

Report on Maternity 2000 & 2001



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1. Introduction

1.1 BACKGROUND

This is the second in the series of annual data analysing New Zealand maternity services. It contains information on the outcomes, availability and utilisation of maternity services for women who gave birth in New Zealand in 2000 and 2001. This information is useful for District Health Boards (DHBs) when they are considering maternity services and outcomes within their district, and it will also assist them in preparing needs analysis. The report should also be of interest to lead maternity carers (LMCs), health professionals, policy makers, academics and consumers. The report allows LMCs and maternity institutions to benchmark their services, to compare their practice with that of their colleagues, and to make international comparisons. It is hoped that this data will stimulate further enquiry.

This report contains data from the recently established Maternal and Newborn Information System (MNIS), whose primary purpose is to provide information on maternity services. It is essential that every country monitors its maternity services, for only by careful observation of the past can we develop methods to improve in the future.

National maternity data has been collected in New Zealand for some years, but reports have been limited and data incomplete.¹ To improve the information available, the Health Funding Authority initiated the establishment of MNIS in July 1999, which would be a collection of perinatal information, amalgamating data from two of the five current datasets:² LMC payments claims, and the data collected at hospital discharge through the National Minimum Dataset (NMDS).

While MNIS can provide answers to a wide range of queries, data quality limitations affect the robustness of the analysis. Addressing the data quality issues will increase confidence in any analysis based on data held in MNIS. The 2000 and 2001 Report on Maternity should therefore be considered another step in the production of reliable information for mothers, practitioners, providers, policy makers and funders of maternity services in New Zealand.

Under each table in this report that analyses data from MNIS there is a statement on how complete the field is.

1.2 STRUCTURE OF THE MNIS DATABASE

MNIS currently contains extracts of data from the NMDS and data from payment claims submitted to Health Benefits (now known as HealthPAC, but for this report will remain as 'HB').

NMDS records are collected routinely about all patients discharged from a hospital in New Zealand. These records are forwarded in encoded form to the Ministry of Health's New Zealand Health Information Service (NZHIS), and are checked and validated. This data includes a substantial amount of clinical information. Diseases and operations are encoded using the international ICD-10-AM clinical codes.

¹ See NZHIS (2002), Health Funding Authority (1999), Ministry of Health (1999).

² Perinatal data sets include LMC payment claims from Health Benefits (HB), the National Minimum Dataset (NMDS) collected at discharge from hospital, the Perinatal Mortality Database, birth and death registrations, and the Maternal Mortality Database.

HB manages payment claims from providers of maternity services, who are required, under their terms of payment, to submit certain information. It should be noted that audits of the data quality are random for HB data and only a small amount of clinical data is captured. This dataset does, however, collect community data, a unique feature of the New Zealand maternity service.

For a pregnancy to be identified in the MNIS database, the woman's encrypted unique national identifier (National Health Index – NHI) and the gravida number of this pregnancy are used. All valid encrypted NHI numbers from HB claims are mapped to the corresponding encrypted NHI numbers in the NMDS records, in order to obtain all hospital events from the NMDS to supplement outpatient events recorded by HB. This should obtain all maternity-related events this mother has had from 10 months before the birth to 3 months after the birth. These extracts of data from HB are loaded monthly into MNIS, and currently contains data from March 1998. The data is non-identifiable, and it is intended to make it available to a range of agencies and analysts, according to the NZHIS Information Release Policy.

MNIS also contains information on the baby at birth and the immediate postnatal period. The baby is linked to the pregnancy by the mother's encrypted NHI and the gravida number for this pregnancy.

Currently, HB data is collected from approximately 70 percent of births. These are births that are managed by LMCs who make claims for payment under the arrangements set down in 1998 in the Notice Issued Pursuant to Section 51 of the Health and Disability Services Act 1993 Concerning the Provision of Maternity Services (Health Funding Authority 1998). Linking events therefore limits the data contained in MNIS to approximately 70 percent of births.

As of July 2002, the Notice Pursuant to Section 88 of the Health and Disability Act 2000 came into force. The non-standard Lead Maternity Care contracts were terminated in June–September 2002, which means that from 1 October 2002, MNIS will be able to capture 100 percent of LMC data.

In July 1999 a maternal and newborn advisory group was established to oversee the reporting and use of information in MNIS. This group consists of a mix of consumers, health practitioners and technical experts (for a full list of current members see Appendix 5). The advisory group meets regularly to discuss issues surrounding MNIS and the reports being produced.

1.3 DATA QUALITY AND LIMITATIONS OF MNIS

Throughout this report, any data quality issues are identified in italics. The accuracy of data within any information system is critical to the reliability of the system and its ability to provide meaningful and robust analyses. Since MNIS is still a relatively new data collection, there are significant limitations on the quality of the data.

A number of issues regarding MNIS have been identified, and solutions have been sought. These issues are being addressed at present. There are three major areas where the quality of the data in MNIS has a serious impact on analyses of maternity events and outcomes.

Incorrect and duplicate NHIs

Incorrect allocation and recording of NHI numbers have caused there to be many duplicate or incorrect NHI numbers. This means that data cannot be linked within MNIS to the appropriate

woman and/or baby, which has a direct impact on the quantity and quality of data that can be analysed.

As a separate project NZHIS is reviewing the NHI to improve the quality of and access to the existing NHI. One focus of the review will be on improving the search functionality to reduce the rate of duplication in the future; this will, therefore improve the quality of the data within MNIS.

