100% (962)	100% (4838)
Minor temporary	73.2	66.8
Major temporary	7.7	7.7
Minor permanent	12.6	15.9
Major permanent	6.7	9.7
Total (N)	100% (957)	100% (4817)

Doctors were also asked to rank the level of uncertainty about appropriate action they felt for each visit. The percentage of patients in each uncertainty group was similar for Māori and non-Māori (Table 6.5). The mean uncertainty scores (no uncertainty = 1, high uncertainty = 4) were similar for Māori and non-Māori between different age, sex and deprivation groups (Table 6.6).

Table 6.5 Percentage distribution of level of uncertainty as to appropriate action

Level of uncertainty	Māori	Non-Māori
1. None	48.8	50.4
2. Low	36.2	34.3
3. Medium	12.5	12.5
4. High	2.6	2.8
Total (N)	100% (1433)	100% (7619)

Doctors were asked to rank the quality of the relationship with the patient during consultation. Table 6.6 presents the mean rapport for each ethnic group across age, sex and deprivation groups. Mean rapport was similar (although very slightly lower for Māori) for Māori and non-Māori in each age group, both sexes and the deprivation groups.

Table 6.6 also presents information on the mean duration of visits for different age, sex and deprivation groups. Mean duration was slightly lower for Māori than for non-Māori in all age groups, both sexes and all deprivation groups.

Table 6.6 Relationship between patient and visit characteristics

	Age < 25	Age 25–44	Age 45–64	Age 65+	Male	Female	Decile 1–3	Decile 4–7	Decile 8–10
Māori									
% new to practice	13.1	6.9	7.8	4.5	10.4	9.7	3.8	8.4	11.3
% new to practitioner	21.4	13.1	8.3	5.6	19.0	13.9	12.7	15.2	16.9
% not usual source	13.1	8.0	10.3	2.7	8.1	12.6	7.6	7.7	12.2
Mean rapport*	2.5	2.6	2.6	2.6	2.5	2.6	2.7	2.6	2.5
Mean duration (minutes)	12.2	15.0	15.6	15.2	12.7	14.5	13.5	14.4	13.4
Mean urgency*	2.5	2.4	2.3	2.3	2.5	2.4	2.3	2.5	2.4
Mean severity*	2.2	2.3	2.5	2.6	2.3	2.3	2.1	2.3	2.3
Mean uncertainty*	1.6	1.8	1.8	1.6	1.7	1.7	1.8	1.6	1.7
Minimum N for column	(666)	(381)	(232)	(101)	(584)	(804)	(89)	(301)	(823)
Non-Māori									
% new to practice	10.5	9.7	4.9	2.1	8.7	5.9	7.1	7.0	6.7
% new to practitioner	17.1	15.5	9.5	4.1	13.8	10.5	11.8	11.8	11.8
% not usual source	10.1	10.3	6.8	2.6	8.8	6.8	7.0	7.8	8.1
Mean rapport*	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6
Mean duration (minutes)	12.7	16.1	16.7	15.6	14.9	15.2	15.7	15.1	14.4
Mean urgency*	2.4	2.2	2.1	2.1	2.2	2.2	2.1	2.3	2.3
Mean severity*	2.1	2.1	2.3	2.3	2.2	2.2	2.2	2.2	2.3
Mean uncertainty*	1.6	1.7	1.7	1.7	1.6	1.7	1.7	1.7	1.7
Minimum N for column	(2201)	(1743)	(1746)	(1694)	(3063)	(4362)	(1894)	(2527)	(1927)

* Categories converted to numerical scores as indicated in Tables 5.4, 6.3 and 6.5.

7 Reasons-for-Visit

Practitioners were asked to record up to four reasons that patients gave for attending that particular visit. Age- and sex-specific rates of reasons (per 100 visits) are presented in Table 7.1. For “all ages” combined, Māori had slightly fewer reasons-for-visit compared with non-Māori. Māori males had 131 reasons-for-visit per 100 visits compared with 138 reasons per 100 visits for non-Māori males. Māori females had 138 reasons per 100 visits compared with 147 reasons per 100 visits for non-Māori females (Table 7.1).

For Māori males and females, the rates were lower for children and young adults, rising over the adult years to peak in the 65–74 years age group. A similar pattern was observed for non-Māori males and females (Table 7.1).

Within each age group, differences in the number of reasons per 100 visits between Māori and non-Māori varied. For males, the numbers of reasons-for-visit were higher for Māori in the < 1, 1–4, 25–34, and 65–74 year age groups compared to non-Māori. In the 5–14 years age group, the number of reasons-for-visit was essentially the same for Māori and non-Māori, and in the remaining age groups (15–24, 35–44, 45–54, 55–64 and 75+ years) Māori had fewer reasons-for visit than non-Māori (Table 7.1).

For females, Māori had a greater number of reasons-for-visit than non-Māori in the < 1, 55–64, and 65–74 year age groups. The number of reasons-for-visit was essentially the same for Māori and non-Māori in the 1–4, 5–14, and 25–34 years age groups. In the remaining age groups (15–24, 35–44, 45–54 and 75+ years), the number of reasons-for-visit was lower for Māori than for non-Māori (Table 7.1).

Table 7.1 Reasons-for-visit: age- and sex-specific rates (per 100 visits)

	All ages	< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+
Māori											
Male	131	140	129	120	112	143	124	134	144	178	113
Female	138	139	120	121	127	148	142	140	172	175	124
Non-Māori											
Male	138	126	121	121	124	129	142	152	150	156	145
Female	147	123	121	118	145	145	151	157	161	157	152

The reasons-for-visit (RfV) were coded into READ2 chapter codes, as shown in Table 7.2. Information is provided for each READ2 code as a percentage of all visits and as a percentage of the reasons given by the patients. For Māori, respiratory symptoms were the most common reason for visit, cited in 23.5% of visits and accounting for 18.3% of reasons given. Actions (18.5% of visits and 14.3% of all reasons), non-specific symptoms (16.8% of visits and 13.0% of all reasons), nervous system/sense organs (10.5% of visits and 7.9% of all reasons), and investigations (10.2% of visits and 7.7% of all reasons) were the next four commonest reasons for visit. For non-Māori the commonest reasons were actions (26.8% of visits and 21.0% of all reasons), non-specific symptoms (16.7% of visits and 12.3% of all reasons), respiratory (16.2% of visits and 11.8% of all reasons), investigations (10.7% of visits and 7.8% of all reasons) and musculoskeletal/connective tissue (10.1% of visits and 7.4% of all reasons).

Of particular interest, actions were given as a reason for visit in a smaller proportion of Māori visits (18.5%) than non-Māori visits (26.8%). Further analysis of the type of action undertaken reveals that preventive procedures (e.g. immunisation, cervical or mammography screening) accounted for the same percentage (5.8%) of reasons-for-visit in both the Māori and non-Māori populations. However, the other types of actions (therapeutic procedures, operations and administrative work) accounted for lower percentages of reasons in the Māori population (Table 7.2).

The percentages of visits for other reasons for visit were similar for both Māori and non-Māori. Interestingly (given the higher Māori morbidity and mortality from cardiovascular disease, mental conditions and diabetes), these conditions were not as frequently cited as a reason for visit by Māori patients: 3.4% of Māori visits were for cardiovascular/circulatory conditions (versus 5.2% of non-Māori), 1.9% of Māori visits were for “mental” conditions (versus 3.3% of non-Māori) and 1.9% of Māori visits were for endocrine/nutritional/metabolic/immunity disorders (versus 2.1% of non-Māori). However, these findings may not persist once adjustments for differences in the age structures of the populations are made (Table 7.2).

Table 7.2 Distribution of reasons-for-visit: chapters and sub-chapters

RfV grouping, READ2 chapters and sub-chapters*	RfV grouping, percent of visits		RfV grouping, percent of reasons	
	Māori	Non-Māori	Māori	Non-Māori
Respiratory	23.5	16.2	18.3	11.8
Respiratory symptoms			11.5	6.6
Acute respiratory infections			2.7	2.7
Chronic obstructive airways disease			2.1	1.0
Pneumonia and influenza			1.0	0.9
Upper respiratory tract diseases			0.9	0.5
Actions	18.5	26.8	14.3	21.0
Preventive procedures			5.8	5.8
Therapeutic procedures			5.4	8.7
Operations			1.6	3.7
Administration			1.4	3.1
Symptoms non-specific	16.8	16.7	13.0	12.3
Ear, nose and throat symptoms			5.3	3.4
Abdominal and pelvic symptoms			1.3	1.4
Head and neck symptoms			0.8	0.7
Nervous system/sense organs	10.5	9.7	7.9	7.0
Central nervous system symptoms			3.5	3.9
Ear diseases			2.6	1.6
Disorders of eye and adnexa			1.4	1.1
Investigations	10.2	10.7	7.7	7.8
Examination			3.1	4.0
History			2.3	2.3
Diagnostic procedures/lab tests/radiology			2.3	1.7
Musculoskeletal/connective tissue	8.2	10.1	6.3	7.4
Vertebral column syndromes			2.4	2.6
Rheumatism, excluding the back			2.0	2.6
Arthropathies and related disorders			1.9	1.9
Skin/subcutaneous tissue	7.9	6.0	6.2	4.2
Dermatitis/dermatoses			2.2	0.7
Symptoms affecting skin and other integumentary tissue			1.9	1.7
Skin and subcutaneous tissue infections			1.4	0.9
Injury/poisoning	7.4	6.6	5.6	4.7
Abrasions			0.6	0.5
Sprains and strains of joints and adjacent muscles			0.4	0.5
Genito-urinary	6.0	5.1	4.5	3.7
Genito-urinary symptoms			2.0	1.2
Female genital tract disorders			1.4	1.0
Disorders of breast			0.5	0.6
Urinary system diseases			0.4	0.6

RfV grouping, READ2 chapters and sub-chapters*	RfV grouping, percent of visits		RfV grouping, percent of reasons	
	Māori	Non-Māori	Māori	Non-Māori
Unspecified conditions	5.9	6.3	4.4	4.5
Health status and contact with health services factors			4.3	4.2
Digestive	5.4	6.1	4.0	4.4
Gastrointestinal tract symptoms			3.4	3.5
Cardiovascular/circulatory	3.4	5.2	3.0	3.8
Cardiovascular symptoms			1.3	1.5
Blood pressure – hypertensive disease			0.7	1.3
Mental	1.9	3.3	1.4	2.4
Non-organic psychoses			0.9	1.0
Neurotic, personality and other non-psychotic disorders			0.4	1.4
Endocrine/nutritional/metabolic/immunity	1.9	2.1	1.4	1.5
Endocrine gland diseases, including goitre			0.8	0.9
Infectious/parasitic	1.7	2.2	1.2	1.6
Viral and chlamydial diseases			0.6	0.8
Cancers/neoplasms	0.6	1.8	0.5	1.3
Benign neoplasms			0.3	0.8
Pregnancy/childbirth/puerperium	0.4	0.2	0.3	0.1
Blood/blood-forming organs	0.1	0.2	0.1	0.1
Congenital	0	0.2	0	0.1
Perinatal	0	0.01	0	0.01
Not coded	0.1	0.5	0.1	0.3
Total (N)	(1447)	(7677)	100% (1960)	100% (11,000)

* 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”. READ2 sub-chapters at the two-digit level are shown where they comprise $\geq 0.5\%$ of all reasons.

Table 7.3 describes the reasons for visit as a rate per 100 visits. This allows us to examine differences between Māori and non-Māori in more detail. For most reasons-for-visit, the number of occurrences per 100 visits was similar for both the Māori and non-Māori populations. Marked differences in the rate per 100 visits between Māori and non-Māori were observed for actions and respiratory illnesses: actions were cited 30 times per 100 visits by non-Māori compared with 19.4 times per 100 visits by Māori. Conversely respiratory symptoms were cited more frequently by Māori (24.7 per 100 visits) than non-Māori (16.8 per 100 visits).

Table 7.3 Frequency of reasons-for-visit (by READ2 chapter), rate per 100 visits

READ2 chapter	Māori	Non-Māori
Respiratory	24.7	16.8
Actions	19.4	30.0
Symptoms non-specific	17.5	17.7
Nervous system/sense organs	10.6	10.0
Investigations	10.4	11.1
Musculoskeletal/connective tissue	8.5	10.5
Skin/subcutaneous tissue	8.3	6.0
Injury/poisoning	7.5	6.7
Genito-urinary	6.1	5.2
Unspecified conditions	6.0	6.4
Digestive	5.4	6.3
Cardiovascular/circulatory	4.0	5.5
Mental	1.9	3.5
Endocrine/nutritional/metabolic/immunity	1.9	2.2
Infectious/parasitic	1.7	2.3
Cancers/neoplasms	0.6	1.8
Pregnancy/childbirth/puerperium	0.4	0.2
Blood/blood-forming organs	0.1	0.2
Congenital	0	0.2
Perinatal	0	0.01
Not coded	0.1	0.5
Total reasons per 100 visits	135.1	143.1

Finally, Table 7.4 describes results for each component of a reason-for-visit, by ethnic group. For Māori, symptoms were the commonest reason-for-visit component, accounting for 36.6% of all reasons. Disease was the second commonest component (31.3%), followed by investigations (7.7%), treatments (7.1%), and prevention (5.8%). Some differences in the components of reason-for-visit between Māori and non-Māori were noted. For example, disease was the commonest reason-for-visit component for non-Māori. Symptoms accounted for a smaller percentage of reasons-for-visit for non-Māori (30.5% versus 36.6% for Māori), and investigations accounted for a greater percentage of non-Māori reasons-for-visit (12.5% versus 7.1% for Māori).

Table 7.4 Reason-for-visit (RfV) components as percentage of all reasons

RfV component	Māori	Non-Māori
Symptoms	36.6	30.5
Disease	31.3	31.2
Investigations	7.7	7.8
Treatments	7.1	12.5
Prevention	5.8	5.8
Injury/poisoning	5.6	4.7
Unspecified conditions	4.4	4.5
Administrative	1.4	2.7
Not coded	0.1	0.3
Total (N)	100% (1960)	100% (11,000)

8 Problems Identified and Managed

Section 8 presents information about the problems managed during visits. Practitioners were asked to note up to four problems they managed during each consultation for which full visit information had been obtained. The distribution of the number of problems per visit was similar for Māori and non-Māori (Table 8.1), although a slightly smaller proportion of Māori visits had three (10.6% versus 11.9% of non-Māori) or four (5.0% versus 6.0% of non-Māori) problems.

Table 8.1 Percentage distribution of number of problems per visit

No. of problems	Māori	Non-Māori
No problem	0.3	0.3
1 problem	57.2	55.3
2 problems	26.9	26.6
3 problems	10.6	11.9
4 problems	5.0	6.0
Total (N)	100% (1447)	100% (7677)
Mean number of problems	1.6	1.7

Analysis of this information by sex and specific age groups is presented in Table 8.2. In general (excluding the < 1 and 75+ years age groups), the number of problems managed increased with age for both ethnic groups and both sexes. For both males and females, the “all ages” rates of problems per 100 visits were similar for Māori and non-Māori. Māori males (“all ages”) had 162 problems per 100 visits and non-Māori males had 161 problems per 100 visits, while Māori females (“all ages”) had 174 problems per 100 visits and non-Māori females had 173 problems per 100 visits.

When stratified into age groups, differences in the numbers of problems per 100 visits between Māori and non-Māori emerge (Table 8.2). Māori males had a higher number of problems per 100 visits in the < 1, 25–34, 45–54, 55–64 and 65–74 years age groups compared with non-Māori males. Rates of problems per 100 visits were similar for Māori males and non-Māori males in the 1–4, 5–14 and 35–44 year age groups, but lower for Māori males (than for non-Māori males) in the 15–24 and 75+ year age groups.

For females, the rates of problems per 100 visits were higher for Māori (than for non-Māori) in the < 1, 1–4, 5–14, 25–34, 55–64 and 65–74 years age groups. Māori female rates were lower than those of non-Māori females in the 15–24 and 75+ year age groups, and similar to those of non-Māori females in the 35–44 and 45–54 years age groups.

Table 8.2 Number of problems: age- and sex-specific rates (per 100 visits)

	All ages	< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+
Māori											
Male (N = 608)	162	150	130	137	124	182	165	182	228	227	142
Female (N = 833)	174	158	140	142	144	182	184	183	205	215	163
Non-Māori											
Male (N = 3158)	161	141	131	136	135	148	160	171	186	191	184
Female (N = 4498)	173	129	131	126	162	165	180	186	191	201	192

There appeared to be differences between patients and doctors in the reporting of reasons-for-visit and problems managed at the visit, respectively. Table 8.3 presents the rate (per 100 visits) of reasons for visit and problems managed, by ethnicity, sex and age group. In general, patients reported fewer reasons for visit than doctors reported problems managed. For males in the 25–74 year age groups, the difference between the rate of reasons for visit and that of the problems managed is greater for Māori men than for non-Māori men. For females, there were differences between Māori and non-Māori in the same age range, but these were less marked than those between Māori and non-Māori men.

Table 8.3 Rates per 100 visits of reasons for visit and problems managed, by ethnicity, sex and age

	All ages	< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+
Māori males											
Reasons	131	140	129	120	112	143	124	134	144	178	113
Problems	162	150	130	137	124	182	165	182	228	227	142
Non-Māori males											
Reasons	138	126	121	121	124	129	142	152	150	156	145
Problems	161	141	131	136	135	148	160	171	186	191	184
Māori females											
Reasons	138	139	120	121	127	148	142	140	172	175	124
Problems	174	158	140	142	144	182	184	183	205	215	163
Non-Māori females											
Reasons	147	123	121	118	145	145	151	157	161	157	152
Problems	173	129	131	126	162	165	180	186	191	201	192

Table 8.4 describes the types of problems that were managed during visits using the READ2 classification. The five most common conditions (as a percentage of all visits) were the same for Māori and non-Māori patients. Respiratory conditions were the most common problem for both, but made up a greater proportion of problems managed for Māori (30.4%) than non-Māori (21.9%). Actions (by the GP), nervous system/sense organs, skin/subcutaneous tissue, and injury/poisoning were the next most common problems, each accounting for similar percentages of visits for both Māori and non-Māori.

Table 8.4 also provides information about problems managed as percentages of all problems and of new problems managed. The five most common conditions (respiratory, actions, nervous system/sense organs, skin/subcutaneous tissue and injury/poisoning) managed were the same for Māori and non-Māori. For most of these conditions the percentages of all problems and new problems that each accounted for were similar between Māori and non-Māori patients. The exception was respiratory conditions, which made up a higher percentage of all problems and new problems for Māori than for non-Māori. Much of this difference was due to acute respiratory infections and chronic obstructive airways disease: acute respiratory infections accounted for a higher percentage of “all” and “new” problems for Māori, while chronic obstructive airways disease accounted for a higher percentage of “all” problems in Māori.

Cardiovascular/circulatory problems accounted for 8.9% of Māori and 14.4% of non-Māori visits, 6.3% of all problems managed for Māori patients (versus 9.6% of all non-Māori problems managed) and 2.8% of Māori new problems managed (versus 3.2% of non-Māori).

Mental disorders accounted for 4.5% of Māori and 8.1% of non-Māori visits, 2.8% of all problems managed for Māori patients (versus 5.2% of all non-Māori problems managed) and 2.1% of Māori new problems managed (versus 3.2% of non-Māori).

Cancer accounted for 1.9% of Māori and 4.2% of non-Māori visits, 1.2% of all problems managed for Māori patients (versus 2.6% of all non-Māori problems managed) and 1.3% of Māori new problems managed (versus 2.6% of non-Māori).