Incorrect gravida numbers

The gravida number is used to link the mother's service records to the correct pregnancy so that all the events are correctly associated with each other. Incorrect recording of gravida numbers means that not all the events for a pregnancy can be linked, resulting in an incomplete picture of pregnancy and postnatal care. For example, the mother may be recorded at registration and at the birth as a gravida 2, but when referred for an ultrasound may be recorded as a gravida 1. Hence this mother is not recorded as having had an ultrasound for this pregnancy, but is recorded as having the ultrasound in a previous pregnancy. This issue has been addressed in the new Section 88 Maternity Notice (effective 1 July 2002) by introducing the estimated delivery date (EDD) as the unique pregnancy identifier rather than gravida number. In the meantime, the Ministry applied a data-cleansing process to identify as many records as possible associated with each pregnancy, even where there is variance in the recorded gravida number.

Non-Section-51 LMC contract data

In 2000 and 2001, approximately 30 percent of women receive pregnancy care from a non-Section-51 LMC provider. These contracts were terminated in June–September 2002. This means that, as from 1 October 2002, all LMCs now work under the Section 88 Notice, and so all LMC data will be available for future MNIS reports. A list of the non-Section-51 LMC providers is given in Appendix 9, together with some data from these providers.

Further limitations of MNIS include the following.

Breastfeeding data

Breastfeeding data is only collected at the time of transfer to the well-child provider – and transfer takes place at variable times during the six weeks after the birth. This means that it is difficult to analyse breastfeeding rates at specific times following birth. Also, the interpretation of the definition of breastfeeding status (exclusive breastfeeding, partial breastfeeding and not breastfeeding) can vary. The new Section 88 Maternity Notice, effective from July 2002, includes breastfeeding definitions, and requires that this be reported at two weeks and on discharge from the LMC. These reporting requirements are now being enforced.

Difficulty in accurately identifying home births

The identification of home births will improve from 1 July 2002, as the new Section 88 Maternity Notice has a mandatory field to indicate whether or not the birth occurred at home. It should be noted that the fee for home birth supplies does not accurately describe home births, since it can be claimed where management of the labour commences at home and there is documentation of an intention to give birth at home.

Difficulty in accurately classifying cause of stillbirth or neonatal deaths

While MNIS can answer a wide range of queries, full analysis of perinatal deaths is unable to be achieved at present. However, NZHIS holds the mortality collection, and it is hoped that the perinatal mortality data will be able to be included in MNIS in the future.

Diagnosis-Related Group (DRG) codes

Diagnosis-related grouping is a classification scheme that provides a clinically meaningful way of relating the types of patients treated in a hospital to the resources required by the hospital. The AR-DRG version 4.1 was used in the publication. This classification scheme was developed in Australia for use in monitoring and managing healthcare services. For more information, see Appendix 2.

It is estimated that the overall coding of NMDS data is 84 percent accurate.¹ This is based on the 10 random audits that were performed on all hospital discharges reported to the NMDS (not only maternity services) for the 2001/2002 financial year (1 July to 30 June). For maternity services, there is an incentive to code accurately, given that the fee for maternity facilities is based on NMDS reporting. During 2000 and 2001, most facilities were subject to financial wash-ups against actual volumes recorded in the NMDS, rather than relying on indicative volumes stated in facility's contract.

The LMC data from HB is more variable for the 2000 and 2001 period. The complex fee structure of the Section 51 Maternity Notice ensures reasonable accuracy in fields related to payment. However, there is variable population of the fields that are not required for payment purposes, particularly those of a clinical nature. All mandatory reporting requirements are now being enforced, with claims being returned if all the required fields are not complete.

It is expected that the above quality issues will be largely resolved for all data received after 1 October 2002 — the date when all LMCs are under the Section 88 Maternity Notice. The on-going quality relies on the data being accurately entered by LMC practitioners and hospital coders.

1.4 MATERNITY REPORT

This report provides information on pregnancy care, labour and birth events, postnatal care and outcomes for births occurring in the 2000 and 2001 calendar years. Most of these services are provided by public facilities, but as publicly funded maternity care is also provided by private hospitals, this information is also captured in this report.

A birth is defined as a live or stillborn baby (or babies, if it is a multiple birth) of at least 20 weeks' gestation and/or over 400 g. Antenatal events are defined as all women who were admitted to a hospital up to 44 weeks before the birth,² irrespective of the diagnosis. Re-admissions are defined as all women or babies admitted up to 6 weeks after the date of birth,³ irrespective of the diagnosis.

Analysis of the type of birth includes normal births, caesarean sections and operative births. Caesarean sections are coded as acute or elective caesarean sections, and operative births are coded as either vaginal breech birth, forceps or vacuum extractions.

¹ Coders Update 35. NZHIS 2002.

² Only for women who gave birth during the 2000 and 2001 calendar years.

³ Ibid.

This report is written using the classifications ICD-10-AM and Diagnosis-Related Group (DRG) 4.1. The New Zealand health sector changed to the more modern versions, because it was felt that it better reflected the complexity of care provided in today's environment.

The total number of babies born includes both live and stillbirths, which are determined from the mother's records. Deaths occurring up to 27 days post-birth (neonatal deaths) are determined from the babies' records. Total perinatal deaths include all stillbirths and babies who died within seven days of birth. Babies are included only if the death occurred in hospital. Perinatal mortality definitions are included in the Glossary.¹

While most of the information contained in this report is robust, some aspects of the report must be interpreted with caution. These areas are identified in the commentary accompanying the relevant tables.

For this report, data presented is from two sources – NMDS and MNIS. The source is identified below each table.

1.5 SUMMARY DATA

In New Zealand in 2000, 54,946 mothers gave birth and 55,477 babies were born in hospital, while in 2001 there were 53,805 mothers who gave birth and 54,288 babies were born in hospitals. The tables below provide a summary of the maternity data used for this report.

The difference between the Statistics NZ number and the NMDS number can be assumed to be home births. However, this should not be considered as the exact number of home births or of total births, given that Statistics NZ relies on registration of births by parents. The accuracy of the home birth numbers will improve from 1 July 2002, because of changes in the claim forms for the Section 88 Maternity Notice.

Table 1.1: Total births, by source, 2000 and 2001

| | 2000 | 2001 |
|--|--------|--------|
| Total live babies (<i>Statistics NZ</i>) | 56,994 | 56,224 |
| Live babies recorded in NMDS (hospital births) | 55,477 | 54,288 |
| Live babies recorded in MNIS (hospital births and home birth claims less 30%) | 39,777 | 37,419 |
| Total mothers (<i>Statistics NZ</i>) | 56,024 | 55,223 |
| Mothers recorded in NMDS (discharged from hospital) | 54,946 | 53,805 |
| Mothers recorded in MNIS (hospital births and home birth claims less 30%) | 40,287 | 38,693 |

Data source: NMDS, MNIS, and Statistics NZ

¹ Filtering of data from the NMDS – no birth event has been excluded, but some births have been taken out because they had a transfer on the day of birth and the birth was attached to both events. (For example, one woman had two birth events on the same day, one associated with the hospital where the birth occurred, and one to the hospital they were transferred to for their postnatal care.)

Table 1.2: Maternity hospital summary data, 2000 and 2001

| | 2000 | | 2001 | |
|-------------------------------|--------|------|--------|------|
| | No | % | No | % |
| Mothers | 54,946 | | 53,805 | |
| Liveborn babies | 55,477 | | 54,288 | |
| <i>Perinatal deaths:</i> | | | | |
| • Stillbirths | 406 | 0.7 | 379 | 0.7 |
| • In-hospital neonatal deaths | 191 | 0.3 | 134 | 0.2 |
| <i>Type of birth:</i> | | | | |
| • Normal births | 37,601 | 68.4 | 36,364 | 67.6 |
| • Caesarean section | 11,431 | 20.8 | 11,891 | 22.1 |
| • Operative births | 5914 | 10.8 | 5550 | 10.3 |

Data source: NMDS

2. Mother and Pregnancy

This section concentrates on the mother, especially her age, ethnicity, parity, gravidity and residence. Pregnancy complications including miscarriage and events leading to a hospital admission in the antenatal period are also discussed.

Data integrity

Home birth information is not included, because of the difficulty of accurately identifying the number of home births in New Zealand. MNIS is only able to identify a home birth if the LMC submits a home birth and birthing unit claim form to HB, and not all home births are captured through this claim form. This exclusion means that home birth data is unable to be reported on.

The 'Not stated' ethnic group is where there is no ethnic group data supplied, and the 'Other' ethnic group is any individual who has indicated that they identify with a ethnic group other than Māori, Pacific Peoples, Asian or European.

In 2000, there were 54,946 women who gave birth and 55,477 live babies born in hospital (as reported in the NMDS). For the same period, Statistics NZ reported that there were 56,024 mothers and 56,994 liveborn babies. In 2001 there were 53,805 women who gave birth and 54,288 live babies born in hospital (as reported in the NMDS), and for the same period Statistics NZ reported 55,223 mothers and 56,224 liveborn babies. The difference between the in-hospital numbers and the Statistics New Zealand numbers is accounted for by those mothers who gave birth, and babies who were born, outside of the hospital setting.

The data in this section is predominantly from the NMDS dataset, which represents the total hospital births.