Table 8.4 Distribution of problems managed, by READ2 chapter and sub-chapter

Problem grouping, by READ2 chapter*	Problem grouping: percent of visits		Percent of all problems		Percent of new problems	
	Māori	Non-Māori	Māori	Non-Māori	Māori	Non-Māori
Respiratory	30.4	21.9	20.1	14.0	26.1	22.7
Acute respiratory infections			10.2	7.7	18.6	16.5
Chronic obstructive airways disease			5.5	3.0	1.0	1.0
Pneumonia and influenza			1.9	1.3	3.2	2.3
Respiratory symptoms			1.5	1.2	2.1	1.8
Actions	16.8	17.0	11.2	11.3	6.2	5.6
Preventive procedures			6.9	5.3	4.2	2.8
Operations			2.0	2.3	1.4	1.2
Therapeutic procedures			1.2	2.0	0.4	0.5
Administration			0.6	1.2	0.2	0.9
Nervous system/sense organs	15.7	13.0	9.9	8.0	10.1	9.9
Ear diseases			5.8	3.6	6.8	5.1
Disorders of eye and adnexa			1.8	1.5	2.5	2.4
Central nervous system symptoms			1.3	1.4	0.4	1.7
Central nervous system disorders			0.7	0.9	0.3	0.4
Skin/subcutaneous tissue	11.7	10.5	7.6	6.5	10.3	9.0
Dermatitis/dermatoses			3.9	2.2	4.2	2.8
Skin and subcutaneous tissue infections			2.4	1.3	4.1	2.2
Symptoms affecting skin and other integumentary tissue			0.3	0.5	0.4	0.7
Injury/poisoning	10.7	11.7	6.7	7.2	8.4	10.3
Sprains and strains of joints and adjacent muscles			2.2	2.4	3.0	3.8
Abrasions			0.7	0.5	1.4	1.0
Contusion			0.6	0.6	1.2	1.1
Arm fracture			0.4	0.3	0.6	0.3
Scalds			0.2	0.08	0.5	0.1
Laceration – leg			0.1	0.5	0.02	0.5
Investigations	9.3	8.4	6.0	5.2	4.8	4.1
History			3.3	2.3	2.3	1.6
Examination			1.5	1.7	1.5	1.9
Diagnostic procedures/lab tests/radiology			1.0	1.2	1.0	0.7
Genito-urinary	9.2	7.1	5.9	4.5	7.0	5.1
Urinary system diseases			2.0	1.2	3.5	1.6
Female genital tract disorders			1.9	1.3	1.6	1.2
Genito-urinary symptoms			1.0	0.7	0.7	0.8
Female pelvic inflammatory diseases			0.3	0.1	0.7	0.2
Male genital organ diseases			0.3	0.5	0.1	0.3

Problem grouping, by READ2 chapter*	Problem grouping: percent of visits		Percent of all problems		Percent of new problems	
	Māori	Non-Māori	Māori	Non-Māori	Māori	Non-Māori
Cardiovascular/circulatory	8.9	14.4	6.3	9.6	2.8	3.2
Blood pressure – hypertensive disease			2.9	4.8	0.7	0.7
Arteriosclerotic heart disease			1.0	1.6	0.6	0.3
Cardiovascular symptoms			0.5	0.5	0.9	0.8
Infectious/parasitic	7.4	6.7	4.9	4.2	7.0	7.1
Viral and chlamydial diseases			1.2	1.3	1.0	2.1
Mycoses			1.2	1.0	2.3	1.5
Bacterial food poisoning			1.1	0.9	2.2	2.0
Viral diseases with exanthema			0.4	0.5	0.9	0.7
Endocrine/nutritional/metabolic/immunity	6.5	6.1	4.6	4.0	1.1	1.0
Endocrine gland diseases, including goitre			2.6	2.1	0.7	0.3
Metabolic and immunity disorders			1.7	1.7	0.3	0.5
Symptoms non-specific	5.3	5.7	3.5	3.5	4.3	4.1
Ear, nose and throat symptoms			0.7	0.5	1.6	0.8
Abdominal and pelvic symptoms			0.4	0.5	0.3	0.7
Digestive	4.9	7.5	3.1	4.6	3.8	4.7
Gastrointestinal tract symptoms			1.2	1.4	1.0	1.9
Oral cavity, salivary glands, jaw diseases			0.7	0.4	1.1	0.6
Duodenal diseases			0.7	1.7	1.1	1.1
Diseases of the intestines and peritoneum			0.2	0.5	0.1	0.5
Musculoskeletal/connective tissue	4.7	9.7	3.0	6.1	1.9	4.8
Vertebral column syndromes			1.3	1.4	0.5	1.3
Arthropathies and related disorders			1.2	2.2	0.9	1.1
Rheumatism, excluding the back			0.4	1.9	0.2	2.0
Osteopathy/chondropathy/acquired musculoskeletal deformity			0.2	0.6	0.4	0.3
Mental	4.5	8.1	2.8	5.2	2.1	3.2
Neurotic, personality and other non-psychotic disorders			1.5	2.6	0.9	2.3
Non-organic psychoses			1.3	2.4	1.2	0.9
Unspecified conditions	3.4	3.8	2.1	2.3	1.2	1.5
Health status and contact with health services factors			2.1	2.0	1.2	1.4
Cancers/neoplasms	1.9	4.2	1.2	2.6	1.3	2.6
Benign neoplasms			0.6	0.8	0.9	1.2
Malignant neoplasms of bone, connective tissue, skin and breast			0.1	0.5	0.3	0.4
Pregnancy/childbirth/puerperium	0.7	0.4	0.5	0.2	0.6	0.3
Blood/blood-forming organs	0.4	0.8	0.2	0.5	0.3	0.2

Problem grouping, by READ2 chapter*	Problem grouping: percent of visits		Percent of all problems		Percent of new problems	
	Māori	Non-Māori	Māori	Non-Māori	Māori	Non-Māori
Congenital	0.3	0.3	0.2	0.2	0.5	0.06
Perinatal	0.2	0.04	0.1	0.02	0.3	0.02
Not coded	0.5	0.7	0.3	0.4	0.2	0.4
Total (N)	(1447)	(7677)	100% (2330)	100% (12,867)	100% (915)	100% (4492)

* Major groupings are based on READ2 chapters and a similar process was applied as for reason-for-visit. Sub-chapters are shown where they comprise $\geq 0.5\%$ of all problems.

Table 8.5 presents information about the frequency of each major problem group per 100 visits. For both Māori and non-Māori, respiratory conditions were commonest, accounting for 32.8 problems per 100 visits for Māori and 23.6 problems per 100 visits for non-Māori. Cardiovascular/circulatory conditions were the third commonest for non-Māori (16.1 per 100 visits) but sixth for Māori (10.3 per 100 visits).

Table 8.5 Frequency of problems (per 100 visits)

Problems (READ2 chapter)	Māori	Non-Māori
Respiratory	32.8	23.6
Actions	18.3	19.0
Nervous system/sense organs	16.1	13.5
Skin/subcutaneous tissue	12.5	10.9
Injury/poisoning	10.9	12.1
Cardiovascular/circulatory	10.3	16.1
Investigations	9.8	8.8
Genito-urinary	9.6	7.5
Infectious/parasitic	8.0	7.0
Endocrine/nutritional/metabolic/immunity	7.5	6.7
Symptoms non-specific	5.7	5.9
Digestive	5.0	7.8
Musculoskeletal/connective tissue	4.9	10.3
Mental	4.6	8.7
Unspecified conditions	3.4	3.8
Cancers/neoplasms	1.9	4.3
Pregnancy/childbirth/puerperium	0.7	0.4
Blood/blood-forming organs	0.4	0.8
Congenital	0.3	0.3
Perinatal	0.2	0.04
Not coded	0.5	0.7
Total problems per 100 visits	163.6	168.1

Table 8.6 presents information about the number of new problems per 100 visits for Māori and non-Māori, by sex and age group. Overall, for both Māori and non-Māori, males had a slightly higher number of new problems per 100 visits than females. Overall, Māori males and Māori females had a higher number of new problems per 100 visits than their non-Māori peers of the same sex. Māori males had 66 new problems per 100 visits (versus 59 for non-Māori males) and Māori females had 64 new problems per 100 visits (versus 57 for non-Māori females).

The number of new problems per 100 visits was higher in the younger age groups for both Māori and non-Māori.

Differences in the number of new problems per 100 visits were noted between Māori males and Māori females. Māori males had a markedly higher number of new problems in the < 1, 5–14, 35–44 and 75+ years age groups. In the other age groups, the number of problems per 100 visits was lower for males than for females. Differences in the number of new problems per 100 visits between non-Māori males and non-Māori females in different age groups are much less marked.

Generally speaking, the number of new problems per 100 visits was higher for Māori in younger age groups and lower for Māori in the older age groups (both versus non-Māori). More specifically, differences in the number of new problems between Māori and non-Māori males were apparent, with fewer new problems for Māori men in the middle age groups (45–54 and 55–64 years). Māori females had fewer new problems in the < 1, 35–44 and 75+ years age groups.

Table 8.6 Age and sex distribution of new problems (per 100 visits)

	All ages	< 1	1–4	5–14	15–24	25–34	35–44	45–54	55–64	65–74	75+
Māori											
Male (N = 608)	66	84	67	93	66	71	67	40	27	43	43
Female (N = 833)	64	56	74	75	76	79	51	52	47	51	20
Non-Māori											
Male (N = 3158)	59	74	73	78	67	67	62	53	45	48	37
Female (N = 4498)	57	65	69	72	73	63	64	55	49	45	39

Table 8.7 presents information about the frequency of new problem groups per 100 visits. Respiratory conditions were the most frequent new problem for both Māori (17.0 per 100 visits) and non-Māori (13.1 per 100 visits). The frequencies of other new problems were similar between Māori and non-Māori.

Table 8.7 Frequency of new problems (per 100 visits)

Problems (READ2 chapter)	Māori	Non-Māori
Respiratory	17.0	13.1
Skin/subcutaneous tissue	6.7	5.2
Nervous system/sense organs	6.6	5.7
Injury/poisoning	5.5	6.0
Infectious/parasitic	4.6	4.1
Genito-urinary	4.5	2.9
Actions	4.1	3.2
Investigations	3.1	2.4
Symptoms non-specific	2.8	2.4
Digestive	2.5	2.7
Cardiovascular/circulatory	1.8	1.9
Mental	1.3	1.9
Musculoskeletal/connective tissue	1.2	2.8
Cancers/neoplasms	0.8	1.5
Unspecified conditions	0.8	0.9
Endocrine/nutritional/metabolic/immunity	0.7	0.6
Pregnancy/childbirth/puerperium	0.4	0.1
Congenital	0.3	0.1
Blood / blood-forming organs	0.2	0.03
Perinatal	0.2	0.01
Not coded	0.2	0.2
Total problems per 100 visits	65.2	57.7

Table 8.8 presents information on the status of problems dealt with during visits. The percentages of Māori and non-Māori whose visits were for short-term follow-up and long term with flare-up were similar. Higher proportions of Māori visits were for new problems (39.9% versus 34.3% for non-Māori), with a smaller percentage for long-term follow-up (17.5% for Māori versus 24.0% for non-Māori).

Table 8.8 Percentage distribution of problem status

Status	Māori (N = 2330)	Non-Māori (N = 12,867)
New problem	39.9	34.3
Short-term follow-up	14.3	14.5
Long-term follow-up	17.5	24.0
Long-term with flare-up	7.9	8.0
Preventive	5.3	4.9
Not given	15.1	14.3
Total	100%	100%

Tables 8.9 and 8.10 describe the age- and sex-specific rates (per 100 visits) of common problems for Māori and non-Māori.

Table 8.9 presents this information for Māori. With the exception of genito-urinary problems, the overall (“all ages”) rates for each problem were similar for Māori males and Māori females. Genito-urinary problems were more common in Māori females in all age groups compared with Māori males. Cardiovascular, endocrine, musculoskeletal, and cancer problems were more common in older age groups for both males and females. Rates per 100 visits for respiratory, injury/poisoning, digestive, genito-urinary and mental problems were similar across the age groups, and nervous system/sense organs, skin/subcutaneous tissue, and infectious/parasitic problems tended to be more common in younger age groups.

Comparing the age- and sex-specific rates of common problem groups between Māori and non-Māori, a number of interesting observations can be made (Tables 8.9 and 8.10). For example, for cardiovascular/circulatory problems, the overall (“all ages”) rates were lower for both Māori males and Māori females compared with non-Māori males and females. However, differences in rates at different age groups were apparent. Māori males had higher rates of these diagnoses in the 45–64 years age group, and lower rates in the 65+ age group. Māori females, however, had similar rates to non-Māori females within each age group. These findings require more detailed analyses to be understood completely.

Table 8.9 Māori: age- and sex-specific rates (per 100 visits) of common groups of problems

	All ages	< 25	25–44	45–64	65+
Respiratory					
Male	35	40	32	23	34
Female	31	35	24	33	30
Nervous system/sense organs					
Male	17	22	13	7	13
Female	15	17	15	14	14
Skin/subcutaneous tissue					
Male	12	16	8	4	2
Female	13	16	13	8	9
Injury/poisoning					
Male	12	10	18	12	3
Female	10	8	9	17	7
Cardiovascular/circulatory					
Male	12	0	9	49	26
Female	9	1	8	24	35
Genito-urinary					
Male	3	3	4	4	6
Female	14	12	17	14	15
Infectious/parasitic					
Male	10	11	12	7	5
Female	6	10	2	3	0.9
Endocrine/nutritional/metabolic/immunity					
Male	8	4	8	28	33
Female	7	0.2	13	17	8
Digestive					
Male	6	7	3	6	4
Female	4	4	4	5	9
Musculoskeletal/connective tissue					
Male	7	2	11	16	18
Female	3	0.1	4	8	11
Mental					
Male	4	4	4	4	9
Female	5	2	10	7	7
Cancers/neoplasms					
Male	2	0.1	3	4	7
Female	2	0.1	2	5	10

Table 8.10 Non-Māori: age- and sex-specific rates (per 100 visits) of common groups of problems

	All ages	< 25	25–44	45–64	65+
Respiratory					
Male	27	40	25	17	19
Female	21	34	18	18	16
Nervous system/sense organs					
Male	13	19	12	9	11
Female	14	17	11	14	13
Skin/subcutaneous tissue					
Male	11	11	10	10	13
Female	11	12	9	8	14
Injury/poisoning					
Male	14	12	20	15	11
Female	11	9	10	11	13
Cardiovascular/circulatory					
Male	16	0.9	6	27	37
Female	16	0.9	6	20	39
Genito-urinary					
Male	4	3	3	5	8
Female	10	5	15	12	7
Infectious/parasitic					
Male	7	11	9	4	2
Female	7	12	8	5	3
Endocrine/nutritional/metabolic/immunity					
Male	7	1	4	13	11
Female	6	1	5	10	11
Digestive					
Male	8	6	8	7	10
Female	8	6	8	9	9
Musculoskeletal/connective tissue					
Male	9	2	10	15	13
Female	11	3	9	14	20
Mental					
Male	8	5	13	9	7
Female	9	3	13	12	9
Cancers/neoplasms					
Male	5	0.5	3	6	11
Female	4	2	4	6	5

9 Laboratory Tests and Other Investigations

This section includes information about the laboratory and other tests and investigations that were ordered by practitioners during the consultations. In Table 9.1, “any laboratory test” refers to haematology, biochemistry and other lab tests; “any test/investigation” refers to all tests and investigations. If the practitioner did not provide information about these tests it was assumed that the tests were not ordered during the consultation.

Table 9.1 Rate per 100 visits at which tests and investigations were ordered

Test group*	Test sub-group	Māori (N = 1447)	Non-Māori (N = 7677)
Any laboratory test		15.2	17.4
Haematology	Full blood count	6.4	9.3
	Sed rate	6.4	9.0
		2.2	4.0
	Fe, B12, folic acid	1.6	3.1
Biochemistry		8.3	11.3
	Serum glucose	4.2	5.7
	Creatinine/urea	5.6	6.0
	Liver function	3.4	5.1
	Lipids	3.3	5.3
	Thyroid	2.6	4.3
	Other chemistry	4.0	3.6
Other		6.2	5.2
	Culture	5.3	3.9
	Pap smear	1.7	1.9
Imaging		3.1	4.2
	Plain X-ray	2.5	3.0
	Contrast	0.1	0.1
	Ultrasound	0.7	1.3
Other		6.9	8.5
	ECG	0.5	0.4
	Spirometry	0	0.1
	Other	6.6	8.0
Any test/investigation		21.0	25.4

* “Missing” is counted as “none”.

The rates of ordering (per 100 visits) of “any laboratory test”, “imaging”, “other”, and “any test/investigation” were all slightly lower for Māori than non-Māori. Table 9.2 presents age- and sex-specific rates for “any test/ investigation” per 100 visits. Overall (“all ages”) rates for Māori males and females were slightly lower than those for non-Māori. With the exception of the 65+ years age group (where Māori male and female rates were much higher than their non-Māori peers), Māori male and female rates were similar to, or lower than, those observed for non-Māori.

Table 9.2 Any test/investigation: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	20	13	25	30	44
Female (N = 833)	22	15	27	25	42
Non-Māori					
Male (N = 3158)	22	11	26	32	26
Female (N = 4498)	27	18	35	32	26

Tables 9.3, 9.4 and 9.5 examine age- and sex-specific rates for haematology, biochemistry and microbiology culture investigations, respectively. For biochemistry tests, a similar pattern to that for “any test/investigation” was observed. That is, the rates of biochemistry testing per 100 visits for Māori males and females were similar to, or lower than, the equivalent non-Māori rates, except in the case of the 65+ years age group, where the rate of biochemistry testing was higher for Māori males and females than for non-Māori.

For haematology, Māori male and female rates in all age groups, except females aged 65+, were similar to or lower than those of non-Māori.

For microbiology culture, rates per 100 visits were higher for females than for males in both ethnic groups. Overall, the rates were slightly higher for Māori than for non-Māori.

Table 9.3 Haematology: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	7	3	13	11	8
Female	6	4	9	5	17
Non-Māori					
Male	9	2	12	14	10
Female	10	5	13	11	10

Table 9.4 Biochemistry: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	9	2	16	17	34
Female	8	2	10	14	22
Non-Māori					
Male	12	2	13	21	15
Female	11	4	13	14	13

Table 9.5 Microbiology culture: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	4	6	1	0	0
Female	7	7	8	6	4
Non-Māori					
Male	2	4	3	2	2
Female	5	6	6	4	3

Table 9.6 presents findings about the rate of cervical smear testing per 100 visits for Māori and non-Māori women, by age group. Overall (“all ages”) rates were the same for Māori and non-Māori women. Fewer smears were undertaken for Māori in the 45–64 years age group.

Table 9.6 Cervical smear: age-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Female	3	2	6	0.1	0
Non-Māori					
Female	3	2	7	4	0.3

Māori males had higher rates of imaging than Māori females, in all age groups. Māori males also had higher rates of imaging than non-Māori males (Table 9.7).

Table 9.7 Imaging: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	5	3	5	7	11
Female	2	0.9	2	4	4
Non-Māori					
Male	3	2	4	5	4
Female	5	3	7	5	4

Table 9.8 presents data for “other” tests, by age and sex. Rates of ordering “other” tests for Māori males and females were similar to or lower than those for non-Māori, with the exception of Māori women in the 65+ years age group, who had a higher rate of such tests.

Table 9.8 Other tests: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	4	3	6	7	2
Female	9	8	8	8	22
Non-Māori					
Male	8	5	10	12	9
Female	9	6	11	9	8

Age-specific rates of ordering lipid and glucose tests were calculated for Māori and non-Māori. These two tests were chosen because they provide information on care for two important health conditions: diabetes and cardiovascular disease. The “all ages” rate (per 100 visits) of ordering lipid tests (Table 9.9) was lower for Māori patients (3.3 per 100 visits) than for non-Māori (5.3 per 100 visits). In the three age groups between 35 and 64 years, rates were lower for Māori patients than for non-Māori. The difference was most marked in the 45–54 years age group, in which the Māori rate was about one-third of the non-Māori rate. Rates for Māori were higher in the two age groups over 65 years.

The same findings were observed for the ordering of glucose tests (Table 9.10). Rates were lower for Māori (“all ages”) and for the three age groups between 35 and 64 years of age. The difference was most marked in the 45–54 years age group, in which the Māori rate was about one-quarter of the non-Māori rate. Rates in the two age groups over 65 years were higher for Māori than for non-Māori.

Table 9.9 Lipids: age-specific rates (per 100 visits)

	All ages	< 35	35–44	45–54	55–64	65–74	75+
Māori (N = 1447)	3.3	1.1	5.0	3.6	10.6	14.8	6.5
Non-Māori (N = 7656)	5.3	0.9	7.0	9.5	12.5	8.6	4.9

Table 9.10 Serum glucose: age-specific rates (per 100 visits)

	All ages	< 35	35–44	45–54	55–64	65–74	75+
Māori (N = 1441)	4.2	1.9	7.2	2.2	8.7	18.1	13.1
Non-Māori (N = 7677)	5.7	2.1	7.7	8.0	10.7	8.3	6.3

Practitioners were asked to note what problems they identified at each encounter and what actions and investigations they undertook. This information has been combined in Table 9.11. The information is presented here in several different ways.

Firstly, the rate of each problem per 100 visits where a lab test was ordered was determined for both Māori and non-Māori (see column two of Table 9.11). “Actions” was the problem group most commonly cited in visits at which a laboratory test was ordered, for both Māori (26.6 per 100 visits where a lab test was ordered) and non-Māori patients (24.2 per 100 visits where a lab test was ordered). Respiratory conditions were the most common specific problem noted in consultations where a lab test was recorded for Māori (24.1 per 100 visits). However, circulatory/cardiovascular conditions were the most common problem noted in consultations where a lab test was recorded for non-Māori (23.2 per 100 visits).

The percentages of consultations for specific problems that resulted in tests being ordered by the practitioner are presented in column four of Table 9.11. The highest rates of laboratory test use in Māori patients were for:

- pregnancy/childbirth/puerperium (47.6% of visits resulted in a test being ordered)
- endocrine/nutritional/metabolic/immunity problems (37.8%)
- genito-urinary problems (34.4%)
- investigations (32.2%) and
- non-specific symptoms (28.7%).

For non-Māori the highest rates of laboratory test use were for:

- blood/blood-forming organs (56.9% of visits resulted in a test being ordered)
- genito-urinary problems (37.4%)
- endocrine/nutritional/metabolic/immunity problems (35.2%)
- congenital problems (34.8%)
- non-specific symptoms (32.2%).