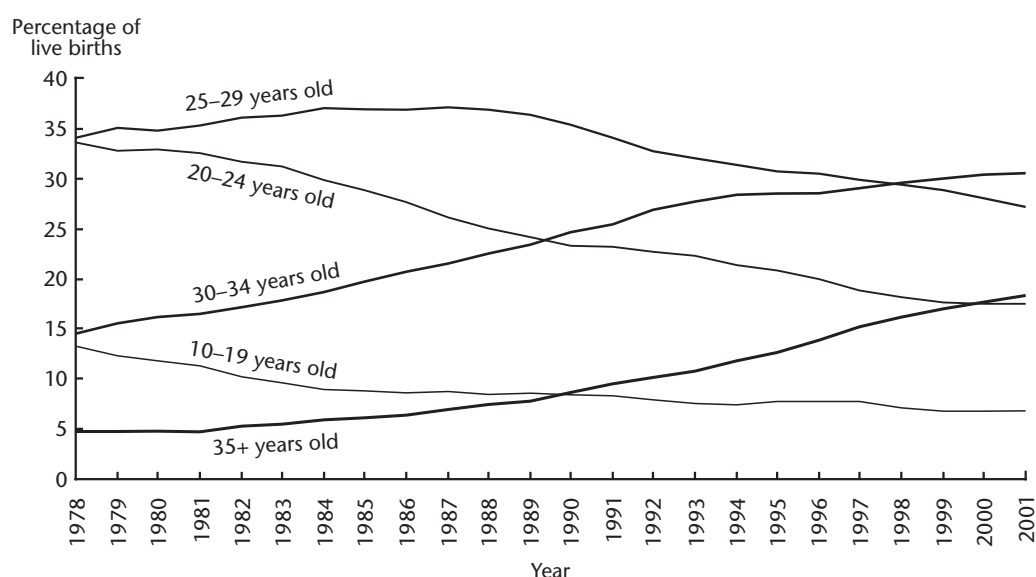


Figure 2.1: Live birth registrations by age of mother, 1978–2001

Data source: NZHIS

Table 2.1: Mother's age and ethnicity (hospital data), 2000 and 2001

| Age group | Māori | Pacific peoples | Asian | European | Other | Not reported | Total number | Total % |
|-------------|--------|-----------------|-------|----------|-------|--------------|--------------|---------|
| 2000 | | | | | | | | |
| Under 16 | 87 | 16 | 1 | 33 | 5 | 3 | 145 | 0.3 |
| 16–19 | 1566 | 387 | 62 | 1355 | 138 | 124 | 3632 | 6.6 |
| 20–24 | 3232 | 1399 | 386 | 4306 | 400 | 185 | 9908 | 18.0 |
| 25–29 | 2817 | 1518 | 1045 | 8981 | 646 | 247 | 15,254 | 27.8 |
| 30–34 | 1821 | 1360 | 1292 | 11,026 | 670 | 246 | 16,415 | 29.9 |
| 35–39 | 907 | 707 | 701 | 5348 | 309 | 93 | 8065 | 14.7 |
| 40+ | 217 | 162 | 118 | 965 | 49 | 16 | 1527 | 2.8 |
| Total | 10,647 | 5549 | 3605 | 32,014 | 2217 | 914 | 54,946 | 100.0 |
| Total % | 19.4 | 10.1 | 6.6 | 58.3 | 4.0 | 1.7 | 100.0 | |
| 2001 | | | | | | | | |
| Under 16 | 97 | 8 | 1 | 39 | 3 | 1 | 149 | 0.3 |
| 16–19 | 1566 | 389 | 56 | 1377 | 129 | 115 | 3632 | 6.8 |
| 20–24 | 3239 | 1443 | 421 | 4044 | 360 | 182 | 9689 | 18.0 |
| 25–29 | 2687 | 1576 | 976 | 8366 | 564 | 228 | 14,397 | 26.8 |
| 30–34 | 1853 | 1335 | 1212 | 11,040 | 609 | 202 | 16,251 | 30.2 |
| 35–39 | 882 | 687 | 671 | 5452 | 287 | 95 | 8074 | 15.0 |
| 40+ | 238 | 151 | 135 | 996 | 75 | 18 | 1613 | 3.0 |
| Total | 10,562 | 5589 | 3472 | 31,314 | 2027 | 841 | 53,805 | 100.0 |
| Total % | 19.6 | 10.4 | 6.5 | 58.2 | 3.8 | 1.6 | 100.0 | |

Data source: NMDS

2.1 DEMOGRAPHY

Figure 2.1 shows how the age of mothers has changed over the last 20 years, with the number of women giving birth over 30 years of age steadily increasing.

In 2000 the average age for New Zealand women to have a baby was 29.3 years,¹ and 57.6 percent of New Zealand births were to women between the ages of 25 and 34 years. Seven percent of births were to those under 20 years (3777/54,946), 19.4 percent (10,647/54,946) to Māori women, 10.1 percent to Pacific women (5549/54,946), and 6.6 percent to Asian women (3605/54,946) (Table 2.1).

In 2001 the average age for New Zealand women to have a baby was 29.4 years,² and 57.0 percent of New Zealand births were to women between the ages of 25 and 34 years. Seven percent of births were to those under 20 years (3781/53,805), 19.6 percent (10,562/53,805) to Māori women, 10.4 percent to Pacific women (5589/53,805), and 6.5 percent to Asian women (3472/53,805) (Table 2.1).

¹ *Demographic Trends 2000*. Statistics New Zealand. 2001. p 38.

² *Demographic Trends 2001*. Statistics New Zealand. 2001. p 38.

Table 2.2: Percentage of women in each age bracket, by ethnicity (hospital data), 2000 and 2001

| Age group | Māori | Pacific peoples | Asian | European | Other | Not reported | Total % | Total number |
|-------------|-------|-----------------|-------|----------|-------|--------------|---------|--------------|
| 2000 | | | | | | | | |
| Under 16 | 0.8 | 0.3 | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 145 |
| 16–19 | 14.7 | 7.0 | 1.7 | 4.2 | 6.2 | 13.6 | 6.6 | 3632 |
| 20–24 | 30.4 | 25.2 | 10.7 | 13.5 | 18.0 | 20.2 | 18.0 | 9908 |
| 25–29 | 26.5 | 27.4 | 29.0 | 28.1 | 29.1 | 27.0 | 27.8 | 15,254 |
| 30–34 | 17.1 | 24.5 | 35.8 | 34.4 | 30.2 | 26.9 | 29.9 | 16,415 |
| 35–39 | 8.5 | 12.7 | 19.4 | 16.7 | 13.9 | 10.2 | 14.7 | 8065 |
| 40+ | 2.0 | 2.9 | 3.3 | 3.0 | 2.2 | 1.8 | 2.8 | 1527 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 54,946 |
| 2001 | | | | | | | | |
| Under 16 | 0.9 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.3 | 149 |
| 16–19 | 14.8 | 7.0 | 1.6 | 4.4 | 6.4 | 13.7 | 6.8 | 3632 |
| 20–24 | 30.7 | 25.8 | 12.1 | 12.9 | 17.8 | 21.6 | 18.0 | 9689 |
| 25–29 | 25.4 | 28.2 | 28.1 | 26.7 | 27.8 | 27.1 | 26.8 | 14,397 |
| 30–34 | 17.5 | 23.9 | 34.9 | 35.3 | 30.0 | 24.0 | 30.2 | 16,251 |
| 35–39 | 8.4 | 12.3 | 19.3 | 17.4 | 14.2 | 11.3 | 15.0 | 8074 |
| 40+ | 2.3 | 2.7 | 3.9 | 3.2 | 3.7 | 2.1 | 3.0 | 1613 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 53,805 |

Data source: NMDS

Note: Numbers of births include both live births and stillbirths, but exclude miscarriages (occurring before 20 weeks' gestation).