Table 9.11 Problems most frequently managed at visits that included an order for a laboratory test

Problem grouping (READ2 chapter)	Rate per 100 visits where lab test ordered		Rate per 100 – all visits		Percent of visits for problem grouping where lab test ordered	
	Māori (N = 204)	Non- Māori (N = 1349)	Māori (N = 1447)	Non- Māori (N = 7677)	Māori	Non- Māori
Actions	26.6	24.2	4.0	4.2	24.1	24.8
Respiratory	24.1	15.0	3.7	2.6	12.0	11.9
Genito-urinary	20.8	15.4	3.2	2.7	34.4	37.4
Investigations	19.8	13.6	3.0	2.4	32.2	28.2
Cardiovascular/circulatory	16.8	23.2	2.6	4.0	28.5	28.0
Endocrine/nutritional/metabolic/ immunity	16.1	12.4	2.5	2.2	37.8	35.2
Skin/subcutaneous tissue	14.0	10.5	2.1	1.8	18.3	17.4
Symptoms non-specific	10.0	10.5	1.5	1.8	28.7	32.2
Nervous system/sense organs	9.3	10.5	1.4	1.8	9.0	14.1
Mental	8.5	10.6	1.3	1.9	28.6	22.8
Infectious/parasitic	7.9	7.9	1.2	1.4	16.2	20.5
Digestive	6.1	11.3	0.9	2.0	19.0	26.0
Unspecified conditions	5.9	4.9	0.9	0.9	26.1	22.8
Injury/poisoning	3.8	6.1	0.6	1.1	5.4	9.1
Musculoskeletal/connective tissue	2.7	11.4	0.4	2.0	8.6	20.5
Cancers/neoplasms	2.3	4.1	0.3	0.7	18.1	17.1
Pregnancy/childbirth/puerperium	2.3	0.4	0.4	0.08	47.6	19.8
Blood/blood-forming organs	0.3	2.6	0.1	0.5	13.1	56.9
Congenital	0	0.7	0	0.1	0	34.8
Perinatal	0	0	0	0	0	0
Not coded	1.3	0.8	0.2	0.1	37.0	18.6

Table 9.12 Problems most frequently managed at visits that included an order for an X-ray

Problem grouping (READ2 chapter)	Rate per 100 visits where X-ray ordered		Rate per 100 – all visits		Percent of visits for that problem grouping where X-ray ordered	
	Māori (N = 41)	Non- Māori (N = 231)	Māori (N = 1447)	Non- Māori (N = 7677)	Māori	Non- Māori
Musculoskeletal/connective tissue	42.6	35.9	1.1	1.1	23.0	11.1
Injury/poisoning	26.7	33.1	0.7	1.0	6.3	8.4
Respiratory	15.1	20.8	0.4	0.6	1.3	2.8
Endocrine/nutritional/metabolic/ immunity	14.4	2.5	0.4	0.08	5.6	1.2
Symptoms non-specific	13.9	4.6	0.4	0.1	6.6	2.4
Investigations	12.7	11.3	0.3	0.3	3.4	4.0
Cardiovascular/circulatory	11.7	7.9	0.3	0.2	3.3	1.6
Genito-urinary	6.5	6.1	0.2	0.2	1.8	2.5
Actions	5.3	13.8	0.1	0.4	0.8	2.4
Unspecified conditions	3.8	2.0	0.1	0.06	2.8	1.6
Nervous system/sense organs	3.3	4.9	0.1	0.1	0.5	1.1
Cancers/neoplasms	1.0	4.4	0.02	0.1	1.3	3.1
Mental	0.9	9.0	0.02	0.3	0.5	3.3
Skin/subcutaneous tissue	0.5	3.3	0.01	0.1	0.1	0.9
Infectious/parasitic	0.5	3.7	0.01	0.1	0.2	1.7
Digestive	0	6.2	0	0.2	0	2.4
Blood/blood-forming organs	0	1.6	0	0.05	0	6.1
Pregnancy/childbirth/puerperium	0	0	0	0	0	0
Congenital	0	0	0	0	0	0
Perinatal	0	0	0	0	0	0
Not coded	0	0.7	0	0.02	0	3

10 Pharmacological Treatment

Sections 10 and 11 provide information about the types of treatments that were utilised by practitioners for Māori and non-Māori patients. Section 10 begins with some basic descriptive information about the treatments used (Tables 10.1 and 10.2). Information about drug treatments follows (Tables 10.3 to 10.37).

Section 11 provides detailed information about non-drug treatments. Non-drug treatments (actions) were recorded for up to four problems per patient visit. However, only one action of each type (e.g. administration) was counted for each problem. Similarly, drug treatments (actions) were recorded for up to four problems per patient visit. However, all drugs prescribed for each problem were included in the data set. Drugs were classified according to the Pharmacodes/ATC system.

Table 10.1 describes the percentage of visits that included specific types of treatment. Overall, 69.6% of Māori and 65.9% of non-Māori visits resulted in a prescription being written, and 61.2% of Māori (versus 62.3% of non-Māori) visits resulted in other (non-prescription) forms of treatment. Similar percentages of Māori (8.1%) and non-Māori (7.9%) visits did not require any form of treatment, or resulted in a prescription but no other form of treatment (Māori 30.7%; non-Māori 29.9%). A slightly smaller proportion of Māori visits received other (non-prescription) treatments (22.3% versus 26.3% of non-Māori), and a slightly larger proportion of Māori visits resulted in both (prescription and other) forms of treatment.

Table 10.1 Percentage of visits at which treatments were given, by treatment modality

Treatment modality	Māori	Non-Māori
No treatment	8.1	7.9
Prescription only	30.7	29.9
Other treatments only	22.3	26.3
Both types of treatment	38.9	36.0
Total (N)	100% (1447)	100% (7677)
Percent prescriptions	69.6	65.9
Percent other treatments	61.2	62.3

Table 10.2 presents information about the number of treatment items per 100 visits and per 100 problems managed for Māori and non-Māori visits. Similar numbers of prescription items per 100 visits were ordered for Māori (130 items per 100 visits) and non-Māori patients (129 per 100 visits). In addition, a similar number of prescription items were ordered per 100 problems for Māori (80 per 100 problems) as for non-Māori (77 per 100 problems). The number was slightly higher for Māori because Māori patients had a slightly lower mean number of problems managed during each visit.

The use of other (non-drug) treatments per 100 visits was also similar between Māori (116 per 100 visits) and non-Māori (115 per 100 visits). Likewise, the number of other (non-drug) treatments per 100 problems managed was similar between Māori (71 per 100 problems) and non-Māori (68 per 100 problems). Again, the number was slightly higher for Māori because Māori patients had a slightly lower mean number of problems managed during each visit. The findings for all treatments (prescription and other treatments) followed the same pattern as those for prescriptions and other treatments separately.

Table 10.2 Number of treatment items: number per 100 visits and per 100 problems

N visits = N problems =		Māori (1447) (2330)	Non-Māori (7677) (12,867)
All treatments	Per 100 visits	246	244
	Per 100 problems	151	145
All script items	Per 100 visits	130	129
	Per 100 problems	80	77
All other treatment items	Per 100 visits	116	115
	Per 100 problems	71	68

Table 10.3 presents data relating to the use of prescriptions, by age, sex and ethnicity. Overall, prescriptions were used more often for Māori males (73 per 100 visits) than for Māori females (68 per 100 visits). However, for non-Māori males and females, prescriptions were used at the same rate (66 per 100 visits). The use of prescriptions varied by age group for Māori. Māori males aged 25–44 years received fewer prescriptions per 100 visits than Māori in other age groups, and the rate of use of prescriptions was higher for Māori males aged 45–64 and 65+ years than for Māori males in younger age groups. The equivalent finding was not seen in Māori women. The rates of use of prescriptions for Māori female visits were similar for all age groups, except among those aged 25–44 years, who had fewer prescriptions per 100 visits than Māori women in other age groups. These findings are quite different from those for the non-Māori visits, where the use of prescriptions per 100 visits was similar across all age groups for both non-Māori males and non-Māori females.

Prescription use per 100 visits was similar for Māori and non-Māori females. However, the rate of prescription use was slightly higher for Māori women aged under 25 years (71 per 100 visits compared to 64 per 100 visits for non-Māori females). In comparison, rates of use of prescriptions for Māori males were higher at all age groups compared with non-Māori males, and this difference was particularly marked for males in the age groups over 45 years (Table 10.3).

Table 10.3 Any prescription: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	73	72	65	80	85
Female (N = 833)	68	71	63	70	69
Non-Māori					
Male (N = 3158)	66	64	61	67	71
Female (N = 4498)	66	64	61	68	72

Table 10.4 presents information about the number of prescription items per 100 visits, by age, sex and ethnicity. Māori males (“all ages”) received more items per 100 visits (140) than Māori females (124). This pattern was not observed for non-Māori males and females, where the number of prescription items was similar for non-Māori males and non-Māori females within each age group.

However, differences in the number of items per 100 visits across age groups were apparent. For both Māori males and Māori females, the 25–44 years age group had the lowest number of prescription items. In the other age groups, for Māori males the number of items increased with age. However, the number of items received by Māori women in the 65+ years age group was lower than that for Māori women aged 45–64 years. In all age groups (except 25–44 years) Māori males received more prescription items than Māori females.

The pattern of prescription items associated with increasing age was different for non-Māori. For non-Māori males and females the number of prescription items increased sharply with age over 45 years. There was very little difference between males and females within each age group in the number of prescription items received.

Table 10.4 Prescription items: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	140	128	104	163	269
Female (N = 833)	124	122	114	156	132
Non-Māori					
Male (N = 3158)	128	104	106	138	170
Female (N = 4498)	129	103	105	135	176

Information about the types of drugs prescribed is presented in Table 10.5. Drugs are categorised according to their Pharmacodes/ATC groups at level 1 (i.e. the broadest categories). Information is provided about the percentage of total prescription items, and the rates per 100 visits that each group accounted for, by ethnicity.

Table 10.5 Distribution of drugs, by group (Pharmacodes/ATC level 1)

Drug group	Percent of all prescription items		Per 100 visits	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)
16 Infections – agents for systemic use	28.1	17.2	33.3	20.1
28 Respiratory system and allergies	13.3	10.6	12.7	9.7
22 Nervous system	12.5	14.8	15.1	16.0
10 Dermatologicals	7.7	5.7	7.9	6.2
7 Cardiovascular system	7.4	13.7	5.9	11.3
1 Alimentary tract and metabolism	6.2	8.8	6.8	9.1
19 Musculoskeletal system	5.8	6.6	7.3	7.6
4 Blood and blood-forming organs	5.2	6.1	5.2	6.0
13 Genito-urinary system	3.8	3.7	3.9	4.0
14 Systemic hormone preparations (excluding oral contraceptives)	3.3	4.4	4.1	5.3
31 Sensory organs	2.1	1.2	2.4	1.5
38 Extemporaneously compounded preparations and galenicals	1.0	1.0	0.9	1.1
25 Oncology agents and immunosuppressants	0.2	0.3	0.3	0.3
40 Special foods	0.1	0.05	0.2	0.07
Medication non-specific	3.2	5.9	4.0	7.2

Table 10.6 shows the Pharmacodes/ATC drug sub-categories for Māori and non-Māori. For both of these groups, anti-bacterial agents were the most commonly prescribed drug type. These drugs accounted for about one-quarter of all prescription items for Māori patients, and were prescribed at a rate of 32.2 times per 100 visits. The use of anti-bacterial agents was lower in non-Māori patients and accounted for 14.8% of non-Māori prescription items, at a rate of 19.1 per 100 visits.

Table 10.6 Most frequently prescribed drug sub-groups

Drug sub-group (Pharmacodes/ATC level 2)*	Percent of all prescription items		Per 100 visits	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)
Anti-bacterials	24.7	14.8	32.2	19.1
Analgesics	9.0	7.2	11.7	9.2
Anti-inflammatory non-steroidal drugs (NSAIDs)	4.7	4.8	6.2	6.2
Inhaled corticosteroids	3.8	3.5	5.0	4.5

Beta-adrenoceptor agonists	3.8	2.8	5.0	3.6
Corticosteroids topical	3.8	2.7	4.9	3.4
Contraceptives	2.6	1.6	3.3	2.1
Diabetes and diabetes management	2.6	1.5	3.4	2.0
Agents affecting the renin-angiotensin system	2.4	3.3	3.1	4.3
Anti-histamines	2.1	1.3	2.8	1.7
Diuretics	2.0	3.6	2.0	4.6
Corticosteroids and related agents	2.0	1.7	2.0	2.2
Eye preparations	1.9	1.1	2.5	1.4
Anti-thrombotic agents	1.8	2.1	2.3	2.7
Anti-depressants	1.6	3.3	2.1	4.2
Lipid-modifying agents	1.4	2.0	1.8	2.6
Calcium channel blockers	1.0	2.0	1.3	2.5
Inhaled combined beta-adrenoceptor agonist and anticholinergic agents	1.0	0.5	1.3	0.6
Anti-fungals topical	1.0	0.7	1.3	0.8

* Includes drug sub-groups with frequencies $\geq 1\%$ of all script items for Māori people.

The following sections 10.1 to 10.10 present information about different groups of drugs. Information about the use (percentages of all prescription items, rates of use per 100 visits and, for the sub-groups, the percentage of each group that each sub-group accounted for) of each group of drugs and its sub-groups is presented. In addition, for each group (but not the sub-groups) the age- and sex-specific rates of use, and data about the problems for which the drug group was prescribed, are presented. Note that numbers of cases are low in the later-presented drug groups and so the results must be interpreted with caution.

10.1 Anti-bacterials (Tables 10.7, 10.8 and 10.9)

Drugs used in the treatment of infections were the most commonly prescribed drugs for both Māori and non-Māori (Table 10.7). Anti-bacterial agents were the most commonly used sub-group, accounting for 87.9% of Māori and 86.1% of non-Māori anti-infective drug prescription items. Differences in the use of these drugs for Māori and non-Māori patients were observed. Anti-bacterial agents accounted for 24.7% of all prescription items, at a rate of 32.2 per 100 visits, and made up 87.9% of anti-infective drug prescriptions for Māori.

Penicillins were the commonest anti-bacterial agent used for both Māori and non-Māori patients, but they were more commonly used with Māori patients. Use of other types of anti-bacterial agents was similar for Māori and non-Māori.

Table 10.7 Infections: agents for systemic use – sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items	Per 100 visits	Percent of drug group
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	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
16 Infections – agents for systemic use	28.1	17.2	33.3	20.1	100%	100%
Anti-bacterials	24.7	14.8	32.2	19.1	87.9	86.1
Penicillins	16.0	8.6	20.9	11.1	57.1	50.2
Macrolides (erythromycins etc)	1.8	1.6	2.3	2.1	6.4	9.5
Tetracyclines	1.1	1.1	1.4	1.4	3.9	6.4
Cephalosporins and cephamycins	1.8	0.9	2.4	1.1	6.5	5.2
Other antibiotics	3.1	2.0	4.1	2.6	11.1	11.5

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.8 presents age- and sex-specific rates of use for anti-infective drugs. For both Māori and non-Māori, rates of use were highest in the < 25 years age group. “All ages” rates of anti-infective agent use were higher for Māori of both sexes than for non-Māori. These agents were used more frequently for Māori females in all age groups than for non-Māori females. For males, the rates of use were similar in the 25–44 and 45–64 years age groups, and higher in Māori males aged under 25 and over 65 years.

Table 10.8 Anti-infective drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	38	50	28	16	24
Female	36	48	27	26	24
Non-Māori					
Male	24	35	26	17	15
Female	21	32	17	18	15

The problems that anti-infective drugs were most commonly used to treat are presented in Table 10.9. Acute respiratory infections were the most common problems associated with an anti-infective drug prescription, for both Māori and non-Māori patients. Ear diseases, skin/subcutaneous tissue infections, other urinary system infections and chronic obstructive airways disease were the next most common problems. Ear diseases and other urinary system diseases were more common in Māori.

For Māori, 26.8% of anti-infective prescriptions were for acute respiratory infections; 56.6% of all and 58.4% of new acute respiratory infections resulted in a prescription for anti-infective agents. For non-Māori, 32.5% of anti-infective prescriptions were for acute respiratory infections. This was higher than the equivalent proportion of Māori patients because a higher proportion of Māori anti-infective prescriptions were for ear disease (15.0%) compared with non-Māori (11.3%). The percentage of Māori with (new and recurrent) acute respiratory infections who received a prescription for an anti-infective agent was slightly higher than that of non-Māori.

Māori who had ear disease problems were more likely than non-Māori to receive antibiotics: 55.9% of Māori with ear disease problems were given a prescription for anti-infective agents compared with 39.0% of non-Māori with ear disease problems. Similarly, 72.1% of Māori with a new ear disease problem were given antibiotics compared with 49.6% of non-Māori with new ear problems.

Use of anti-infective agents for Māori and non-Māori patients with other urinary system disease problems followed a similar pattern. Although the proportions of anti-infective prescription items that were for urinary system disease problems were similar for Māori (6.5% of anti-infective prescriptions) and non-Māori (4.9% of anti-infective prescriptions), Māori with these problems were more likely to receive a prescription for an anti-infective agent: 74.4% of Māori (versus 52.5% of non-Māori) with a urinary system disease problem (new or recurrent) received a prescription for an anti-infective agent; 87.4% of Māori (versus 66.7% of non-Māori) with a new urinary system disease problem received a prescription for an anti-infective agent.

Similar findings were observed for chronic obstructive airways disease problems. In both Māori and non-Māori these problems accounted for a similar percentage of all

anti-infective prescriptions. However, a higher proportion of Māori with chronic obstructive airways disease problems (new and recurrent), or new chronic obstructive airways disease problems, received a prescription for anti-infective agents.

Table 10.9 Most frequent problems managed by anti-infective drugs

Problem (READ2 sub-chapter) [†]	Percent of anti-infective* script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 480)	Non-Māori (N = 1762)	Māori	Non-Māori	Māori	Non-Māori
H0 Acute respiratory infections	26.8	32.5	56.6	53.3	58.4	55.0
F5 Ear diseases	15.0	11.3	55.9	39.0	72.1	49.6
M0 Skin and subcutaneous tissue infections	8.5	8.1	75.4	72.4	89.8	81.6
K1 Other urinary system diseases	6.5	4.9	74.4	52.5	87.4	66.7
H3 Chronic obstructive airways disease	5.2	4.5	21.2	19.2	51.4	31.3

* This drug group includes systemic anti-bacterials, anti-fungals and anti-virals.

† Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.2 Respiratory system drugs (Tables 10.10, 10.11 and 10.12)

Results pertaining to the use of respiratory system drugs are presented in Tables 10.10 to 10.12.

Respiratory system drugs accounted for a slightly higher proportion of all prescription items in Māori (13.3%) than non-Māori (10.6%), and were prescribed to them slightly more often (Māori 12.7 versus non-Māori 9.7 per 100 visits) (Table 10.10). Drugs used in the management of asthma and chronic obstructive airways disease (inhaled corticosteroids and beta-adrenoceptor agonists) were the most commonly prescribed sub-groups, and there was little difference in the use of these agents between Māori and non-Māori patients. Prescriptions for inhaled corticosteroids accounted for 3.8% of all Māori prescription items (3.5% of non-Māori prescription items); were prescribed at a rate of 5.0 per 100 Māori visits (4.5 per 100 non-Māori visits); and accounted for 28.7% of the respiratory system drug prescriptions for Māori (33.0% for non-Māori). Prescriptions for beta-adrenoreceptor agonists accounted for 3.8% of all Māori prescription items (2.8% of non-Māori prescription items); were prescribed at a rate of 5.0 per 100 Māori visits (3.6 per 100 non-Māori visits); and accounted for 28.7% of the respiratory system drug prescriptions for Māori (26.1% for non-Māori).

Table 10.10 Respiratory system drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
28 Respiratory system and allergies	13.3	10.6	12.7	9.7	100%	100%
Inhaled corticosteroids	3.8	3.5	5.0	4.5	28.7	33.0
Beta-adrenoceptor agonists	3.8	2.8	5.0	3.6	28.7	26.1
Anti-histamines	2.1	1.4	2.8	1.8	15.9	13.0
Inhaled combined beta-adrenoceptor agonist and anti-cholinergic agents	1.0	0.5	1.3	0.6	7.8	4.5

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.11 presents age- and sex-specific rates of use for respiratory system drugs. “All ages” rates of respiratory system drug use were slightly higher for Māori than non-Māori for both sexes. For Māori males the rate of use was higher (21 per 100 visits) in the < 25 years age group, but after dropping in the 25–34 years age group the rate of use of these drugs in Māori males increased with age. The pattern of use was different for Māori females, for whom the rate increased with age until the 65+ years age group, after which the rate of use dropped. Among non-Māori, no clear pattern associated with age for males or females was observed. Rates of use for Māori males and females (compared to non-Māori) were higher in all age groups with the exception of Māori males aged 25–44 years, who had a lower rate of use than non-Māori.

Table 10.11 Respiratory drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	19	21	8	15	35
Female	16	14	17	23	16
Non-Māori					
Male	15	18	16	10	15
Female	13	13	12	14	12

The problems that respiratory system drugs were most commonly used for are presented in Table 10.12. Chronic obstructive airways disease was the commonest problem that resulted in the prescription of a respiratory system drug, followed by acute respiratory infections and ear diseases.

For Māori, 52.6% (versus 45.4% for non-Māori) of respiratory system drug prescriptions were for chronic obstructive airways disease problems; 62.6% of chronic obstructive airways disease problems (new or recurrent) resulted in a prescription for

respiratory system drugs (versus 71.0% for non-Māori); and 9.5% of new chronic obstructive airways disease problems resulted in a prescription for respiratory system drugs (versus 77.8% for non-Māori).

Table 10.12 Most frequent problems managed by respiratory drugs

Problem (READ2 sub-chapter)*	Percent of respiratory script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 246)	Non-Māori (N = 1041)	Māori	Non-Māori	Māori	Non-Māori
H3 Chronic obstructive airways disease	52.6	45.4	62.6	71.0	9.5	77.8
H0 Acute respiratory infections	14.4	19.2	13.6	18.4	12.6	16.2
F5 Ear diseases	6.0	3.7	9.9	6.9	12.0	8.3

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.3 Nervous system (Tables 10.13, 10.14 and 10.15)

Results pertaining to the use of nervous system drugs are presented in Tables 10.13 to 10.15.

Nervous system drugs accounted for a slightly lower proportion of all prescription items in Māori (12.5%) than in non-Māori (14.8%) (Table 10.13). These types of drugs were prescribed at similar rates for Māori (15.1 per 100 visits) and non-Māori (16.0 per 100 visits). Drugs used in the management of pain (analgesics) were the most commonly prescribed sub-group. Prescriptions for analgesics accounted for 9.0% of all Māori prescription items (7.6% of non-Māori prescription items) and were prescribed at a rate of 11.7 per 100 Māori visits (9.7 per 100 non-Māori visits). Analgesics accounted for 71.9% of Māori nervous system drug prescriptions (51.1% of non-Māori).

Anti-depressants were the second most common nervous system drug type. Anti-depressants were less commonly prescribed for Māori patients, accounting for 1.6% of all Māori prescription items (3.3% of non-Māori prescription items), were prescribed at a rate of 2.1 per 100 Māori visits (4.2 per 100 non-Māori), and accounted for 12.9% of the nervous system drug prescriptions for Māori (22.0% for non-Māori).

Table 10.13 Nervous system drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
22 Nervous system	12.5	14.8	15.1	16.0	100%	100%
Analgesics	9.0	7.6	11.7	9.7	71.9	51.1
Anti-depressants	1.6	3.3	2.1	4.2	12.9	22.0

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.14 presents age- and sex-specific rates for nervous system drugs. The “all ages” rate of nervous system drug use was similar for Māori males, non-Māori males and non-Māori females, but was lower for Māori women. Rates of use at “all ages” were lower for Māori females when compared with Māori males. For non-Māori there were no clear sex-related patterns.

As for age groups, overall rates of prescribing were higher in the < 25 and 65+ age groups for both Māori and non-Māori visits. Rates of use were lower for Māori males and females in the 45–64 years age groups than for non-Māori, and in the 25–44 years age group the rate of use was lower for Māori women. In the 65+ years age group the rate was higher for Māori male visits.

Table 10.14 Nervous system drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	20	23	17	12	24
Female	14	15	12	10	21
Non-Māori					
Male	19	21	17	18	17
Female	19	15	18	21	23

The problems that nervous system drugs were most commonly used for are presented in Table 10.15. Acute respiratory infections and ear diseases were the two commonest problems that resulted in the prescription of a nervous system drug for Māori visits: 23.8% of Māori nervous system prescriptions were for acute respiratory infections (versus 13.7% for non-Māori) and 11.5% were for ear diseases (versus 4.4% for non-Māori). However, non-organic psychosis was the commonest problem resulting in a nervous system drug prescription for non-Māori visits (16.3% of non-Māori nervous system prescriptions versus 9.6% of non-Māori nervous system prescription items). Slightly higher proportions of Māori visits with acute respiratory problems (both all problems and new problems) resulted in the prescription of a nervous system drug when compared with non-Māori visits for these problems. More than two-thirds (68.5%) of Māori visits (versus 63.2% of non-Māori visits) with non-organic psychosis as a

problem and 78.0% of Māori visits (versus 50.9% of non-Māori visits) with non-organic psychosis as a new problem resulted in the prescription of a nervous system drug.

Table 10.15 Most frequent problems managed by nervous system drugs

Problem (READ2 sub-chapter) [†]	Percent of nervous system* script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 262)	Non-Māori (N = 1532)	Māori	Non-Māori	Māori	Non-Māori
H0 Acute respiratory infections	23.8	13.7	23.5	19.9	26.3	23.2
F5 Ear diseases	11.5	4.4	20.1	13.1	24.6	17.8
E1 Non-organic psychoses	9.6	16.3	68.5	63.2	78.0	50.9
E2 Neurotic, personality and other non-psychotic disorders	5.6	9.2	31.5	35.4	14.3	19.7

* This drug group includes analgesics and psychological drugs.

† Includes any problem sub-chapters, for which the drug group was prescribed, with ≥ 5% of group script items for Māori people.

10.4 Dermatologicals (Tables 10.16, 10.17 and 10.18)

Results pertaining to the use of dermatological drugs are presented in Tables 10.16 to 10.18.

Dermatological drugs accounted for a slightly higher proportion of all prescription items for Māori (7.7%) than for non-Māori (5.7%) (Table 10.16). These types of drugs were prescribed at similar rates for Māori (7.9 per 100 visits) and non-Māori (6.2 per 100 visits). Topical corticosteroids were the most commonly prescribed sub-group for both groups. Prescriptions for topical corticosteroids accounted for 3.8% of all Māori prescription items (2.7% of non-Māori prescription items) and were prescribed at a rate of 4.9 per 100 Māori visits (3.4 per 100 non-Māori visits). Topical corticosteroids accounted for 48.9% of Māori dermatological drug prescriptions (46.7% for non-Māori). Anti-fungal agents were the second most commonly prescribed dermatological drugs.

Table 10.16 Dermatological drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all scripts		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
10 Dermatologicals	7.7	5.7	7.9	6.2	100%	100%
Corticosteroids topical	3.8	2.7	4.9	3.4	48.9	46.7
Anti-fungals topical	1.0	0.7	1.3	0.8	12.5	11.6

* Includes drug sub-groups comprising ≥ 1% of all script items for Māori people.

Table 10.17 presents age- and sex-specific rates of dermatological drug prescription. The “all ages” rate of dermatological drug use was similar for Māori males, non-Māori males and non-Māori females, but was higher for Māori women. Rates of use were higher in the < 25 years age group for males and females of both ethnic groups. No clear pattern pertaining to age group, sex or ethnic group was identifiable.

Table 10.17 Dermatological drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	8	11	7	2	2
Female	12	19	6	1	9
Non-Māori					
Male	7	9	4	8	5
Female	7	12	7	5	6

The problems that dermatological drugs were most commonly used for are presented in Table 10.18. Dermatitis/dermatoses was the commonest problem group that resulted in the prescription of a dermatological drug: 63.2% of Māori dermatological prescriptions were for dermatitis/dermatoses (versus 43.3% for non-Māori).

Just over 75% of Māori visits for dermatitis/dermatoses problems (new and recurrent) resulted in a prescription for dermatological agents (versus 69% of non-Māori visits). Similar percentages of visits by Māori and non-Māori for a new dermatitis/dermatoses problem resulted in the use of a dermatological agent. Other infectious and parasitic diseases were the second commonest problem for Māori. Higher proportions of Māori with this problem (74.2% of all problems and 95.5% of new problems) received a prescription for dermatological agents, compared with non-Māori (54.7% of all problems and 76.3% of new problems).

Mycoses problems accounted for 6.3% of Māori and 13.1% of non-Māori dermatological prescriptions. Lower proportions of Māori visits with mycoses problems (both all problems and new problems) resulted in the prescription of a dermatological drug when compared with non-Māori visits for these problems. Overall, 23.8% of Māori visits with mycoses as a problem resulted in a prescription for a dermatological agent compared with 49.8% of non-Māori visits for the same problem. Similarly, 28.2% of Māori visits where mycoses was a new problem resulted in a prescription for dermatological agents, compared with 52.0% of non-Māori visits.

Table 10.18 Most frequent problems managed by dermatological drugs

Problem (READ2 sub-chapter)*	Percent of dermatological script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 143)	Non-Māori (N = 590)	Māori	Non-Māori	Māori	Non-Māori
M1 Dermatitis/dermatoses	63.2	43.3	75.1	69.0	70.9	70.4
AD Other infectious and parasitic diseases	8.3	2.4	74.2	54.7	95.5	76.3
AB Mycoses	6.3	13.1	23.8	49.8	28.2	52.0
M0 Skin and subcutaneous tissue infections	6.0	4.8	21.6	16.0	29.0	21.4

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.5 Cardiovascular system drugs (Tables 10.19, 10.20 and 10.21)

Results pertaining to the use of cardiovascular system drugs are presented in Tables 10.19 to 10.21.

Cardiovascular system (CVS) drugs accounted for a lower proportion of all prescription items in Māori (7.4%) than non-Māori (13.7%), and were prescribed at a lower rate for Māori (5.9 per 100 visits) than non-Māori (11.3 per 100 visits) (Table 10.19). Renin-angiotensin drugs were the most commonly prescribed sub-group for Māori, accounting for 2.4% of all Māori prescription items (3.3% of non-Māori). The renin-angiotensin drugs were prescribed at a rate of 3.1 per 100 Māori visits (4.3 per 100 visits for non-Māori) and accounted for 32.1% of Māori (24.4% of non-Māori) CVS drug prescriptions. Diuretics were the most commonly prescribed CVS drug sub-group for non-Māori patients, accounting for 3.6% of all non-Māori prescription items (versus 2.0% of Māori). Diuretics were prescribed at a rate of 4.6 per 100 visits for non-Māori (2.6 per 100 visits for Māori) and accounted for 26.0% of non-Māori (26.4% of Māori) CVS drug prescriptions.

Table 10.19 Cardiovascular system drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
7 Cardiovascular system	7.4	13.7	5.9	11.3	100%	100%
Agents affecting the renin-angiotensin system	2.4	3.3	3.1	4.3	32.1	24.4
Diuretics	2.0	3.6	2.6	4.6	26.4	26.0
Calcium channel blocker	1.0	2.0	1.3	2.5	10.7	20.0

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.20 presents age- and sex-specific rates of CVS drug prescription. In general, the rate of use (per 100 visits) of CVS drugs increased with age. The “all ages” rate of CVS drug use was lower for Māori males and females than for non-Māori, although age-specific rates of use were higher in Māori males and females in the 45–64 years age group, and in Māori males aged 65+ years compared with non-Māori of the same sex. Rates of use were lower for Māori females aged 65+ years than non-Māori females of the same age.

Table 10.20 Cardiovascular drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	12	0	0.3	39	71
Female	8	0	4	29	35
Non-Māori					
Male	18	0.9	5	26	44
Female	18	1	3	20	49

The problems that CVS drugs were most commonly used for are presented in Table 10.21. Hypertensive disease was the commonest problem that resulted in the prescription of a CVS drug, accounting for 32.4% of Māori and 51.6% of non-Māori CVS drug prescriptions. However, lower proportions of Māori visits for hypertensive disease (all and new problems) resulted in the prescription of a CVS drug: 53.7% of Māori visits for hypertensive disease problems (new and recurrent) compared with 77.5% of non-Māori visits. Similarly, 33.0% of Māori visits for a new hypertensive disease problem resulted in a prescription for CVS agents, compared with 44.6% of non-Māori visits.

Arteriosclerotic disease was the second commonest problem that resulted in the prescription of a CVS drug, accounting for 28.0% of Māori and 14.2% of non-Māori CVS drug prescriptions. Higher proportions of Māori visits for arteriosclerotic disease (all and new problems) resulted in the prescription of a CVS drug (70.4% of Māori versus 57.4% of non-Māori). However, similar percentages of Māori (45.1%) and non-Māori (41.8%) visits where arteriosclerotic disease was a new problem resulted in a prescription for CVS agents.

Table 10.21 Most frequent problems managed by cardiovascular drugs

Problem (READ2 sub-chapter)*	Percent of cardiovascular script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 138)	Non-Māori (N = 1274)	Māori	Non-Māori	Māori	Non-Māori
G2 BP – hypertensive disease	32.4	51.6	53.7	77.5	33.0	44.6
G3 Arteriosclerotic heart disease	28.0	14.2	70.4	57.4	45.1	41.8
G5 Other forms of heart disease	19.4	12.4	92.5	63.3	0 [†]	21.2

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

[†] There were no Māori patients with this as a new problem.

10.6 Alimentary drugs (Tables 10.22, 10.23 and 10.24)

Results pertaining to the use of alimentary drugs are presented in Tables 10.22 to 10.24.

Alimentary drugs accounted for a lower proportion of all prescription items in Māori (6.2%) than non-Māori (8.8%), and were prescribed at lower rates for Māori (6.8 per 100 visits) than non-Māori (9.1 per 100 visits) (Table 10.22).

Diabetes and diabetes management drugs accounted for 2.6% of all Māori prescription items (versus 1.5% of non-Māori). Diabetes drugs were prescribed at a rate of 3.4 per 100 Māori visits (versus 2.0 per 100 non-Māori visits) and accounted for 41.6% of Māori (17.5% of non-Māori) alimentary drug prescriptions.

Table 10.22 Alimentary system drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
1 Alimentary tract and metabolism	6.2	8.8	6.8	9.1	100%	100%
Diabetes and diabetes management	2.6	1.5	3.4	2.0	41.6	17.5

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.23 presents age- and sex-specific rates of alimentary drug prescription. In the non-Māori sample, the rates of prescription of these drugs for males and females were the same in all age groups. In the Māori sample, this pattern was not observed in the two higher age groups, in which the rates of prescription of these drugs were lower for Māori females than for Māori males. In general, the rate of use (per 100 visits) of alimentary drugs increased with age. The “all ages” rate of alimentary drug prescription was the same for Māori males, non-Māori males and non-Māori females (11 per 100 visits), but lower for Māori females (6 per 100 visits). In the < 25 years age group the rate of prescription was the same for Māori females, non-Māori females and non-Māori males (4 per 100 visits), but slightly higher for Māori males (6 per 100 visits). Rates of prescription were lower for both Māori males and Māori females than non-Māori males and females in the 25–44 years age group. In the 45–64 years age group the rate of prescription was similar for Māori females, non-Māori females and non-Māori males, but slightly higher for Māori males. In the 65+ years age group the rate of prescription for Māori males was twice that of non-Māori males (40 per 100 visits versus 20 per 100 visits). The rate of prescription for Māori females in this age group was lower than for Māori males, non-Māori males and non-Māori females.

Table 10.23 Alimentary drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	11	6	7	20	40
Female	6	4	7	13	7
Non-Māori					
Male	11	4	10	14	19
Female	11	4	10	14	20

The problems that alimentary drugs were most commonly used for are presented in Table 10.24. “Other endocrine gland diseases” was the commonest problem group that resulted in the prescription of an alimentary drug, accounting for 33.2% of Māori and 16.4% of non-Māori alimentary drug prescriptions. A slightly higher percentage of Māori visits for other endocrine diseases (all problems) resulted in the prescription of an alimentary drug (53.6% versus 48.7% of non-Māori). However, no Māori visits that included a new diagnosis of other endocrine diseases resulted in a prescription for an alimentary agent, compared with 20.4% of non-Māori visits with a new diagnosis.

Duodenal disease was the second commonest problem that resulted in the prescription of an alimentary drug, accounting for 10.4% of Māori and 20.7% of non-Māori alimentary drug prescriptions. A higher proportion of Māori visits (76.6%) that included a new diagnosis of duodenal disease resulted in a prescription of an alimentary drug (versus 67.9% of non-Māori visits). However, a lower proportion of Māori visits where this was a previous or new problem resulted in a prescription of these drugs (56.3% versus 79.6% of non-Māori visits).

Table 10.24 Most frequent problems managed by alimentary drugs

Problem (READ2 sub-chapter)*	Percent of alimentary script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 115)	Non-Māori (N = 857)	Māori	Non- Māori	Māori	Non- Māori
C1 Other endocrine gland diseases	33.2	16.4	53.6	48.7	0	20.4
J1 Duodenal diseases	10.4	20.7	56.3	79.6	76.6	67.9

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.7 Musculoskeletal drugs (Tables 10.25, 10.26 and 10.27)

Results pertaining to the use of musculoskeletal drugs are presented in Tables 10.25 to 10.27.

Musculoskeletal drugs accounted for similar proportions of all prescription items in Māori (5.8%) and non-Māori (6.6%), and were prescribed at similar rates (Māori 7.3 per 100 visits; non-Māori 7.6 per 100 visits) (Table 10.25).

Non-steroidal anti-inflammatory drugs (NSAIDs) were the commonest sub-group, accounting for 4.7% of all Māori prescription items (5.3% of non-Māori). NSAIDs were prescribed at a rate of 6.2 per 100 Māori visits (6.8 per 100 non-Māori visits), and accounted for 81.6% of Māori (80.0% of non-Māori) musculoskeletal drug prescriptions.

Table 10.25 Musculoskeletal system drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non- Māori
19 Musculoskeletal system	5.8	6.6	7.3	7.6	100%	100%
Anti-inflammatory non-steroidal drugs (NSAIDs)	4.7	5.3	6.2	6.8	81.6	80.0

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.26 presents age- and sex-specific rates of musculoskeletal drug prescription. In both the Māori and non-Māori samples, the “all ages” rate of prescription was higher for males than for females. Rates of use (per 100 visits) were similar for all sex and ethnic groups in the < 25 years age group. However, in the other age groups the rates of prescription were higher for males than for females in both the Māori and non-Māori samples. No other clear trends related to age were observed.

Table 10.26 Musculoskeletal drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	10	4	18	20	13
Female	6	3	8	15	2
Non-Māori					
Male	9	3	10	15	11
Female	8	3	9	11	10

The problems that musculoskeletal drugs were most commonly used for are presented in Table 10.27. Sprains and strains was the commonest problem group that resulted in the prescription of a musculoskeletal drug, accounting for 17.0% of Māori and 16.8% of non-Māori musculoskeletal drug prescriptions. A similar percentage of Māori visits for sprains and strains (all problems) resulted in the prescription of a musculoskeletal drug (35.3% versus 32.8% of non-Māori), and a slightly larger proportion of Māori visits (49.9%) that included a new diagnosis of sprains and strains resulted in a prescription for a musculoskeletal drug (compared with 40.4% of non-Māori visits with this as a new diagnosis).

“Other metabolic and immunity disorders” was the second commonest problem group, accounting for 14.7% of musculoskeletal drug prescription items for Māori (8.7% for non-Māori). In Māori visits, 40.6% of these problems (versus 19.8% for non-Māori) resulted in a prescription for musculoskeletal drugs. Over half (50.7%) of Māori visits where this was a new problem included a prescription for musculoskeletal agents (versus 15.0% of non-Māori visits where this was a new problem).

Table 10.27 Most frequent problems managed by musculoskeletal drugs

Problem (READ2 sub-chapter)*	Percent of musculoskeletal script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 113)	Non-Māori (N = 632)	Māori	Non-Māori	Māori	Non-Māori
S5 Sprains and strains of joints and adjacent muscles	17.0	16.8	35.3	32.8	49.9	40.4
C3 Other metabolic and immunity disorders	14.7	8.7	40.6	19.8	50.7	15.0
N1 Vertebral column syndromes	12.7	9.8	46.7	33.3	8.1	46.1
N0 Arthropathies and related disorders	7.1	15.1	26.2	33.8	42.4	18.4

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.8 Blood/blood-forming organs (Tables 10.28, 10.29 and 10.30)

Results pertaining to the use of blood/blood-forming organ drugs are presented in Tables 10.28 to 10.30.

Blood/blood-forming organ drugs accounted for similar proportions of all prescription items in Māori (5.2%) and non-Māori (6.1%), and were prescribed at similar rates (Māori 5.2 versus non-Māori 6.0 per 100 visits) (Table 10.28).

Anti-thrombotic agents were the commonest sub-group. They accounted for 1.8% of all Māori prescription items (2.8% of non-Māori), were prescribed at a rate of 2.3 per 100 Māori visits (3.6 per 100 non-Māori visits), and accounted for 34.6% of Māori (46.2% of non-Māori) blood / blood-forming organ drug prescriptions.

Lipid-modifying agents were also included in this group of drugs, and accounted for 1.4% of all Māori prescription items (2.0% of non-Māori), were prescribed at a rate of 1.8 per 100 Māori visits (2.6 per 100 non-Māori visits), and accounted for 26.4% of Māori (32.6% of non-Māori) blood/blood-forming organ drug prescriptions.

Table 10.28 Blood/blood-forming organ drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
4 Blood and blood-forming organs	5.2	6.1	5.2	6.0	100%	100%
Anti-thrombotic agents	1.8	2.8	2.3	3.6	34.6	46.2
Lipid-modifying agents	1.4	2.0	1.8	2.6	26.4	32.6
Fluids and electrolytes	1.2	0.5	1.5	0.6	22.3	8.0

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.29 presents age- and sex-specific rates of blood/blood-forming organ drug prescription. The “all ages” rate of prescription was similar for all sex and ethnic groups (7 per 100 visits for Māori males, Māori females and non-Māori females, and 9 per 100 visits for non-Māori males). Except in the case of Māori females, the rate of prescription increased with age. Among Māori women, the rate of prescription was similar in the 45–64 and over 65 years age groups.