In both 2000 and 2001 Māori women tended to have children at a younger age than women in other ethnic groups. The most common age for a Māori woman to give birth was 20–24 years in 2000 and 2001. Of all births to teenage mothers (under 20 years of age), 43.8 percent (1653/3777) in 2000 and 44.0 percent (1663/3781) in 2001 were to Māori women. Asian women, in contrast, most commonly give birth between 25 and 34 years of age, and in 2000 and 2001 only account for 1.7 percent (63/3777) and 1.5 percent (57/3781), respectively, of the teenage (under 20) births as shown in Figures 2.1a and 2.1b.

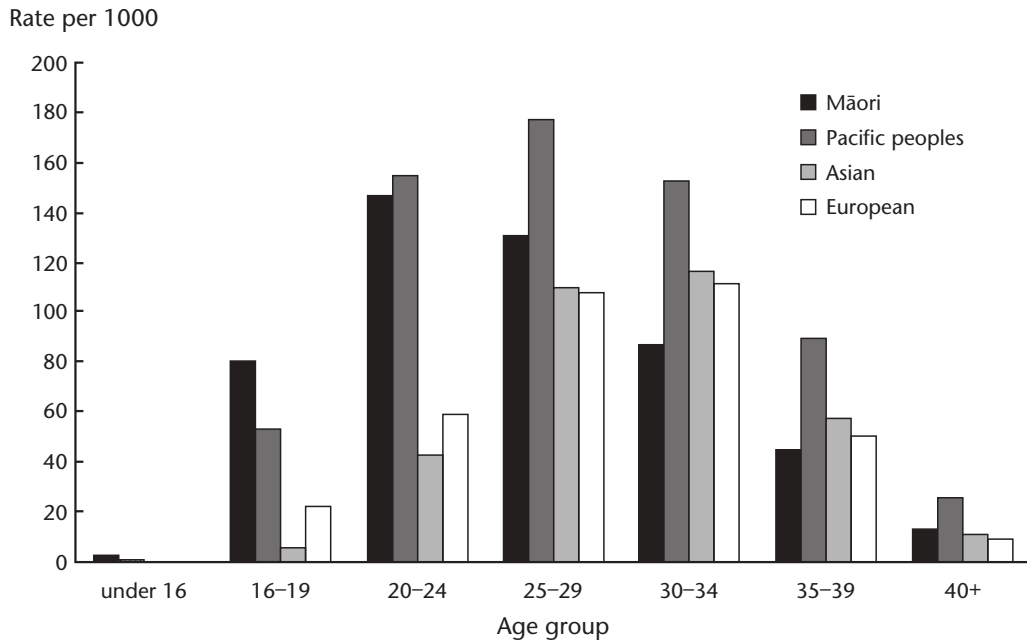


Figure 2.2a: Mother's age compared with ethnicity per 1000 women of reproductive age (hospital data), 2000

(Note: The 'Other' and 'Not reported' ethnic groups have been excluded from this graph)

Data source: NMDS

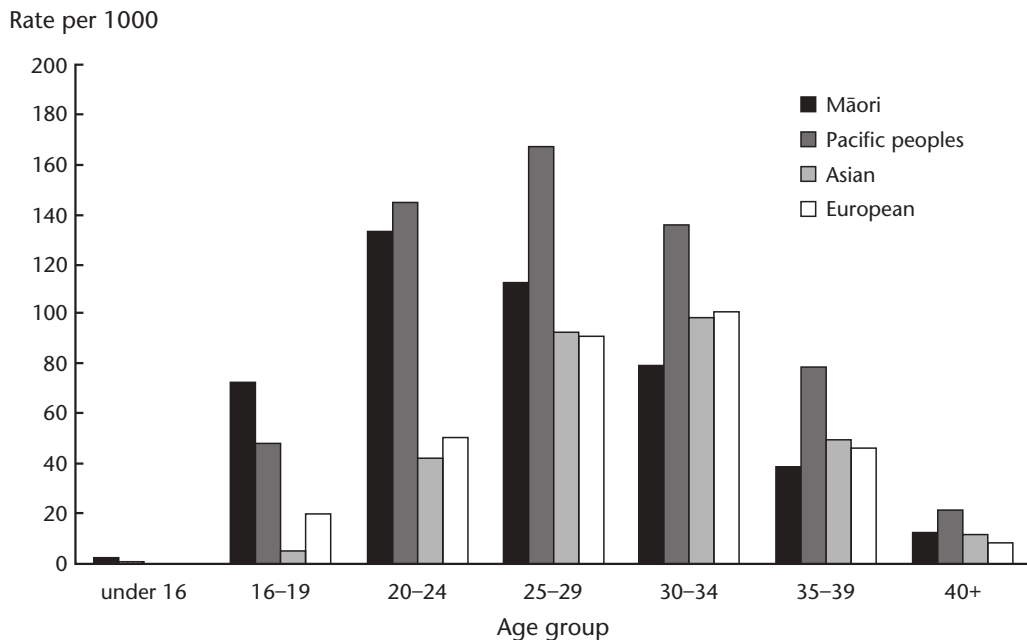


Figure 2.2b: Mother's age compared with ethnicity per 1000 women of reproductive age (hospital data), 2001

(Note: The 'Other' and 'Not reported' ethnic groups have been excluded from this graph)