Table 10.29 Blood/blood-forming organs drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	7	2	4	12	41
Female	7	2	9	16	14
Non-Māori					
Male	9	2	4	13	21
Female	7	2	3	5	17

The problems that blood/blood-forming organ drugs were most commonly used for are presented in Table 10.30. Arteriosclerotic heart disease was the commonest problem that resulted in a prescription for this group of drugs, accounting for 15.3% of Māori and 22.1% of non-Māori blood/blood-forming organ drug prescriptions. A higher proportion of Māori (51.7%) than non-Māori (42.4%) visits for this problem (previous and new problems) included a prescription for these medicines. However, in visits where arteriosclerotic heart disease was recorded as a new problem, no Māori received a prescription for these medications, compared with 16.5% of non-Māori.

Hypertensive disease was the second commonest problem resulting in a prescription of this medication group. This problem accounted for similar proportions of blood/blood-forming organ drug prescription items in the Māori (15.2%) and non-Māori (14.5%) samples. A slightly higher proportion of Māori (17.5%) than non-Māori (12.2%) visits for this problem (previous and new problems) included a prescription for these medicines. In visits where hypertensive disease was recorded as a new problem, 4.2% of non-Māori patients, but no Māori patients, received a prescription for these medications.

Table 10.30 Most frequent problems managed by blood/blood-forming organs drugs

Problem (READ2 sub-chapter)*	Percent of blood/ blood-forming organ script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 86)	Non-Māori (N = 583)	Māori	Non- Māori	Māori	Non- Māori
G3 Arteriosclerotic heart disease	15.3	22.1	51.7	42.4	0	16.5
G2 BP – hypertensive disease	15.2	14.5	17.5	12.2	0	4.2
C1 Other endocrine gland diseases	7.7	2.1	4.2	6.1	0	0
H0 Acute respiratory infections	7.7	0.4	3.2	0.2	4.4	0
C3 Other metabolic and immunity disorders	7.7	8.4	19.5	21.8	0	5.0
G5 Other forms of heart disease	7.4	8.4	35.7	26.0	0	17.1
C0 Struma – goitre	5.1	0.5	28.3	4.8	0	0

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.9 Genito-urinary drugs (Tables 10.31, 10.32 and 10.33)

Results pertaining to the use of genito-urinary drugs are presented in Tables 10.31 to 10.33.

Genito-urinary drugs accounted for similar proportions of all prescription items in Māori (3.8%) and non-Māori (3.7%), and were prescribed at similar rates (Māori 3.9 per 100 visits, non-Māori 4.0 per 100 visits) (Table 10.31). Absolute numbers of prescription items in the group were low: these drugs accounted for less than 4% of all prescription items in both Māori and non-Māori samples.

Contraceptive agents were the commonest sub-group: they accounted for 2.6% of all Māori prescription items (1.6% of non-Māori), were prescribed at a rate of 3.3 per 100 Māori visits (2.1 per 100 non-Māori visits), and accounted for 67.2% of Māori (43.8% of non-Māori) genito-urinary drug prescriptions.

Table 10.31 Genito-urinary drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non- Māori
13 Genito-urinary system	3.8	3.7	3.9	4.0	100%	100%
Contraceptives	2.6	1.6	3.3	2.1	67.2	43.8

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.32 presents age- and sex-specific rates of genito-urinary drug prescription. The “all ages” rate of prescription was higher for females than for males in both the Māori and non-Māori populations. Rates of prescription were higher for females (in both ethnic groups) than males in the < 25 and 25–44 years age groups. However, rates were higher for males than for females in the older age groups. Low numbers for this drug group make it difficult to make comments about any apparent differences in the rates of prescription between Māori and non-Māori.

Table 10.32 Genito-urinary drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	2	0.4	0.3	6	6
Female	8	10	9	0.3	0
Non-Māori					
Male	2	0.7	1	3	5
Female	7	8	14	2	2

The problems that genito-urinary drugs were most commonly used for are presented in Table 10.33. Contraception was the commonest problem resulting in the prescription of a genito-urinary drug, accounting for 43.8% of Māori and 33.0% of non-Māori genito-urinary drug prescriptions. Nearly two-thirds (65.4%) of Māori visits for contraception resulted in the prescription of a genito-urinary drug (75.2% of non-Māori visits). In visits where contraception was noted as a new problem, 98.7% of Māori and 84.2% of non-Māori received a prescription for a genito-urinary drug.

Table 10.33 Most frequent problems managed by genito-urinary drugs

Problem (READ2 sub-chapter)*	Percent of genito-urinary script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 71)	Non-Māori (N = 386)	Māori	Non-Māori	Māori	Non-Māori
61 Contraception	43.8	33.0	65.4	75.2	98.7	84.2
K5 Other female genital tract disorders	14.0	4.7	17.3	8.5	14.1	15.4
AB Mycoses	9.2	9.1	24.2	25.3	19.3	28.0
K2 Male genital organ diseases	7.1	4.6	83.0	25.3	0	25.3
K1 Other urinary system diseases	5.7	3.0	8.9	7.3	12.6	5.3
K4 Female pelvic inflammatory diseases	5.2	0.6	53.7	13.8	53.7	18.8

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

10.10 Systemic hormone drugs (Tables 10.34, 10.35 and 10.36)

Results pertaining to the use of systemic hormone drugs are presented in Tables 10.34 to 10.36.

Systemic hormone drugs accounted for similar proportions of all prescription items in Māori (3.3%) and non-Māori (4.4%), and were prescribed at similar rates (Māori 4.1 per 100 visits, non-Māori 5.3 per 100 visits). Absolute numbers of prescription items in the group were low, making interpretation of these data difficult.

Corticosteroids and related agents were the commonest sub-group. They accounted for 2.0% of all Māori prescription items (1.7% for non-Māori), were prescribed at a rate of 2.5 per 100 Māori visits (2.2 per 100 visits for non-Māori), and accounted for 59.2% of Māori (39.6% of non-Māori) systemic hormone drug prescriptions (Table 10.34).

Table 10.34 Systemic hormone drugs: sub-groups

Drug group (level 1) Sub-group (level 2)*	Percent of all script items		Per 100 visits		Percent of drug group	
	Māori (N = 1856)	Non-Māori (N = 9928)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori	Non-Māori
14 Systemic hormone preparations (excluding oral contraceptives)	3.3	4.4	4.1	5.3	100%	100%
Corticosteroids and related agents	2.0	1.7	2.5	2.2	59.2	39.6

* Includes drug sub-groups comprising $\geq 1\%$ of all script items for Māori people.

Table 10.35 presents age- and sex-specific rates of systemic hormone drug prescription. The “all ages” rate of prescription was higher for females than for males in both the Māori and non-Māori populations. In fact, all of the age-specific rates were higher for females than for males except for those of the 65+ age group for Māori patients and the <25 age group for non-Māori (for both of whom there was very little difference related to sex). Low numbers for this drug group make it difficult to make comments about any apparent differences in the rates of prescription between Māori and non-Māori. However, Māori females appeared to have higher rates of prescription of these drugs than their non-Māori peers in the younger age groups (< 25 and 25–44 years), while non-Māori females had higher rates in the 45–64 and 65+ years age groups.

Table 10.35 Systemic hormone drugs: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	2	2	1	1	5
Female	6	4	9	10	4
Non-Māori					
Male	3	2	3	3	5
Female	8	2	5	14	11

The problems that systemic hormone drugs were most commonly used for are presented in Table 10.36. Chronic obstructive airways disease was the commonest problem resulting in the prescription of a systemic hormone drug. However, this problem accounted for a greater percentage of systemic hormone drug prescriptions for Māori (41.2%) than non-Māori (14.3%): 19.9% of Māori and 16.4% of non-Māori visits where chronic obstructive airways disease was a problem (previous or new) resulted in the prescription of a systemic hormone drug. Where this was a new problem, 47.5% of Māori and 13.6% of non-Māori received systemic hormone drugs.

Contraception was also a problem that resulted in the prescription of systemic hormone drugs. The systemic hormone drug group excludes oral contraceptives; it is likely that prescriptions for systemic hormone drugs associated with contraceptive problems were for injectable or implanted contraceptives.

Table 10.36 Most frequent problems managed by systemic hormone drugs

Problem (READ2 sub-chapter)*	Percent of systemic hormone* script items		Percent of problems so treated		Percent of new problems so treated	
	Māori (N = 58)	Non-Māori (N = 425)	Māori	Non-Māori	Māori	Non-Māori
H3 Chronic obstructive airways disease	41.2	14.3	19.9	16.4	47.5	13.6
61 Contraception	14.6	5.1	25.5	16.2	0	6.4
K5 Other female genital tract disorders	13.5	9.5	18.9	23.0	15.8	20.6
C0 Struma – goitre	5.9	9.4	41.6	64.2	0	10.1

* Includes any problem sub-chapters, for which the drug group was prescribed, with $\geq 5\%$ of group script items for Māori people.

Table 10.37 presents overall prescribing rates (the number of prescription items) for each major drug group for the Māori and non-Māori populations in the study. Drugs belonging to the “infections – agents for systemic use” group had the highest rate of use in both Māori and non-Māori populations. However, the ranking of other drug groups varied by ethnicity. For Māori, drugs from respiratory system, nervous system, dermatological and cardiovascular system drug groups were the next most frequently prescribed. In the non-Māori population, nervous system, cardiovascular system, respiratory system, alimentary system and musculoskeletal system drugs were the next most commonly prescribed drug groups.

Table 10.37 Prescribing rates for different drug groups (script items per 100 visits)

Drug group (Pharmacodes/ATC level 1)	Māori (N = 1447)	Non-Māori (N = 7677)
16 Infections – agents for systemic use	36.7	22.1
28 Respiratory system and allergies	17.3	13.6
22 Nervous system	16.3	19.0
10 Dermatologicals	10.0	7.3
7 Cardiovascular system	9.6	17.6
1 Alimentary tract and metabolism	8.1	11.2
19 Musculoskeletal system	7.6	8.4
4 Blood and blood-forming organs	6.8	7.8
13 Genito-urinary system	5.0	4.8
14 Systemic hormone preparations (excluding oral contraceptives)	4.4	5.7
31 Sensory organs	2.7	1.6
38 Extemporaneously compounded preparations and galenicals	1.3	1.3
25 Oncology agents and immunosuppressants	0.2	0.4
40 Special foods	0.2	0.1
Medication non-specific	4.2	7.6
Total	130.4	128.6

11 Non-drug Treatments

This section provides information about the types of non-drug treatments that were provided during visits by patients. Non-drug treatments (actions) were recorded for up to four problems per patient visit. However, only one action of each type (e.g. administration) was counted for each problem.

Table 11.1 documents the types of non-drug treatments as percentages of all non-drug treatments provided. It also details the frequency per 100 visits and the frequency per 100 problems for each type of non-drug treatment.

In total, practitioners provided 115.6 non-drug treatments per 100 Māori visits and 114.7 per 100 non-Māori visits. When analysed according to the number of problems managed, 70.9 non-drug treatments per 100 Māori problems and 68.2 per 100 non-Māori problems were provided. Health advice was the commonest non-drug treatment provided during visits, accounting for 37.0% (Māori) and 33.4% (non-Māori) of these types of treatments. Health advice was offered 42.8 times per 100 Māori visits (38.3 per 100 non-Māori visits), and 26.2 times per 100 problems in Māori visits (22.8 per 100 problems in non-Māori visits).

Investigation/examination/screening was the second commonest non-drug treatment type, accounting for 21.6% of non-drug treatments in the Māori population and 25.8% of non-drug treatments in the non-Māori population. Investigation/examination/screening was provided at rates of 24.9 per 100 Māori visits (29.6 per 100 non-Māori visits) and 15.3 per 100 Māori problems (17.6 per 100 non-Māori problems). Referral accounted for 13.0% of Māori and 14.3% of non-Māori non-drug treatments. Referrals were undertaken at a rate of 15.0 per 100 Māori visits (16.4 per 100 visits non-Māori) and 9.2 per 100 problems managed during Māori visits (9.7 per 100 problems for non-Māori visits).

Table 11.1 Frequency of non-drug treatments

Non-drug treatments	Percentage of all treatments		Frequency per 100 visits		Frequency per 100 problems	
	Māori (N = 1664)	Non-Māori (N = 8791)	Māori (N = 1447)	Non-Māori (N = 7677)	Māori (N = 2330)	Non-Māori (N = 12,867)
Health advice	37.0	33.4	42.8	38.3	26.2	22.8
Investigation/examination/ screening	21.6	25.8	24.9	29.6	15.3	17.6
Referral	13.0	14.3	15.0	16.4	9.2	9.7
Follow-up	7.4	5.9	8.5	6.8	5.2	4.0
Administration	6.8	4.8	7.8	5.5	4.8	3.2
Minor surgery	3.8	6.0	4.4	6.9	2.7	4.1
Other procedure	3.7	3.2	4.2	3.7	2.6	2.2
Dressing	3.3	2.6	3.9	3.0	2.4	1.8
Immunisation	1.8	1.9	2.1	2.2	1.3	1.3
Complementary medicine	1.0	1.6	1.2	1.8	0.7	1.1
Physical medicine	0.6	0.6	0.7	0.7	0.5	0.4
Total	100%	100%	115.6	114.7	70.9	68.2

Table 11.2 documents age- and sex-specific rates for the provision of health advice in Māori and non-Māori visits. The “all ages” rates of providing health advice for both males and females were higher in the Māori population. Within each ethnic group, in all four age groups, the rate of provision of health advice was higher for females than for males. Rates of providing health advice to Māori and non-Māori males and females were similar for the < 25 years age group; the rates were higher among Māori females and males (than their non-Māori peers) in the 25–44 years age group, and the differences varied in the two older age groups. Health advice was provided to Māori males at a higher rate (than to non-Māori males), and to Māori females at a lower rate (than to non-Māori females) in the 45–64 years age group. This pattern was reversed in the 65+ years age group.

Table 11.2 Health advice: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	39	34	57	39	24
Female (N = 833)	46	38	63	40	43
Non-Māori					
Male (N = 3158)	32	34	34	33	28
Female (N = 4498)	42	37	52	47	34

Table 11.3 documents findings for the provision of minor surgery. “All ages” rates of minor surgery for Māori were lower (males) or slightly lower (females) than those of non-Māori. In the under 25 years age group Māori and non-Māori rates were similar for both sexes. However, in the other age groups, the rates of minor surgery were lower for Māori than for non-Māori.

Table 11.3 Minor surgery: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male	4	5	2	1	1
Female	5	6	4	5	1
Non-Māori					
Male	8	5	8	9	10
Female	6	4	7	7	7

12 Disposition

Practitioners were asked about the follow-up arrangements that were made for each consultation. They were also asked to record whether any referral to specialists or to hospitals was made. Only one referral per consultation was included in the information presented in this report. If more than one referral was made, an emergency referral was included in preference to a non-emergency referral. If the practitioner did not include information about follow-up or referrals, it was assumed that no follow-up arrangements or referrals were made.

Arrangements to see the patient again within three months were made in 54.6% of Māori and 57.5% of non-Māori consultations (Table 12.1). The overall (“all ages”) rates of follow-up were the same for Māori and non-Māori females, but lower for Māori males than non-Māori males. In the non-Māori population, the rate of three-month follow-up increased with age (Table 12.2). However, in the Māori population, that rate increased with age through to the 45–64 years age group, and then decreased in the 65+ years age group. This pattern was observed for both Māori males and Māori females. Rates of follow-up were higher for Māori females than for non-Māori females in all age groups except the 65+ years group. Among males a different pattern was observed: the rate of three-month follow-up was lower for Māori males than for non-Māori males in all age groups except the 45–64 years age group.

Table 12.1 Frequency of types of disposition (percent of visits)

	Māori	Non-Māori
Follow-up within three months	54.6	57.5
Referred on	14.7	16.2
Emergency	2.0	1.3
Unspecified	0.9	0.8
Medical/surgical specialties	7.1	8.1
Non-medical	4.7	5.9
(N)	(1447)	(7677)

* “Missing” is counted as “none”; follow-up and referral are not mutually exclusive; one referral is counted per visit; referral types are mutually exclusive; and “emergency” referrals are given precedence.

Table 12.2 Follow-up to three months: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	49	40	49	73	68
Female (N = 833)	58	47	68	73	60

Non-Māori					
Male (N = 3158)	57	44	51	64	72
Female (N = 4498)	58	41	56	62	76

Table 12.3 presents the percentages of the various problem groups for which patients had follow-up within the next three months arranged during the visit, by ethnicity. This is presented both for new problems identified during the consultation and for all problems (both pre-existing and new). Three-month follow-up was arranged for 100% of problem types related to pregnancy/childbirth/puerperium (both for new and all problems) in the Māori population. However, in the non-Māori population only 58.5% of all (and 51.8% of new) problems relating to pregnancy/childbirth/puerperium resulted in a three-month follow-up arrangement. Reasons for this difference are unclear but may include differences in the type of lead maternity carer (e.g. Māori may have been seeing the GP for maternity care and non-Māori using non-GP maternity care). These issues require further elucidation.

Among the Māori population, three-month follow-up was arranged for 88.9% of endocrine/nutritional/metabolic/immunity problems, 86.8% of cardiovascular/circulatory problems, 74.6% of non-specific symptoms problems and 74.3% of mental problems. In the non-Māori population, the commonest problems associated with three-month follow-up were perinatal problems (90.3%), blood/blood-forming organs (84.5%), mental (80.0%), cardiovascular/circulatory (79.8%) and endocrine/nutritional/metabolic/immunity problems (77.7%).

Although some of the differences in three-month follow-up between Māori and non-Māori appear striking, interpretation of the differences must be undertaken carefully. For example, differences in the composition of the two populations (e.g. differences in the specific types of problems within each broad problem group) may account for the observed differences. Further analysis is necessary to allow for a clearer interpretation. Similarly, there are differences in the ranking of percent of new problems resulting in a three-month follow-up arrangement, by ethnic group, and there are large differences in actual percentages between Māori and non-Māori. However, the same caveats apply when making inferences from this analysis.

Table 12.3 Rates of follow-up, by problem grouping

Problem grouping (READ2 chapter)	Percent of problems so treated		Percent of new problems so treated	
	Māori	Non-Māori	Māori	Non-Māori
Pregnancy/childbirth/puerperium	100	58.5	100	51.8
Endocrine/nutritional/metabolic/immunity	88.9	77.7	96.4	83.3
Cardiovascular/circulatory	86.8	79.8	68.5	77.1
Symptoms non-specific	74.6	68.7	67.2	64.0
Mental	74.3	80.0	78.9	80.7
Genito-urinary	72.0	69.4	65.3	63.2
Cancers/neoplasms	70.9	77.3	64.2	76.9
Musculoskeletal/connective tissue	70.4	71.0	45.4	62.2
Nervous system/sense organs	67.4	62.7	65.2	57.7
Injury/poisoning	65.2	62.0	54.6	52.0
Investigations	63.2	66.7	62.4	53.6
Unspecified conditions	61.7	58.4	40.9	39.8
Actions	57.0	54.0	40.6	51.6
Digestive	54.6	68.8	50.2	60.8
Skin/subcutaneous tissue	53.0	56.9	45.4	51.2
Respiratory	44.2	47.5	32.2	37.8
Infectious/parasitic	41.8	42.7	44.4	32.8
Blood/blood-forming organs	37.9	84.5	6.6	93.5
Congenital	27.2	76.3	28.4	77.9
Perinatal	0	90.3	0	100.0
Not coded	39.3	73.3	0	77.4

Practitioners made a referral in 14.7% of Māori and 16.2% of non-Māori visits (Table 12.1). In both the Māori and non-Māori groups, referral to medical/surgical specialties was commonest, followed by non-medical, emergency and unspecified referrals. The percentages of non-Māori visits that resulted in medical/surgical and non-medical referrals were slightly higher than those of the Māori sample, while the percentage of Māori visits that resulted in an emergency referral was slightly higher than that of non-Māori visits.

Age- and sex-specific rates of referral (any type) are presented in Table 12.4. The total (“all ages”) rates of referral for both ethnic and sex groups were similar. No clear patterns across the age groups could be observed for either sex or ethnic group.

Table 12.4 Referral: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	13	7	25	13	27
Female (N = 833)	16	12	24	12	17
Non-Māori					
Male (N = 3158)	16	11	20	14	19
Female (N = 4498)	17	9	23	19	15

Age- and sex-specific rates of elective medical/surgical referral are presented in Table 12.5. The total (“all ages”) rates of referral for both ethnic and sex groups were similar. The rates of elective referral for non-Māori males and females were similar across the 25–44, 45–64 and 65+ years age groups. However, in the Māori population, rates of elective referral for both males and females appeared lower in the 45–64 years age group.

Table 12.5 Elective medical/surgical referral: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	6	3	10	6	18
Female (N = 833)	8	5	15	6	9
Non-Māori					
Male (N = 3158)	8	5	11	8	10
Female (N = 4498)	8	4	11	9	9

Table 12.6 presents the percentages of visits with selected problem groups that included an elective medical/surgical referral, by ethnicity. This is presented both for new problems identified during the consultation and for all problems (both pre-existing and new). Elective medical/surgical referral was arranged for 68.7% of all, and 71.7% of new congenital problems in the Māori sample (15.9% of all, and 11.0% of new problems in the non-Māori sample).

Differences in the percentages of the Māori and non-Māori referred to elective medical/surgical services were observed for many of the problem types. For a number of reasons (including the low absolute numbers of visits that included a referral of this type and the high number of non-Māori visits that included a referral but lacked a coding for the problem type), interpretation of these data is very difficult and is not undertaken here.