Data source: NMDS

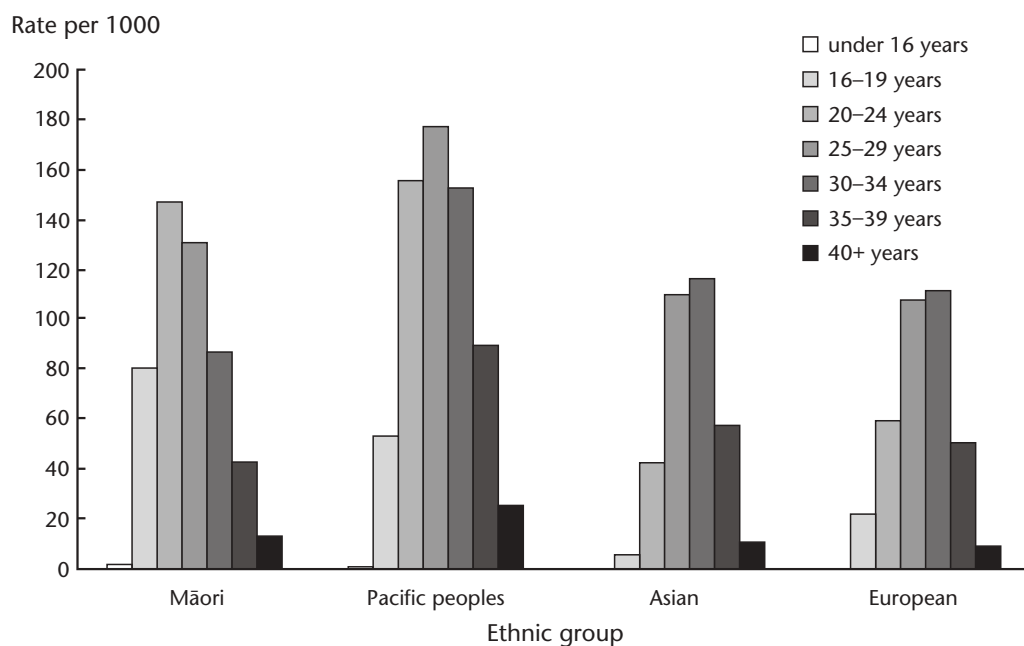


Figure 2.3a: Mother's ethnicity compared with age per 1000 women of reproductive age (hospital data), 2000

(Note: The 'Other' and 'Not reported' ethnic groups have been excluded from this graph)

Data source: NMDS

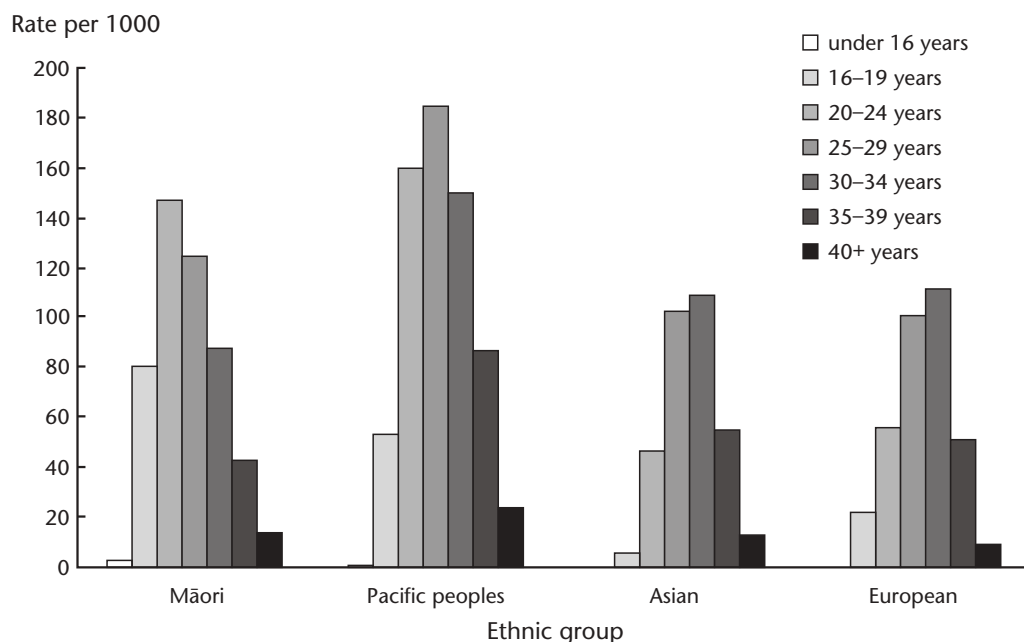


Figure 2.3b: Mother's ethnicity compared with age per 1000 women of reproductive age (hospital data), 2001

(Note: The 'Other' and 'Not reported' ethnic groups have been excluded from this graph)

Data source: NMDS

Table 2.3: Mother's place of residence, by DHB region and ethnicity (hospital data), 2000 and 2001

| DHB region | Māori | Pacific peoples | Asian | European | Other | Not stated | Total |
|--------------------|---------------|-----------------|-------------|---------------|-------------|------------|---------------|
| 2000 | | | | | | | |
| Northland | 960 | 33 | 31 | 942 | 58 | 8 | 2032 |
| Waitemata | 785 | 704 | 579 | 3869 | 301 | 103 | 6341 |
| Auckland | 625 | 1372 | 1148 | 2758 | 272 | 31 | 6206 |
| Counties Manukau | 1605 | 2085 | 677 | 2274 | 269 | 49 | 6959 |
| Waikato | 1248 | 120 | 151 | 2567 | 219 | 215 | 4520 |
| Lakes | 699 | 36 | 21 | 732 | 41 | 26 | 1555 |
| Bay of Plenty | 901 | 37 | 70 | 1327 | 217 | 54 | 2606 |
| Tairāwhiti | 362 | 17 | 4 | 303 | 40 | 16 | 742 |
| Hawke's Bay | 812 | 115 | 37 | 1228 | 39 | 5 | 2236 |
| Taranaki | 248 | 17 | 16 | 925 | 163 | 27 | 1396 |
| MidCentral | 317 | 63 | 68 | 1331 | 137 | 121 | 2037 |
| Whanganui | 325 | 14 | 15 | 549 | 14 | 5 | 922 |
| Capital and Coast | 472 | 486 | 309 | 2367 | 76 | 24 | 3734 |
| Hutt | 392 | 185 | 127 | 1258 | 16 | 2 | 1980 |
| Wairarapa | 113 | 12 | 5 | 350 | 1 | 0 | 481 |
| Nelson Marlborough | 124 | 17 | 24 | 1277 | 7 | 3 | 1452 |
| West Coast | 32 | 2 | 2 | 294 | 20 | 2 | 352 |
| Canterbury | 331 | 141 | 236 | 4358 | 155 | 114 | 5335 |
| South Canterbury | 39 | 5 | 12 | 457 | 5 | 38 | 556 |
| Otago | 88 | 38 | 49 | 1651 | 134 | 33 | 1993 |
| Southland | 147 | 19 | 12 | 1134 | 22 | 34 | 1368 |
| Other/Not reported | 22 | 31 | 12 | 63 | 11 | 4 | 143 |
| Total | 10,647 | 5549 | 3605 | 32,014 | 2217 | 914 | 54,946 |
| 2001 | | | | | | | |
| Northland | 832 | 29 | 23 | 852 | 87 | 9 | 1832 |
| Waitemata | 792 | 739 | 618 | 3,659 | 273 | 141 | 6222 |
| Auckland | 560 | 1310 | 1070 | 2752 | 256 | 35 | 5983 |
| Counties Manukau | 1549 | 2073 | 649 | 2087 | 239 | 54 | 6651 |
| Waikato | 1290 | 137 | 152 | 2725 | 125 | 137 | 4566 |
| Lakes | 694 | 35 | 24 | 698 | 26 | 20 | 1497 |
| Bay of Plenty | 899 | 33 | 58 | 1290 | 224 | 60 | 2564 |
| Tairāwhiti | 416 | 12 | 5 | 270 | 48 | 12 | 763 |
| Hawke's Bay | 797 | 110 | 45 | 1166 | 25 | 5 | 2148 |
| Taranaki | 219 | 9 | 16 | 887 | 150 | 36 | 1317 |
| MidCentral | 273 | 55 | 49 | 1261 | 146 | 109 | 1893 |
| Whanganui | 316 | 13 | 8 | 500 | 19 | 9 | 865 |
| Capital and Coast | 500 | 489 | 274 | 2301 | 62 | 3 | 3629 |
| Hutt | 421 | 219 | 129 | 1275 | 31 | 0 | 2075 |
| Wairarapa | 117 | 7 | 3 | 340 | 2 | 0 | 469 |
| Nelson Marlborough | 129 | 11 | 26 | 1235 | 11 | 4 | 1416 |
| West Coast | 31 | 0 | 0 | 298 | 9 | 6 | 344 |
| Canterbury | 361 | 135 | 221 | 4518 | 119 | 92 | 5446 |
| South Canterbury | 27 | 6 | 10 | 479 | 5 | 33 | 560 |
| Otago | 99 | 49 | 36 | 1516 | 133 | 33 | 1866 |
| Southland | 151 | 16 | 31 | 1073 | 16 | 40 | 1327 |
| Other/Not reported | 89 | 102 | 25 | 132 | 21 | 3 | 372 |
| Total | 10,562 | 5589 | 3472 | 31,314 | 2027 | 841 | 53,805 |

Data source: NMDS

Table 2.4: Mother's place of residence (percentage), by DHB region and ethnicity (hospital data), 2000 and 2001