Table 12.6 Rates of elective referral, by problem grouping

Problem grouping (READ2 chapter)	Percent of problems so treated		Percent of new problems so treated	
	Māori	Non-Māori	Māori	Non-Māori
Congenital	68.7	15.9	71.7	11.0
Pregnancy/childbirth/puerperium	35.1	8.7	0	5.7
Cancers/neoplasms	26.6	16.9	6.5	17.8
Blood/blood-forming organs	21.6	11.8	0	3.2
Genito-urinary	19.8	20.0	12.8	15.9
Endocrine/nutritional/metabolic/immunity	18.9	9.1	22.0	17.9
Unspecified conditions	16.1	12.2	6.4	9.2
Musculoskeletal/connective tissue	15.7	13.9	5.3	11.3
Cardiovascular/circulatory	13.8	10.0	11.8	14.0
Mental	12.4	12.3	2.8	16.2
Investigations	11.8	8.9	10.0	8.4
Infectious/parasitic	10.0	4.4	4.3	1.4
Nervous system/sense organs	9.6	10.7	7.1	8.8
Digestive	6.5	13.0	7.2	11.4
Skin/subcutaneous tissue	6.0	6.4	9.1	3.1
Actions	5.1	7.4	2.6	11.4
Injury/poisoning	4.5	7.0	2.3	5.9
Respiratory	4.5	3.6	2.9	2.6
Symptoms non-specific	4.4	13.0	1.4	5.6
Perinatal	0	0	0	0
Not coded	0	21.6	0	35.5

Age- and sex-specific rates of emergency referral are presented in Table 12.7. Rates of emergency referral were low, and there were no clear age-related trends in the rate of emergency referral in either ethnic or sex groups. However, for both males and females, Māori rates were higher than non-Māori rates. Data on emergency referral, and the percentages of problem types that resulted in an emergency referral, are presented in Table 12.8. Interpretation of data in this table is problematic for the reasons outlined in the sections on follow-up and elective medical/surgical referral.

Table 12.7 Emergency referral: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	2	2	2	3	4
Female (N = 833)	2	3	0.9	0.4	2
Non-Māori					
Male (N = 3158)	1	2	0.3	1	2
Female (N = 4498)	1	1	1	2	1

Table 12.8 Rates of emergency referral, by problem grouping

Problem grouping (READ2 chapter)	Percent of problems so treated		Percent of new problems so treated	
	Māori	Non-Māori	Māori	Non-Māori
Digestive	3.9	0.8	1.0	0.9
Nervous system/sense organs	2.8	0.8	3.2	1.0
Respiratory	2.6	1.2	2.4	1.2
Skin/subcutaneous tissue	2.5	1.2	2.7	0.6
Musculoskeletal/connective tissue	2.4	0.6	8.8	0.6
Actions	2.1	0.5	0	0.06
Injury/poisoning	1.5	1.4	2.3	2.1
Endocrine/nutritional/metabolic/immunity	1.4	1.5	11.9	11.9
Infectious/parasitic	1.3	1.0	2.3	0.9
Cardiovascular/circulatory	1.1	2.5	4.4	6.9
Mental	1.1	0.6	0	0
Genito-urinary	0.9	2.3	1.9	4.3
Cancers/neoplasms	0.7	0.7	1.6	1.7
Symptoms non-specific	0.7	1.1	0.9	1.4
Investigations	0.1	0.5	0	1.1
Pregnancy/childbirth/puerperium	0	25.2	0	16.8
Unspecified conditions	0	0.7	0	0
Blood/blood-forming organs	0	0	0	0
Congenital	0	0	0	0
Perinatal	0	0	0	0
Not coded	0	0	0	0

Non-medical referral was made in 4.7% of Māori and 5.9% of non-Māori visits (Table 12.1). Age- and sex-specific rates of non-medical referral are presented in Table 12.9. Total (“all ages”) rates of referral (per 100 visits) were similar for Māori and non-Māori of both sexes. Referral rates were highest in the 25–44 years age group for both ethnic groups and for both sexes within them.

Table 12.9 Non-medical referral: age- and sex-specific rates (per 100 visits)

	All ages	< 25	25–44	45–64	65+
Māori					
Male (N = 608)	4	2	12	4	0
Female (N = 833)	5	4	7	4	4
Non-Māori					
Male (N = 3158)	5	5	8	4	5
Female (N = 4498)	6	4	10	8	4

Data on non-medical referral, and the percentages of problem types that resulted in a non-medical referral, are presented in Table 12.10. Among Māori, the commonest problems (both previously known and new) that resulted in a non-medical referral were: musculoskeletal/connective tissue (17.3%), mental (15.2%), endocrine/nutritional/metabolic/immunity (11.5%), injury/poisoning (11.5%), investigations (7.4%) and infectious/parasitic (7.4%). The commonest problems (previous and new) that resulted in a non-medical referral among the non-Māori sample were: injury/poisoning (15.7%), musculoskeletal/connective tissue (15.1%), mental (11.1%), actions (8.7%), investigations (8.2%) and congenital (8.2%).

Table 12.10 Rates of non-medical referral, by problem grouping

Problem grouping (READ2 chapter)	Percent of problems so treated		Percent of new problems so treated	
	Māori	Non-Māori	Māori	Non-Māori
Musculoskeletal/connective tissue	17.3	15.1	40.6	20.4
Mental	15.2	11.1	24.4	16.6
Endocrine/nutritional/metabolic/immunity	11.5	6.6	25.2	4.9
Injury/poisoning	11.5	15.7	14.0	18.6
Investigations	7.4	8.2	8.4	12.2
Infectious/parasitic	7.4	0.6	4.3	1.0
Actions	6.8	8.7	2.1	9.0
Blood/blood-forming organs	6.6	3.8	0	0
Unspecified conditions	6.5	5.9	22.3	6.8
Cancers/neoplasms	6.3	4.2	0	5.6
Digestive	5.1	6.1	8.5	5.3
Symptoms non-specific	4.8	7.0	4.0	10.1
Genito-urinary	4.4	6.9	0.6	9.9
Nervous system/sense organs	3.3	5.2	3.2	5.4
Skin/subcutaneous tissue	2.5	4.2	2.8	3.8
Respiratory	2.5	2.0	2.2	2.0
Cardiovascular/circulatory	2.4	3.6	0	8.6
Congenital	0	8.2	0	77.9
Pregnancy/childbirth/puerperium	0	6.2	0	8.0
Perinatal	0	0	0	0
Not coded	0	8.5	0	17.4

Table 12.11 presents information about the percentage distribution and rates (per 100 visits) of referral type, and the destinations of referrals. Of all referrals made during Māori visits, 32.0% were to non-medical services such as nursing services, physiotherapists and dieticians; 48.3% were to medical or surgical specialties such as gynaecology, ENT, psychiatry and diabetes; 13.6% were to emergency; and 6.1% were unspecified. Comparing Māori and non-Māori visits, the percentage and rate for emergency referral were higher and the percentages and rates of medical/surgical and non-medical referrals were slightly lower, in the Māori sample.

Table 12.11 Destination of referrals: percentage distribution and frequency per 100 visits

Destination	Percentage of referrals		Frequency per 100 visits	
	Māori (N = 226)	Non-Māori (N = 1237)	Māori (N = 1447)	Non-Māori (N = 7677)
Emergency referral	13.6	8.1	2.0	1.3
Referral unspecified	6.1	5.0	0.9	0.8
Medical/surgical specialties	48.3	50.3	7.1	8.1
ENT	8.4	4.4	1.2	0.7
Paediatrics	7.8	1.8	1.1	0.3
Obstetric	5.3	0.7	0.8	0.1
Orthopaedics	5.2	7.3	0.8	1.2
Ophthalmology	5.1	2.2	0.7	0.4
Urology	3.3	2.7	0.5	0.4
Gynaecology	2.8	3.7	0.4	0.6
Psychiatry	2.6	2.0	0.4	0.3
Dermatology	2.5	1.6	0.4	0.3
Plastic surgery	1.7	1.4	0.2	0.2
Cardiology	0.5	4.0	0.1	0.7
Neurology	0.5	1.8	0.1	0.3
Gastroenterology	0.2	3.3	0	0.5
Rheumatology	0.2	1.7	0	0.3
Non-medical referrals	32.0	36.6	4.7	5.9
Physiotherapist	5.4	12.1	0.8	1.9
Radiology	4.5	9.4	0.7	1.5
Nursing	3.1	2.2	0.5	0.4
Counselling	3.0	2.1	0.4	0.3
Midwife	2.7	1.3	0.4	0.2
Dietician	2.4	0.5	0.4	0.07
Dental	1.5	1.0	0.2	0.2
Audiology	0.4	1.1	0.1	0.2
Psychologist	0	1.0	0	0.2

13 Māori Patient Visits by General Practice Provider Type

This section presents information for *Māori patients only*, attending private GPs, community-governed (CG) providers and Māori providers. It should be noted that the sample of Māori providers in this study was not representative of all Māori providers across the country, and that the numbers of Māori visits included in these analyses (particularly in CG and Māori providers) were low. In addition, tests of statistical significance have not been undertaken. For these reasons, reliable comparisons of the experiences of Māori in these three types of practices cannot be made.

A greater proportion of Māori visits to private GPs were in the < 25 years age group than those to CG and Māori providers. In all three practice types, visits by males were more common in the < 25 years age group (Table 13.1).

Table 13.1 Percentage distribution of GP visits, by patient sex and age group

Visits*	Māori								
	Private GP			Community-governed†			Māori provider‡		
Age group	Male	Female	All	Male	Female	All	Male	Female	All
0–24	55.7	48.5	51.6	44.1	30.6	36.1	50.4	32.2	39.7
25–44	22.2	29.4	26.3	23.5	38.8	32.5	22.3	29.9	26.9
45+	22.2	22.1	22.1	32.4	30.6	31.3	27.3	37.9	33.3
Total (N)	100% (448)	100% (606)	100% (1056)	100% (34)	100% (49)	100% (83)	100% (121)	100% (174)	100% (297)

* Visits to doctor.

† Health Care Aotearoa (HCA) Union.

‡ Defined according to Ministry of Health criteria.

Table 13.2 presents information about the percentage of each age group that was new to the practice, new to the practitioner and that visited a practice that was not their usual source of care. Overall, similar percentages of Māori were new to the practice in all three practice types (6.0%–10.1%). However, the distribution of age groups for patients who were new to the practice within each practice type may differ. The results also suggest that the overall percentage of patients (and the percentages within each age group) that were new to the practitioner may differ between practice types, with higher percentages in CG and Māori providers being new to the practitioner. Younger patients were more likely to be new to the practitioner. Similar percentages of Māori visits to private (10.6%), CG (7.4%) and Māori (12.7%) providers were to a provider that was not considered the person's usual source of care.

Table 13.2 Percentage of patient age group who were new to practice, new to practitioner, and for whom practice was not usual source of care

Age group	Māori		
	Private GP	Community-governed	Māori provider
New to practice:			
0–24	13.1	3.3	17.0
25–44	6.7	11.1	12.5
45+	7.2	3.9	0
Total (N)	10.0% (1059)	6.0% (84)	10.1% (297)
New to practitioner:			
0–24	20.9	36.7	35.3
25–44	12.5	29.6	21.5
45+	7.3	11.5	9.1
Total (N)	15.8% (1057)	27.4% (84)	22.8% (294)
Not usual source:			
0–24	12.9	6.9	21.7
25–44	7.9	15.4	9.0
45+	8.2	0	5.1
Total (N)	10.6% (1038)	7.4% (81)	12.7% (292)

Mean duration of consultation by age group and provider type is presented in Table 13.3. For all three age groups, mean visit length was longer in CG practices. When analysed by severity of problem (Table 13.4), the mean duration of visit increased as severity increased in all three practice types.

Table 13.3 Mean duration of visit, by age group

Age group	Mean duration of visit (minutes)* Māori		
	Private GP	Community-governed	Māori provider
0–24	12.2	18.0	11.5
25–44	14.8	19.5	16.7
45+	15.4	21.2	15.9
Total (N)	13.6 (1031)	19.4 (81) [†]	14.3 (281)

* Excludes missing data.

† Excludes one outlier.

Table 13.4 Mean duration of visit, by severity of worst problem

Severity	Mean duration of visit (minutes)* Māori		
	Private GP	Community-governed	Māori provider
Life-threatening	23.3	0	22.5
Intermediate	14.3	21.1	16.6
Self-limiting	12.8	13.9	12.4
Not applicable	12.7	26.3	12.9
Total (N)	13.6 (1031)	19.4 (81)*	14.3 (281)

* Excludes one outlier.

Table 13.5 presents data on the number of problems managed in each visit (to a maximum of four problems), by age group and provider type. Generally speaking, the proportion of visits with more than one problem increased with age. Within each age group the data suggest that a greater proportion of visits by Māori to CG providers involved a greater number of problems than visits to private and Māori providers. However, only 83 visits by Māori were made to CG providers, so it is inappropriate to generalise these findings.

Table 13.5 Percentage distribution of number of problems per visit, by age group

No. of problems per visit*	Māori								
	Private GP			Community-governed			Māori provider		
	0–24	25–44	45+	0–24	25–44	45+	0–24	25–44	45+
0	0.1	0	0.8	0	0	0	1.7	2.5	0
1	66.9	50.9	42.4	50.0	22.2	19.2	83.1	55.0	44.4
2	27.8	27.0	27.0	20.0	22.2	30.8	7.6	13.8	29.3
3	4.2	16.0	18.3	13.3	18.5	15.4	6.8	17.5	17.2
4	1.1	6.2	11.5	16.7	37.0	34.6	0.9	11.3	9.1
Total (N)	100% (537)	100% (288)	100% (231)	100% (30)	100% (27)	100% (26)	100% (118)	100% (80)	100% (99)
Mean	1.4	1.8	2.0	2.0	2.7	2.7	1.2	1.8	1.9
Median	1.0	1.0	2.0	1.5	3.0	2.5	1.0	1.0	2.0

* Up to four problems per visit could be recorded.

Table 13.6 presents the percentage of visits that included the ordering of any test/investigation, by sex and age group. Generally speaking, the data suggest that higher proportions of visits (all age groups) to CG providers were associated with the ordering of a test/investigation (although the caveats about low numbers apply here again).

Table 13.6 Percentage of visits for age group at which any test/investigation was ordered, by sex

Any test/ investigation	Māori					
	Private GP		Community-governed		Māori provider	
	Male	Female	Male	Female	Male	Female
Age group						
0–24	12.6	14.2	26.7	46.7	11.5	23.2
25–44	25.5	26.6	25.0	26.3	14.8	28.9
45+	35.2	30.3	54.6	26.7	15.2	30.3
All age groups (N)	20.3% (448)	21.3% (606)	34.3% (34)	32.7% (49)	13.2% (121)	27.6% (174)

Table 13.7 presents information about the number of treatment items, by practice type. Data are provided about prescription items, other treatments and all treatment items (the two combined). The rate of use of any treatment per 100 visits was higher in CG providers. However, the difference between CG and the other two providers was reduced when the number of problems managed during each visit was taken into account. Rates of use of any treatment per 100 problems were similar in private and Māori providers but slightly higher in CG practices (166 per 100 problems). Rates of use of prescription items and other treatments (both per 100 visits and per 100 problems) were slightly higher in CG practices compared with private and Māori providers.

Table 13.7 Number of treatment items, by practice type, per 100 visits and per 100 problems

	Māori		
	Private GP	Community-governed	Māori provider
All treatment items*			
Per 100 visits (N)	244 (1062)	403 (84)	252 (295)
Per 100 problems (N)	150 (1649)	166 (204)	154 (477)
All prescription items			
Per 100 visits	130	177	137
Per 100 problems	80	73	84
All other treatment items			
Per 100 visits	114	226	115
Per 100 problems	70	93	70

* All treatment items = All prescription items + All other treatment items.

Table 13.8 presents information about referrals, by practice type. Emergency referrals were made for around 2% of Māori patients in all three practice types. The proportions of visits that resulted in a medical/surgical referral were similar (around 7%) in private and Māori provider practices but higher in CG practices (14.3%). Non-medical referrals were made in similar proportions of visits at all three practice types.

Table 13.8 Percentage of visits at which patient referred on, by practice type

Referral type*	Māori		
	Private GP (N = 1066)	Community-governed (N = 84)	Māori provider (N = 297)
Emergency	2.0	2.4	2.0
Medical/surgical	7.0	14.3	7.4
Non-medical	4.7	3.6	5.4

* One referral is counted per visit; referral types are mutually exclusive; and emergency referrals are given precedence.

14 Māori and Non-Māori Patient Visits to Accident and Medical (A&M) Practitioners

This section presents information about Māori and non-Māori visits to Accident and Medical (A&M) clinics. A&M clinics were defined as community-based clinics that were open seven days per week, with extended hours (until at least 8 pm), and that had X-ray equipment on-site. The reader should be aware that the low numbers of Māori visits (118) (Table 14.1) and the lack of tests of statistical significance mean that these findings must be treated with caution.

Table 14.1 Number of A&M log (and visit) questionnaires submitted

Area	All hours*		Monday–Friday, 8 am–6 pm [†]		Other hours [†]	
	Māori [‡]	Non-Māori	Māori	Non-Māori	Māori	Non-Māori
Auckland	306 (75)	4001 (940)	– (38)	– (378)	– (37)	– (514)
Rest of North Island	161 (38)	458 (116)	– (24)	– (58)	– (13)	– (58)
South Island	21 (5)	472 (114)	– (2)	– (70)	– (3)	– (41)
All New Zealand	488 (118)	4931 (1170)	– (64)	– (506)	– (53)	– (613)

* Logs. Date and time of attendance were not collected.

† Visits.

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

Information about the doctors that worked in the A&M clinics is presented in Table 14.2. Just over half of the doctors were New Zealand European, 4.5% were Māori and over 40% were of Asian or “other” ethnicity. Just over one-quarter of the doctors were female. Over three-quarters of the doctors were under the age of 45 years and the mean age was 40 years. Just over three-quarters had been in practice for 15 years or less. While the mean length of time the practitioners had been in practice (since graduation) was 10.1 years, the mean length of time they had worked in their current clinic was much shorter (2.9 years). Just under two-thirds of the practitioners had graduated in New Zealand, about 10% in the United Kingdom, about 5% in Australia, and the remaining quarter had graduated in other countries. Only one-third belonged to the RNZCGP. The practitioners worked an average of 6.3 half-day sessions a week. They saw 86.6 patients in a standard daytime week, at an average of 13.7 patients per half day.

Table 14.2 Characteristics of participant A&M practitioners

Practitioner* characteristic	A&M practitioners (N = 67)
Ethnicity %	
New Zealand European	53.7
Māori	4.5
Pacific	1.5
Asian	17.9
Other	22.4
Total	100%
Gender %	
Female	26.9
Male	73.1
Age %	
< 35	23.1
35–44	55.4
45–54	18.5
55–64	3.1
> 64	0
Total	100%
Mean	40.0
Years in practice %	
< 6	42.6
6–15	32.8
16–25	21.3
> 25	3.3
Total	100%
Mean	10.1
Years this practice %	
< 6	86.2
6–15	13.9
16–25	0
> 25	0
Total	100%
Mean	2.9
Place of graduation %	
New Zealand	61.2
UK	9.0
Australia	4.5
Other	25.4
Total	100%
% RNZCGP	32.1%
% NZMA	29.2%
Mean daytime patients/week	86.6
Mean half-days/week	6.3
Mean daytime patients per half-day	13.7

* Participants are those practitioners who provided visits data.

Information was collected in log form for all 5419 consultations with practitioners. Visits information (more detailed) was collected from approximately one in four (23%) of consultations. In total (log visits, all hours) Māori accounted for 9% of visits to A&M clinics; 11.2% of visits during usual working hours (Monday–Friday, 8 am–6 pm) and 8% of visits during other hours (Table 14.3).

Table 14.3 Percentage distribution of A&M logs and visits, by patient ethnicity

Ethnic group*	Logs	Visits	
	All hours	M–F, 8 am–6 pm	Other hours
Māori	9.0 (488)	11.2 (64)	8.0 (53)
Non-Māori	91.0 (4931)	88.8 (506)	92.0 (613)
New Zealand European	59.6 (3230)	59.7 (340)	58.0 (386)
Pacific	10.8 (585)	8.8 (50)	13.2 (88)
Asian	10.0 (541)	11.1 (63)	10.7 (71)
Other	10.6 (575)	9.3 (53)	10.2 (68)
All (N)	100% (5419)	100% (570)	100% (666)

* Ethnicity was self-reported, with multiple categories allowed. One ethnic category was then assigned per patient according to prioritisation of Māori and Pacific peoples. Patients with missing ethnicity data were excluded.

Table 14.4 presents the distribution of consultations by age for visits to A&M clinics (all hours). Children under 15 years of age accounted for over half of Māori and one-third of non-Māori visits to A&M clinics. For both ethnic groups, adults aged 25–44 years were the next most frequent attendees at A&M clinics, and the proportions of older age groups attending these centres declined with increasing age. The proportion of Māori in each age group over 15 years was lower than the equivalent proportion of non-Māori.

Table 14.4 Percentage distribution of logs, by patient age group

Age group	A&M: all hours*	
	Māori	Non-Māori
0–14	54.1	37.4
15–24	14.6	17.8
25–44	20.8	27.1
45–64	8.0	12.6
65+	2.5	5.1
Total (N)	100% (486)	100% (4901)
Mean age	18.2	24.8

* Logs. Date and time of attendance were not collected.

Table 14.5 presents the distribution of visits, by patient age and sex, for visits made in usual working hours (Monday–Friday, 8 am–6 pm) and in “other hours”. During usual working hours, Māori males over 15 years of age and Māori females over 45 years of age made up smaller proportions of visits to A&M clinics than their non-Māori peers. Conversely, Māori males under 15 years and Māori females under 25 years made up higher proportions of visits than their non-Māori peers.

For both ethnic groups and both sexes, children aged under 15 made up the highest proportion of visits outside usual working hours. The proportion of visits made by children during usual working and “other hours” was higher in the Māori ethnic group.

Table 14.5 Percentage distribution of visits, by patient sex and age group

Age group	A&M: M–F, 8 am–6 pm				A&M: other hours			
	Māori		Non-Māori		Māori		Non-Māori	
	Male	Female	Male	Female	Male	Female	Male	Female
0–14	61.3	37.5	31.1	31.8	66.7	56.7	51.7	39.4
15–24	12.9	25.0	17.5	20.9	9.5	3.3	15.0	21.3
25–44	12.9	28.1	31.5	25.9	9.5	33.3	23.8	22.9
45–64	12.9	6.3	14.0	13.0	14.3	6.7	7.8	11.0
65+	0	3.1	5.8	8.4	0	0	1.7	5.5
Total (N)	100% (31)	100% (32)	100% (257)	100% (239)	100% (21)	100% (30)	100% (294)	100% (310)
Mean age	15.1	22.9	27.3	27.9	15.3	17.1	18.7	23.6

Table 14.6 presents the distribution of visits by NZDep2001 quintile. For both usual working and “other hours”, a higher proportion of the Māori sample was in the more deprived quintiles. Within ethnic groups, the distribution of deprivation was similar among those patients attending during usual working and other hours.

Table 14.6 Percentage distribution of visits, by NZDep2001 quintile

NZDep2001 quintile	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
1	3.5	24.2	1.9	27.2
2	5.3	19.3	5.7	18.8
3	15.8	18.4	26.4	16.5
4	24.6	17.5	22.6	15.8
5	50.9	20.6	43.4	21.6
Total (N)	100% (57)	100% (462)	100% (53)	100% (569)

Table 14.7 presents information about the relationship between the practice, practitioner and person attending for care.

For visits made during usual working hours, the A&M clinic was not the usual source of care for 72.9% of Māori and 74.3% of non-Māori visits. A smaller proportion of Māori were new to the practice (20.3% versus 34.3% for non-Māori) and new to the practitioner (57.1% versus 71.8% of non-Māori). These findings suggest higher use of these services by Māori, a suggestion that is corroborated by the higher mean number of visits in the previous 12 months by Māori (5.2) compared to non-Māori (3.0).

For visits made at other times, the A&M clinic was not the usual source of care for 69.6% of Māori and 84.7% of non-Māori patients. A smaller proportion of Māori were new to the practice (35.4% versus 44.2% of non-Māori). The same proportion (80.9%) of Māori and non-Māori were new to the practitioner. The mean number of visits in the previous 12 months to these centres at other hours was slightly higher for Māori (3.2 visits versus 2.5 for non-Māori).

Table 14.7 Percentage of patients who were new to practice, new to practitioner or for whom practice was not usual source of care, and mean number of visits in last 12 months

	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
New to practice (N)	20.3 (64)	34.3 (495)	35.4 (48)	44.2 (593)
New to practitioner (N)	57.1 (63)	71.8 (475)	80.9 (47)	80.9 (572)
Not usual source (N)	72.9 (59)	74.3 (459)	69.6 (46)	84.7 (568)
No of visits to practice in last 12 months (mean)* (N)	5.2 (60)	3.0 (487)	3.2 (48)	2.5 (548)

* Includes the current visit.

Table 14.8 describes the sources of payment for Māori and non-Māori attending A&M clinics during usual working hours and other hours.

During usual working hours, cash/GMS payments accounted for 58.3% of Māori and 65.4% of non-Māori visits. ACC payments accounted for 41.7% of Māori and 32.9% of non-Māori visits during usual working hours. Among Māori, payments for children under six accounted for the highest proportion of visits, the payments for which were from cash or GMS sources. However, among non-Māori, adults without a CSC were the commonest sub-group for patients whose payment came from cash or GMS.

For visits that occurred during other hours, cash/GMS was the commonest form of payment for both ethnic groups, but accounted for a higher proportion of visits made by

Māori (90.5% versus 78.8% of non-Māori visits). ACC sources accounted for a smaller proportion of payments than in visits during usual working hours (9.5% of Māori and 20.6% of non-Māori). A smaller proportion of adults with CSCs attended during other hours (versus those who attended in usual working hours) in both ethnic groups.

Table 14.8 Source and type of payment cited, as percentage of visits

Source of payment*	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
% visits cash/GMS	58.3	65.4	90.5	78.8
Under 6 (Y)	54.3	27.2	60.5	41.1
Child, card (J1)	5.7	1.4	0	3.8
Child, no card (J3)	2.9	10.1	7.9	11.1
Adult, card (A1)	22.9	17.4	2.6	8.3
Adult, no card (A3)	14.3	43.9	29.0	35.8
Total cash/GMS	100%	100%	100%	100%
% visits ACC payment	41.7	32.9	9.5	20.6
% visits maternity care	0	1.6	0	0.6
Total (N)	100% (60)	100% (428)	100% (42)	100% (499)

* Categories are mutually exclusive, with maternity or ACC taking precedence over cash/GMS where more than one is cited.

Table 14.9 presents data relating to the urgency and severity of the worst problem managed during, and the mean duration of, visits to A&M clinics.

During usual working hours, the distribution of urgency was similar for Māori and non-Māori, with just over half of the visits by both ethnic groups being in the most urgent groups (to be seen ASAP or on the day of the visit). Severity of the worst problem was slightly higher in Māori; although no Māori visits were described as life-threatening, just over half of Māori visits were of intermediate severity, whereas 41.4% of non-Māori visits were for life-threatening or intermediate severity problems. A higher proportion of non-Māori visits were for problems where a severity rating was not applicable. The mean duration of visits during usual working hours was similar for both ethnic groups.

During other hours, a slightly higher proportion of Māori visits were considered more urgent (as soon as possible or today), and a correspondingly smaller proportion were considered to be of lower urgency, than non-Māori visits. The distribution of severity for visits occurring during other hours was similar between Māori and non-Māori. The mean duration of visit was lower for Māori (13.6 minutes) than non-Māori visits (16.6 minutes).

Table 14.9 Percentage distribution of urgency or severity of worst problem, and mean duration of visit

	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Urgency				
ASAP	6.6	10.1	13.7	15.5
Today	50.8	46.6	60.8	55.8
This week	41.0	34.2	19.6	26.0
This month	1.6	9.1	5.9	2.8
Total (N)	100% (61)	100% (483)	100% (51)	100% (582)
Severity				
Life-threatening	0	1.9	0	1.0
Intermediate	52.5	39.5	34.1	32.8
Self-limiting	39.3	41.8	56.8	55.4
Not applicable	8.2	16.8	9.1	10.7
Total (N)	100% (61)	100% (483)	100% (44)	100% (579)
Duration of visit (mean minutes) (N)	16.6 (57)	16.5 (406)	13.6 (43)	16.6 (472)

Reasons-for-visit (stated by the patient) are noted in Table 14.10 for A&M visits. During usual working hours the three commonest reasons in both ethnic groups were symptoms, injury/poisoning and disease. There were no marked differences between ethnic groups in the proportions of people in each of these three reasons.

These three reasons were also the commonest reasons-for-visit during other hours, and ethnic differences in the distribution of these reasons were not marked. In both ethnic groups, however, a lower proportion of people presenting during other hours named injury/poisoning as a reason-for-visit than of those presenting during normal working hours.

Table 14.10 Reason-for-visit components as percentage of all reasons

Component	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Symptoms	35.9	32.5	44.4	47.3
Injury/poisoning	19.2	16.4	8.3	11.3
Disease	18.0	24.3	30.6	28.0
Treatments	14.1	13.2	6.9	5.5
Investigations	6.4	6.0	4.2	4.2
Unspecified conditions	3.9	2.6	0	0.9
Prevention	2.6	3.3	2.8	2.1
Administrative	0	1.9	0	0.1
Not coded	0	0	2.8	0.6
Total (N)	100% (78)	100% (585)	100% (72)	100% (710)
Mean no. of reasons per visit*	1.2	1.2	1.4	1.2

* Up to four reasons per visit could be recorded.

Table 14.11 shows the rates of occurrence of the various problem groups in visits to A&Ms. Injury/poisoning was the commonest problem group managed at visits made during usual working hours, with a higher rate of occurrence among Māori patients (48.4 per 100 visits versus 31.0 per 100 visits for non-Māori).

During other hours, respiratory problems were most commonly managed (41.5 per 100 visits in Māori and 31.3 in non-Māori). For Māori, skin infections was the second, and injury/poisoning the third, commonest problem type. However, for non-Māori, injury/poisoning was the second, and nervous systems/sense organs the third, commonest problem type.

For both Māori and non-Māori, injury/poisoning was more common in visits occurring during usual working hours than in visits during other hours.

The mean numbers of problems managed during each visit were similar for both ethnic groups and both time periods.

Table 14.11 Frequency of problems (per 100 visits)

Problem grouping READ2 chapter*	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Injury/poisoning	48.4	31.0	13.2	23.2
Respiratory	26.6	24.7	41.5	31.3
Actions	9.4	9.9	7.5	5.9
Nervous system/sense organs	9.4	9.9	11.3	13.2
Musculoskeletal/connective tissue	6.3	4.0	3.8	3.3
Skin/subcutaneous tissue	4.7	8.3	17.0	6.5
Symptoms non-specific	4.7	3.2	7.5	3.8
Infectious/parasitic	3.1	7.1	11.3	12.7
Digestive	3.1	3.4	0	4.9
Investigations	1.6	4.2	3.8	3.3
Cardiovascular/circulatory	1.6	3.2	3.8	1.1
Unspecified conditions	1.6	1.8	0	0.2
Endocrine/nutritional/metabolic/immunity	1.6	0.8	1.9	0.5
Genito-urinary	0	3.6	0	2.9
Mental	0	1.4	1.5	1.3
Cancers/neoplasms	0	1.4	0	0.2
Pregnancy/childbirth/puerperium	0	1.0	0	0.3
Congenital	0	0.6	0	0
Blood/blood-forming organs	0	0	0	0.2
Perinatal	0	0	0	0.2
Not coded	0	0.8	0	0.5
Total problems per 100 visits (N)	121.9 (64)	120.0 (506)	128.3 (53)	115.3 (613)
Mean no. of problems per visit [†]	1.2	1.2	1.3	1.2

* Major groupings are based on READ2 chapters.

[†] Up to four problems per visit could be recorded.

For both the Māori and non-Māori ethnic groups most visits were for new problems (Table 14.12).

Table 14.12 Percentage distribution of problem status

Status	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
New problem	44.9	51.1	51.5	60.4
Short-term follow-up	23.1	23.6	22.1	12.5
Long-term follow-up	1.3	7.4	8.8	1.8
Long-term with flare-up	2.6	3.0	4.4	4.0
Preventive	1.3	1.5	2.9	0.7
Not given	26.9	13.5	10.3	20.7
Total problems (N)	100% (78)	100% (607)	100% (68)	100% (707)

Rates of requesting an investigation (any laboratory test, imaging or other investigation) are presented in Table 14.13. During usual working hours, the rate of requesting an investigation was lower for Māori (9.4 per 100 visits versus 23.5 for non-Māori). Differences in rates were observed between Māori and non-Māori for all three types of investigation, with the rates for Māori being lower than those for non-Māori.

In visits during other hours, the rates of requesting any investigation, and the rates for each type of investigation, were similar between ethnic groups.

Table 14.13 Rate per 100 visits at which tests and investigations were ordered

Test group	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Any laboratory test	6.3	11.1	5.7	5.7
Imaging	3.1	8.7	3.8	4.6
Other	1.6	7.3	7.6	6.2
Any test/investigation (N)	9.4 (64)	23.5 (506)	13.2 (53)	15.5 (613)

Table 14.14 presents information on the number of treatment items (prescriptions, other (non-prescription) treatments and the total). During usual working hours the rates of use of all treatments per 100 visits and per 100 problems were lower for Māori than for non-Māori. The rates of use of prescription items were also lower for Māori than for non-Māori, while the rates of use of other treatments were similar between Māori and non-Māori.

During “other hours” the rates (per 100 visits and per 100 problems) of use of all treatments and prescriptions were higher for Māori than for non-Māori. The rates of use of other treatments were similar between Māori and non-Māori.

Table 14.14 Number of treatment items per 100 visits, and per 100 problems

	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
All treatment items:*				
Per 100 visits (N)	123 (64)	141 (506)	166 (53)	125 (613)
Per 100 problems (N)	101 (78)	117 (607)	129 (68)	109 (707)
All prescription items:				
Per 100 visits	48	67	111	76
Per 100 problems	40	56	87	66
All other treatment items:				
Per 100 visits	75	73	55	49
Per 100 problems	61	61	43	43

* All treatment items = All prescription items + All other treatment items.

Table 14.15 presents the rates (per 100 visits) of prescription of different drug groups. Where visits occurred during usual working hours, the three commonest drug groups for both Māori and non-Māori were infections, nervous system, and respiratory system/allergies. For visits occurring during other hours the same three drug groups were prescribed most commonly to both Māori and non-Māori patient visits.

Of note, dermatological agents were used more commonly for Māori (15.1 per 100 visits) than non-Māori (3.4 per 100 visits) during “other hours”. Similarly, respiratory system drugs were used more commonly for Māori (24.5 per 100 visits) than non-Māori (9.5 per 100 visits) during these hours.

Table 14.15 Prescribing rates for drug groups (prescription items per 100 visits)

Drug group (Pharmacodes/ATC level 1)	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
16 Infections – agents for systemic use	15.6	20.6	28.3	24.5
22 Nervous system	14.1	13.2	26.4	20.4
28 Respiratory system and allergies	7.8	8.3	24.5	9.5
19 Musculoskeletal system	4.7	4.0	0	3.9
10 Dermatologicals	1.6	5.3	15.1	3.4
1 Alimentary tract and metabolism	1.6	3.2	0	2.6
7 Cardiovascular system	1.6	1.2	1.9	0.3
13 Genito-urinary system	0	2.0	7.5	2.4
38 Extemporaneously compounded preparations and galenicals	0	2.0	0	2.0
4 Blood and blood-forming organs	0	1.4	5.7	1.8
14 Systemic hormone preparations (excluding oral contraceptives)	0	1.4	1.9	0.5
31 Sensory organs	0	1.4	0	1.5
25 Oncology agents and immunosuppressants	0	0.2	0	0
40 Special foods	0	0	0	0
Medication non-specific	1.6	3.4	0	3.3
Total (N)	48.4 (64)	67.4 (506)	111.3 (53)	76.0 (613)

During both usual working hours and other hours, the four commonest non-drug treatments were the same for both ethnic groups (Table 14.16). The rate per 100 visits for dressing was higher during usual working hours than in other hours for both ethnic groups. This is likely to be a result of the higher proportion of visits for injury/poisoning that occurred during this time period.

Table 14.16 Frequency of non-drug treatments per 100 visits

Non-drug treatments	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Health advice	17.2	13.8	13.2	10.8
Dressing	17.2	9.3	7.5	5.9
Investigation/examination/screening	15.6	16.8	15.1	11.4
Referral	9.4	8.9	7.5	5.9
Follow-up	4.7	6.5	1.9	5.1
Other procedure	4.7	5.7	3.8	3.9
Minor surgery	1.6	6.5	3.8	3.6
Administration	1.6	2.2	1.9	1.0
Physical medicine	1.6	1.8	0	0.7
Immunisation	1.6	1.2	0	0.7
Complementary medicine	0	0.6	0	0.3
Total (N)	75.0 (64)	73.3 (506)	54.7 (53)	49.1 (613)

Table 14.17 presents information about follow-up and referral in A&M visits.

In visits occurring during normal working hours, similar percentages of Māori and non-Māori had follow-up arranged and/or were referred on. There were no differences in the percentages of Māori and non-Māori that were referred as emergency, medical/surgical or non-medical referrals.

In visits that occurred during “other hours”, a slightly smaller proportion of Māori had follow-up arranged (37.7% versus 43.2% of non-Māori), and a similar proportion were referred on.

Table 14.17 Frequency of types of disposition (percent of visits)

Disposition*	A&M: M–F, 8 am–6 pm		A&M: other hours	
	Māori	Non-Māori	Māori	Non-Māori
Follow-up within three months	46.9	48.4	37.7	43.2
Referred on	15.6	16.2	15.1	16.0
Emergency	4.7	4.2	3.8	2.6
Medical/surgical	4.7	4.4	0	2.6
Non-medical	4.7	7.1	7.6	10.3
(N)	(64)	(506)	(53)	(613)

* “Missing” is counted as “none”; follow-up and referral are not mutually exclusive; one referral is counted per visit; referral types are mutually exclusive; and emergency referrals are given precedence.

15 Summary and Discussion

The data presented here from the NatMedCa 2001/02 survey represent the first nationally representative collection of information about Māori patients' experiences in general practice. This is also the first report containing detailed quantitative information on the experiences of Māori patients in different types of primary care providers, and in A&M clinics. The limitations of this report are discussed in section 15.3. However, it is important to remind readers up front that the descriptive nature of this report, without the use of tests of statistical significance, and the low sample sizes in some sections (particularly sections 13 and 14), limit the conclusions that can be drawn from the data. Therefore this discussion focuses on the experiences of Māori nationally and does not cover the information detailed in sections 13 and 14.

15.1 Results

The Māori patients included in this study were younger than their non-Māori counterparts, and this difference will influence the findings for each group. For example, it may explain the greater prominence of respiratory conditions in the Māori group. However, it may also mask other differences. For example, there were few differences between Māori and non-Māori in the number of problems managed during each visit, but there were differences between Māori and non-Māori in the status of problems (a larger proportion of problems were “new” and a smaller proportion “long-term follow-up” among Māori). Given the higher burden of disease experienced by Māori, these findings may be considered unusual. However, they may be due to the higher proportion of children and young people (who have fewer problems, and especially fewer long-term problems, than older people) in the Māori sample.

Differences in the distribution of socioeconomic status will also affect the findings of the survey. Greater proportions of Māori live in areas that fall within the most deprived NZDep2001 deciles. It is very important that people are aware of the differences in age and deprivation distributions between the Māori and non-Māori samples when they are considering the results presented in this report. It is also essential that further, more sophisticated analyses of NatMedCa data which adjust for the differences in age, deprivation and other factors be undertaken.

Māori made up just over 12% of the sample attending general practices, 11% of the sample attending A&Ms in usual working hours, and 8% of the sample attending A&Ms at other times. These proportions suggest that Māori utilisation is lower than expected, considering the proportion of Māori in the general population (about 16%) and known information about the excess burden of disease borne by Māori.

Other findings are also intriguing when considered in the light of the known disease burden. For example, the lower mean duration of consultation in all four age groups

(Table 6.6), similarities in the rate of new problem identification in age groups between 35 and 74 years (Table 8.5), and the similar or lower rates of tests/investigations in adults (particularly 25–64 years age groups) might all be considered inconsistent with known information about the burden of disease and the associated expected findings from a primary care survey such as this. Further investigation of NatMedCa data, as well as new research into this area, is required.

Some of the findings raise questions about the quality of care provided to Māori. For example, the burden of cardiovascular disease,¹⁸ and diabetes,¹⁹ is greater in the Māori population than in the non-Māori. The most recent guideline regarding the assessment and management of cardiovascular disease risk recommends that screening (including blood lipid and glucose measurement) begin at age 35 for Māori males and age 45 for Māori females.¹⁸ Given the higher burden of disease and recommendations in the cardiovascular guideline, one would expect higher rates of lipid and glucose blood test investigations in Māori. However, the age-specific rates of requesting both these blood tests in the 35–44, 45–54, and 55–64 years age groups were lower for Māori than for non-Māori.

A number of other findings also suggest different quality of care (e.g. the lower mean visit length and the lower percentage of Māori with a new diagnosis of chronic respiratory disease receiving prescriptions for respiratory drugs), but these require detailed analyses taking into account differences such as age, the number of problems managed in a visit, etc., to confirm and understand the findings. This report presents the most superficial analysis of NatMedCa data. Many more analyses are possible from this data set, and will contribute significantly to our understanding of primary care and Māori patients.

15.2 Strengths of the survey

The strengths of the survey are as follows.

- The study is the largest study of primary care undertaken in New Zealand.
- The survey is nationally representative, and the sampling frame included most GPs in New Zealand. Stratification was used to ensure that GPs in all regions and all types of practices in the “private GP” sector (e.g. single GP, group practice) were included in the survey. In addition, extra strata were included to ensure that community-governed practices and A&M clinics were also represented in the study. A separate stratum for Māori providers was not used.
- NatMedCa is very comprehensive. It has provided detailed information about a large range of factors associated with, and occurring during, primary care in New Zealand in 2001.
- The survey has sufficient Māori patients to provide detailed and reliable analyses in some areas. Further data analyses will be made in order to better understand

the experiences of Māori (and non-Māori) patients in primary care. Among other things, these analyses will assist with identifying, and adding to, the knowledge base about disparities in care.

15.3 Limitations of the study

The major limitations of this study with respect to Māori providers and patients are as follows.

- There was no specific sampling framework for Māori providers, which means that the findings relating to Māori providers who participated in this study cannot be generalised to all Māori providers throughout the country.
- The response rate for the private GPs was 70%. The response rate was similar for the CG sample, and was about 50% for A&Ms. Although a higher response rate would have been desirable, this is an acceptable response rate by international standards (e.g. the comparable Australian study achieved a response rate of about 30%).²⁰
- The sample size of Māori patients who visited CG practices and A&Ms was small. As a consequence of the low sample size, it is difficult to ascertain whether any apparent differences (e.g. between provider types in section 13 and between Māori and non-Māori patients in section 14) are meaningful. There is a similar difficulty with some of the analyses in earlier sections – particularly those relating to problems, medications and investigations – where the absolute number of Māori who had these problems, medications or investigations was very low.
- GP consultations that occurred out of usual working hours or by phone were not included in the study.
- No tests of statistical analysis were undertaken in the preparation of this report.

15.4 Policy implications

He Korowai Oranga (the Māori Health Strategy) has four pathways, one of which is to have effective health and disability services.²¹ The four objectives within this pathway relate to addressing health inequalities, improving access to and effectiveness of “mainstream” services, providing the highest-quality service, and improving Māori health information. The results of NatMedCa contained in this report provide information that can inform policy responses and development for all four of these objectives. In addition, future analyses of the NatMedCa data set could provide more detailed information in a wide variety of areas.

Data collection for NatMedCa was undertaken in 2001, prior to the implementation of primary health organisations and other facets of the Primary Health Care Strategy.²²

Given the sociodemographic information associated with Māori patients in NatMedCa, and the known burden of disease, one would expect that Māori will benefit from the latest reforms, particularly from the increased subsidy, health promotion, and initiatives such as CarePlus and Services to Increase Access. Information collected for NatMedCa will provide a useful baseline for future evaluation of the impacts of primary care reform on access to, and effectiveness of, primary health organisations.

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Appendix A: Log of Visits

NATMEDCA National Primary Medical Care Survey <div style="border: 1px solid black; padding: 2px; text-align: center; margin: 5px 0;"> (F) LOG OF VISITS </div>	
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 <input type="checkbox"/> female <input type="checkbox"/> Date of birth: day ___ mth ___ yr ___ Ethnicity: <small>(see options on cover, tick the space or spaces that apply)</small> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> Com'ty Services Cd yes <input type="checkbox"/> no <input type="checkbox"/> High user card yes <input type="checkbox"/> no <input type="checkbox"/>	Patient Two Gender male <input type="checkbox"/> female <input type="checkbox"/> Date of birth: day ___ mth ___ yr ___ Ethnicity: <small>(see options on cover, tick the space or spaces that apply)</small> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> Com'ty Services Cd yes <input type="checkbox"/> no <input type="checkbox"/> High user card yes <input type="checkbox"/> no <input type="checkbox"/>
Patient Three Gender male <input type="checkbox"/> female <input type="checkbox"/> Date of birth: day ___ mth ___ yr ___ Ethnicity: <small>(see options on cover, tick the space or spaces that apply)</small> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> Com'ty Services Cd yes <input type="checkbox"/> no <input type="checkbox"/> High user card yes <input type="checkbox"/> no <input type="checkbox"/>	<u>Patient Four</u> Gender male <input type="checkbox"/> female <input type="checkbox"/> Date of birth: day ___ mth ___ yr ___ Ethnicity: <small>(see options on cover, tick the space or spaces that apply)</small> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> Com'ty Services Cd yes <input type="checkbox"/> no <input type="checkbox"/> High user card yes <input type="checkbox"/> no <input type="checkbox"/> Please complete report for this visit.

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

Questionnaire number _____

_____ Street

Town/Suburb _____

COMPLETE REPORT FORM ➔

Appendix B: Visit Report

Practitioner ID Number _____		NATMEDCA		(G) VISIT REPORT		Questionnaire number _____	
1 Date of visit - day _____ month _____ year _____ Time of visit _____		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 <input type="checkbox"/> no <input type="checkbox"/> unknown <input type="checkbox"/>		4 How would you assess this person's level of social support? (Please circle)			
2 REASON(S) FOR VISIT (persons own words)				_____ (1) very (2) (3) (4) very (5) unknown <input type="checkbox"/> poor good			
1. _____				5 What is this person's marital status? married <input type="checkbox"/> de facto <input type="checkbox"/> single <input type="checkbox"/>			
2. _____				If single, please specify: separated <input type="checkbox"/> divorced <input type="checkbox"/> widowed <input type="checkbox"/> never married <input type="checkbox"/>			
3. _____				7 INVESTIGATIONS ORDERED		DISPOSITION	
4. _____				<input type="checkbox"/> FBC <input type="checkbox"/> Culture <input type="checkbox"/> E Sed Rate <input type="checkbox"/> Pap Smear <input type="checkbox"/> Fe etc, B12, folate <input type="checkbox"/> ECG <input type="checkbox"/> Serum glucose <input type="checkbox"/> Plain X-Ray <input type="checkbox"/> Creatinine/urea <input type="checkbox"/> Contrast etc <input type="checkbox"/> Liver function <input type="checkbox"/> Ultrasound <input type="checkbox"/> Lipids <input type="checkbox"/> Spirometry <input type="checkbox"/> Thyroid <input type="checkbox"/> Other <input type="checkbox"/> Other chemistry		Follow-up within 3/12? yes <input type="checkbox"/> no <input type="checkbox"/> Referred on? yes <input type="checkbox"/> no <input type="checkbox"/> If yes, (please specify) _____ Sent to Acute Assessment Unit or Emergency Dept. yes <input type="checkbox"/> no <input type="checkbox"/>	
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				8 GENERAL			
DIAGNOSIS/PROBLEM 1 _____				Is person new to practice? yes <input type="checkbox"/> no <input type="checkbox"/> Is patient new to practitioner? yes <input type="checkbox"/> no <input type="checkbox"/> Is practice usual source of care? yes <input type="checkbox"/> no <input type="checkbox"/> Number visits to practice in previous 12 months: _____ Has/will person also see nurse today? yes <input type="checkbox"/> no <input type="checkbox"/> Has/will person also see doctor today? yes <input type="checkbox"/> no <input type="checkbox"/> Source of payment? Cash/GMS <input type="checkbox"/> ACC <input type="checkbox"/> Duration of visit? _____minutes			
Status of problem: new <input type="checkbox"/> short-term FU <input type="checkbox"/> long-term FU <input type="checkbox"/> long-term with flare-up <input type="checkbox"/> preventative <input type="checkbox"/>				9 Was patient (child's caregiver) fluent in English? yes <input type="checkbox"/> no <input type="checkbox"/>			
*Action, treatment, drugs for this problem: _____				EVALUATION (for worst problem)			
DIAGNOSIS/PROBLEM 2 _____				Practitioner perception of urgency of this visit? ASAP <input type="checkbox"/> today <input type="checkbox"/> this week <input type="checkbox"/> this month <input type="checkbox"/> Severity? Life-threatening <input type="checkbox"/> intermediate <input type="checkbox"/> self-limiting <input type="checkbox"/> NA <input type="checkbox"/> Disability? Extent: none <input type="checkbox"/> minor <input type="checkbox"/> major <input type="checkbox"/> Type: temporary <input type="checkbox"/> permanent <input type="checkbox"/>			
Status of problem: new <input type="checkbox"/> short-term FU <input type="checkbox"/> long-term FU <input type="checkbox"/> long-term with flare-up <input type="checkbox"/> preventative <input type="checkbox"/>				Uncertainty as to diagnosis or management? none <input type="checkbox"/> low <input type="checkbox"/> medium <input type="checkbox"/> high <input type="checkbox"/>			
*Action, treatment, drugs for this problem: _____				General rapport achieved? low <input type="checkbox"/> medium <input type="checkbox"/> high <input type="checkbox"/>			
DIAGNOSIS/PROBLEM 3 _____							
Status of problem: new <input type="checkbox"/> short-term FU <input type="checkbox"/> long-term FU <input type="checkbox"/> long-term with flare-up <input type="checkbox"/> preventative <input type="checkbox"/>							
*Action, treatment, drugs for this problem: _____							
DIAGNOSIS/PROBLEM 4 _____							
Status of problem: new <input type="checkbox"/> short-term FU <input type="checkbox"/> long-term FU <input type="checkbox"/> Long-term with flare-up <input type="checkbox"/> preventative <input type="checkbox"/>							
*Action, treatment, drugs for this problem: _____							

Appendix C: Practitioner Questionnaire

NATMEDCA

National Primary Medical Care Survey

(C) PRACTITIONER QUESTIONNAIRE

Practitioner Study ID number _____ Practice Study ID number _____

Medical practitioners, 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 Maori
(5) Tongan
(6) Niuean
(7) Chinese
(8) Indian
(9) Other

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

5. **Total years in general practice?** _____

6. **Postgraduate qualifications?**
(a) M/FRNZCGP
(b) Overseas M/FRNZCGP equivalent
(c) Dip Obs
(d) Dip Anaesth
(e) Other
(specify) _____

7. **Are you a member of the New Zealand Medical Association?**
 Yes
 No
8. **How many hours per month do you spend on CME/MOPS?** _____ hours
9. **Where did you obtain your medical degree?**
 (a) New Zealand
 (b) Australia
 (c) United Kingdom
 (d) Asia
 (e) North America
 (f) Other
 (Specify) _____
10. **What are your employment arrangements during regular day-time for your standard office hours?**
 (a) Self-employed
 (b) Salaried
11. (a) **Do you provide after hours cover?**
 Yes
 No
- (b) **If yes, how often do you provide cover on week nights (e.g. one in five nights)?**

- (c) **If yes, how often do you provide cover at the weekend (e.g. 63 hours every three weeks)?** _____
12. **What are your after-hours employment arrangements?**
 (a) Self-employed
 (b) Salaried
 (c) Not applicable
13. (a) **Do you provide medical care to rest homes?**
 Yes
 No
- (b) **If yes, do you claim GMS for rest home visits?**
 Yes
 No

14. **Number of half days worked per week** _____

15. **Average number of day-time patients per week** _____

16. **Do you undertake obstetric deliveries?**

Yes

No

17. (a) **Do you provide telephone consultations in place of face-to-face consultations?**

Yes

No

(b) **If yes, please estimate the number of hours per week for telephone consultations** _____

Appendix D: Practice Questionnaire

NATMEDCA

National Primary Medical Care Survey

(A) PRACTICE QUESTIONNAIRE

Practice Study ID number _____ Please tick the appropriate box(es).

ACCESS

1. **Please indicate the standard day, half days closed, and extra hours the practice is open.**

(a) standard day (e.g. 8.30 am – 5.00 pm) Open _____ Close _____

(b) half days closed (e.g. Wednesday pm) _____

(c) extra hours (e.g. Thursday evening or Saturday morning) _____

2. **Does the practice use a booking system?**

Yes

No

3. **What booking interval is usual?** _____ minutes

4. (a) **Do practitioners in the practice make home visits?**

Yes

No

(b) **If yes, what is the average number of home visits made per week?** _____

5. **What after-hours arrangements does the practice have? (tick all that apply)**

(a) Provides own after-hours cover

(b) Member of collective after-hours service

(c) Sign out to after-hours service

(d) Other

(please specify) _____

6. **Does the practice/local GP organisation undertake any of the following?**

- | | | |
|---------------------------------------|------------------------------|-----------------------------|
| (a) Formal community needs assessment | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (b) Locality service planning | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (c) Intersectoral case management | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

SERVICES PROVIDED

7. **What screening programmes with dedicated recall and follow-up systems are provided?**

- | | |
|--------------------|--------------------------|
| (a) Cervical smear | <input type="checkbox"/> |
| (b) Diabetes | <input type="checkbox"/> |
| (c) Mammogram | <input type="checkbox"/> |
| (d) Other | <input type="checkbox"/> |
- (please specify)* _____

8. **Does the practice provide:** (please tick all that apply)

- | | | |
|-----------------------------------|------------------------------|-----------------------------|
| (a) Minor surgery | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (b) Mental health services | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (c) Group health promotion | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (d) Formal counselling services | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (e) Community worker services | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (f) Dental health services | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (g) Occupational medicine | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (h) Dedicated adolescent medicine | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (i) Dedicated older persons care | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (j) Sports medicine | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (k) Emergency/accident call out | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (l) Other | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
- (If yes, please specify)* _____

9. **Are maternity services provided by the practice?**

(a) **By doctor?**

- Yes
No

If yes, please tick all of the following which apply.

- | | |
|-----------------|--------------------------|
| (a) Antenatal | <input type="checkbox"/> |
| (b) Intrapartum | <input type="checkbox"/> |
| (c) Postpartum | <input type="checkbox"/> |

(b) **By midwife?**

Yes

No

If yes, please tick all of the following which apply.

(a) Antenatal

(b) Intrapartum

(c) Postpartum

(c) **By nurse?**

Yes

No

If yes, please tick all of the following which apply.

(a) Antenatal

(b) Intrapartum

(c) Postpartum

10. **Does the practice provide independent nursing consultations?** (*Patients seen by nurse without same-day doctor consultation.*)

Yes

No

11. **Does the practice provide complementary/alternative services?**

Yes

No

If yes, please specify _____

EQUIPMENT

12. **Does the practice have the following equipment on site?**

(a) ECG machine Yes No

(b) Equipment for intubation Yes No

(c) X-ray facilities Yes No

(d) Autoclave Yes No

(e) Baby scales Yes No

(f) Liquid nitrogen Yes No

(g) Defibrillator Yes No

(h) Cautery machine Yes No

(i) Proctoscope Yes No

MIX OF PERSONNEL

13. **Please indicate the number of FTE workers in the following categories:** (Please use Full Time Equivalents, e.g. 0.5 = 2.5 days/week; when one person performs more than one role, please estimate amount of time for each. Rough data is better than none at all!)

Worker category	Number of hours
a. Manager	
b. Reception staff	
c. Administrative staff	
d. Doctor	
e. Nurse	
f. Community worker	
g. Midwife	
h. Other (specify).....	

14. **Please indicate the number of staff according to the following ethnicity categories.**

- (a) New Zealand European _____
- (b) Māori _____
- (c) Samoan _____
- (d) Cook Island Maori _____
- (e) Tongan _____
- (f) Niuean _____
- (g) Chinese _____
- (h) Indian _____

QUALITY MANAGEMENT

15. **Does the practice have a written policy on complaints?**

Yes
 No

16. **Does the practice have a written policy on critical events investigation procedures?**

Yes
 No

17. **Does the practice have a written training policy for staff?**

Yes
 No

18. **Does the practice have a written development policy for staff?**

Yes

No

19. **Does the practice have a written policy for ongoing quality management (e.g. “RNZCGP quality programme, CHASP”)?**

Yes

No

20. **Does the practice utilise a formal peer review process?**

Yes

No

21. **Does the practice utilise evidence-based protocols and/or guidelines?**

Yes

No

INFORMATION SYSTEMS

22. **Please indicate which of the following information systems are used by the practice.**

(a) Computerised age/sex register Yes No

(b) Computerised patient records Yes No

(c) Family-based records Yes No

(d) Computerised disease register Yes No

(e) Computer-based recall system(s) Yes No

23. **What percentage of patients have NHI numbers allocated?** _____ %

SITE INFORMATION

24. (a) **What is the geographical location of the practice?**
- (1) Large city (Auckland)
 - (2) City (100,000–500,000 population)
 - (3) Town (30,000–100,000 population)
 - (4) Small town (<30,000 population)
- (b) **Is the practice in a rural location?**
- Yes
- No
- If no, go to question 25.**
- (c) **If yes, what is the rural ranking score?** _____ score
(see enclosed rural ranking score sheet)
25. **Is the practice in the central business district?**
- Yes
- No
26. **Please estimate the ethnic/cultural characteristics of the people seen at the practice.**
- (a) % New Zealand European _____
 - (b) % Māori _____
 - (c) % Other Polynesian _____
 - (d) % Other ethnic groups _____
 - (e) % English as a second language _____

FINANCIAL AND COMMERCIAL INFORMATION

27. **Please indicate which of the following best describes the practice.** (Choose only one.)
- (a) Accident and Medical Centre
 - (b) Health Care Aotearoa affiliated
 - (c) Independent Practice Association (IPA) affiliated
 - (d) Independent Practice Inc (including CareNet)
28. **Please indicate which of the following government subsidy payment systems apply to your organisation.** (Tick all that apply.)
- (a) GMS claims for individual consultations
 - (b) Capitation
 - (c) Holding pharmaceutical budget

(d) Holding investigation budget

29. **What is the standard charge for a patient visit?** (Please fill in each box below.)

	CSC	HUHC	No card
Child <6	\$	\$	\$
Child >6	\$	\$	\$
Adult	\$	\$	\$

30. (a) **For what percentage of visits are patient fees reduced?** _____ %

(b) **For what percentage of visits are patient fees waived?** _____ %

31. **Is there any category of consultation for which there is no charge (e.g. contraceptive advice)?**

Yes

No

If yes, please specify. _____

HISTORY

32. **When was the practice established?** Year _____

33. **What were the key reasons/events leading to the establishment of the practice?**

34. **Who are the key sponsors now?** (tick as many as apply)

(a) None

(b) Union

(c) Community organisation

(d) Other

(Name) _____

35. **What is the legal structure of the practice?**

(a) Sole trader

(b) Partnership

- (c) Community trust
 - (d) Incorporated society
 - (e) Limited liability company
 - (f) Other
- (Please specify) _____

MANAGEMENT STRUCTURE AND COMMUNITY PARTICIPATION

36. (a) **Does the practice organisation have a separate management committee?**

- Yes
- No

(If no, go to question 37)

(b) **If yes, is there patient representation on the committee?**

- Yes
- No

(c) **What appointment/election procedures are used for management committee?**

37. **What role does the practice professional staff play in the following:**

- (a) Clinical organisation (e.g. scheduling) _____
- (b) Financial management _____

38. **Are you a “Māori provider” (i.e. eligible for Māori provider funding)?**

- Yes
- No

Glossary and List of Acronyms

ACC: Accident Compensation Corporation – administers the New Zealand accident compensation scheme covering work and non-work injuries.

Actions: actions undertaken by a GP, including prescribing, dressings, physical treatment, surgery, screening procedures, immunisation, reassurance, counselling and certification.

A&M clinics: 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.

AMPA: Accident & Medical Practitioners' Association.

ATC: Anatomical Therapeutic Chemical – a system for classifying pharmaceuticals.

Capitation: a funding arrangement under which a general medical practitioner, or a group of practitioners, receives funding based on the number and characteristics of the patients registered with them for care.

BP: blood pressure.

CNS: central nervous system.

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.

Disability: includes short-term (e.g. influenza) as well as long-term (e.g. sequelae of stroke), major and minor.

ECG: electrocardiograph.

ED: Emergency Department – operated at the public hospital in each large town.

ENT: ear nose and throat.

Fe: Iron.

FTE: Full-time equivalent.

GMS: General Medical Services benefit – a payment claimed from the government by GPs on behalf of eligible patients.

GP: general practitioner.

Hidden agenda: a problem the patient wishes to have dealt with but has difficulty mentioning.

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.

Independent practitioners: self-employed practitioners not belonging to an IPA.

IPA: Independent Practitioners Association – undertakes contract negotiations, administrative functions and programme development for a group of GPs.

MOPS: maintenance of professional standards – a system for ongoing education of GPs.

NAMCS: National Ambulatory Medical Care Survey – an ongoing US survey which was the basis for the methodology used in this study.

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

NSAIDs: Non-steroidal anti-inflammatory drugs.

NZMA: New Zealand Medical Association.

NZNO: New Zealand Nurses organisation.

PHO: Primary health organisation.

Problem status: new – first presentation of a problem; short-term follow-up – review of a problem expected to resolve completely; long-term follow-up – review of a chronic problem; long-term with flare-up – a chronic problem with deterioration or new complication; preventive – a visit for screening or immunisation, etc.

Problems: issues identified by GPs for which the patient requires assistance; they include standard (including provisional) diagnoses, symptoms, psycho-social difficulties, the need for prescription medicines, practitioner-identified issues, administrative tasks and prevention or screening.

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

READ: a classification and coding system for reason-for-visit and diagnosis in primary medical care, officially adopted in New Zealand.

Referral: the direction of a patient to an additional source of care.

RfV: reason-for-visit – the statement of a patient’s reason for visiting the GP.

Sed: sedimentary.

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.

RNZCGP: Royal New Zealand College of General Practitioners.

Social support: includes assessment of primary and family/whānau relationships, housing and neighbourhood, work, transport and financial resources.

Treatment: synonymous with action.

Uncertainty: the degree of a GP’s lack of certainty as to how to manage the patient (uncertainty is low if diagnosis is uncertain but the need for emergency referral is clear).

Urgency: a GP’s assessment, in hindsight, of the time within which the patient should have been seen; applied to the most urgent problem detected.

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

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

White Pages listings: the section of the telephone directory that lists medical practitioners and clinics.