| DHB region | Māori | Pacific peoples | Asian | European | Other | Not stated | Total |
|--------------------|-------|-----------------|-------|----------|-------|------------|-------|
| 2000 | | | | | | | |
| Northland | 47.2 | 1.6 | 1.5 | 46.4 | 2.9 | 0.4 | 100.0 |
| Waitemata | 12.4 | 11.1 | 9.1 | 61.0 | 4.7 | 1.6 | 100.0 |
| Auckland | 10.1 | 22.1 | 18.5 | 44.4 | 4.4 | 0.5 | 100.0 |
| Counties Manukau | 23.1 | 30.0 | 9.7 | 32.7 | 3.9 | 0.7 | 100.0 |
| Waikato | 27.6 | 2.7 | 3.3 | 56.8 | 4.8 | 4.8 | 100.0 |
| Lakes | 45.0 | 2.3 | 1.4 | 47.1 | 2.6 | 1.7 | 100.0 |
| Bay of Plenty | 34.6 | 1.4 | 2.7 | 50.9 | 8.3 | 2.1 | 100.0 |
| Tairāwhiti | 48.8 | 2.3 | 0.5 | 40.8 | 5.4 | 2.2 | 100.0 |
| Hawke's Bay | 36.3 | 5.1 | 1.7 | 54.9 | 1.7 | 0.2 | 100.0 |
| Taranaki | 17.8 | 1.2 | 1.1 | 66.3 | 11.7 | 1.9 | 100.0 |
| MidCentral | 15.6 | 3.1 | 3.3 | 65.3 | 6.7 | 5.9 | 100.0 |
| Whanganui | 35.2 | 1.5 | 1.6 | 59.5 | 1.5 | 0.5 | 100.0 |
| Capital and Coast | 12.6 | 13.0 | 8.3 | 63.4 | 2.0 | 0.6 | 100.0 |
| Hutt | 19.8 | 9.3 | 6.4 | 63.5 | 0.8 | 0.1 | 100.0 |
| Wairarapa | 23.5 | 2.5 | 1.0 | 72.8 | 0.2 | 0.0 | 100.0 |
| Nelson Marlborough | 8.5 | 1.2 | 1.7 | 87.9 | 0.5 | 0.2 | 100.0 |
| West Coast | 9.1 | 0.6 | 0.6 | 83.5 | 5.7 | 0.6 | 100.0 |
| Canterbury | 6.2 | 2.6 | 4.4 | 81.7 | 2.9 | 2.1 | 100.0 |
| South Canterbury | 7.0 | 0.9 | 2.2 | 82.2 | 0.9 | 6.8 | 100.0 |
| Otago | 4.4 | 1.9 | 2.5 | 82.8 | 6.7 | 1.7 | 100.0 |
| Southland | 10.7 | 1.4 | 0.9 | 82.9 | 1.6 | 2.5 | 100.0 |
| Other/Not reported | 15.4 | 21.7 | 8.4 | 44.1 | 7.7 | 2.8 | 100.0 |
| Total | 19.4 | 10.1 | 6.6 | 58.3 | 4.0 | 1.7 | 100.0 |
| 2001 | | | | | | | |
| Northland | 45.4 | 1.6 | 1.3 | 46.5 | 4.7 | 0.5 | 100.0 |
| Waitemata | 12.7 | 11.9 | 9.9 | 58.8 | 4.4 | 2.3 | 100.0 |
| Auckland | 9.4 | 21.9 | 17.9 | 46.0 | 4.3 | 0.6 | 100.0 |
| Counties Manukau | 23.3 | 31.2 | 9.8 | 31.4 | 3.6 | 0.8 | 100.0 |
| Waikato | 28.3 | 3.0 | 3.3 | 59.7 | 2.7 | 3.0 | 100.0 |
| Lakes | 46.4 | 2.3 | 1.6 | 46.6 | 1.7 | 1.3 | 100.0 |
| Bay of Plenty | 35.1 | 1.3 | 2.3 | 50.3 | 8.7 | 2.3 | 100.0 |
| Tairāwhiti | 54.5 | 1.6 | 0.7 | 35.4 | 6.3 | 1.6 | 100.0 |
| Hawke's Bay | 37.1 | 5.1 | 2.1 | 54.3 | 1.2 | 0.2 | 100.0 |
| Taranaki | 16.6 | 0.7 | 1.2 | 67.4 | 11.4 | 2.7 | 100.0 |
| MidCentral | 14.4 | 2.9 | 2.6 | 66.6 | 7.7 | 5.8 | 100.0 |
| Whanganui | 36.5 | 1.5 | 0.9 | 57.8 | 2.2 | 1.0 | 100.0 |
| Capital and Coast | 13.8 | 13.5 | 7.6 | 63.4 | 1.7 | 0.1 | 100.0 |
| Hutt | 20.3 | 10.6 | 6.2 | 61.4 | 1.5 | 0.0 | 100.0 |
| Wairarapa | 24.9 | 1.5 | 0.6 | 72.5 | 0.4 | 0.0 | 100.0 |
| Nelson Marlborough | 9.1 | 0.8 | 1.8 | 87.2 | 0.8 | 0.3 | 100.0 |
| West Coast | 9.0 | 0.0 | 0.0 | 86.6 | 2.6 | 1.7 | 100.0 |
| Canterbury | 6.6 | 2.5 | 4.1 | 83.0 | 2.2 | 1.7 | 100.0 |
| South Canterbury | 4.8 | 1.1 | 1.8 | 85.5 | 0.9 | 5.9 | 100.0 |
| Otago | 5.3 | 2.6 | 1.9 | 81.2 | 7.1 | 1.8 | 100.0 |
| Southland | 11.4 | 1.2 | 2.3 | 80.9 | 1.2 | 3.0 | 100.0 |
| Other/Not reported | 23.9 | 27.4 | 6.7 | 35.5 | 5.6 | 0.8 | 100.0 |
| Total | 19.6 | 10.4 | 6.5 | 58.2 | 3.8 | 1.6 | 100.0 |

Data source: NMDS

Table 2.5: Mother's place of residence, by DHB region and DHB region of facility of birth event (hospital data), 2000 and 2001

| DHB region of residence | DHB region for treatment | | | | | | | | | | | | | | | | | | | | Total | | |
|-------------------------|--------------------------|-------------|-------------|------------------|-------------|-------------|---------------|------------|-------------|-------------|-------------|------------|-------------------|-------------|------------|--------------------|------------|-------------|------------------|-------------|-------------|------------|------------------|
| | Northland | Waitemata | Auckland | Counties Manukau | Waikato | Lakes | Bay of Plenty | Tairāwhiti | Hawke's Bay | Taranaki | MidCentral | Whanganui | Capital and Coast | Hutt | Wairarapa | Nelson Marlborough | West Coast | Canterbury | South Canterbury | Otago | | Southland | Other/Not stated |
| 2000 | | | | | | | | | | | | | | | | | | | | | | | |
| Northland | 1940 | 31 | 33 | 31 | 3 | 2 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 2048 |
| Waitemata | 10 | 5081 | 1210 | 69 | 4 | 0 | 2 | 2 | 2 | 2 | 4 | 0 | 2 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 6398 |
| Auckland | 6 | 494 | 5166 | 605 | 4 | 1 | 3 | 1 | 2 | 1 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 6291 |
| Counties Manukau | 12 | 28 | 1463 | 5490 | 16 | 2 | 6 | 1 | 5 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7030 |
| Waikato | 5 | 7 | 32 | 49 | 4327 | 40 | 74 | 5 | 4 | 1 | 3 | 0 | 4 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 4556 |
| Lakes | 0 | 2 | 4 | 11 | 63 | 1463 | 15 | 3 | 5 | 1 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1570 |
| Bay of Plenty | 1 | 1 | 12 | 14 | 61 | 62 | 2459 | 2 | 4 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2622 |
| Tairāwhiti | 0 | 1 | 5 | 7 | 10 | 2 | 0 | 716 | 3 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 747 |
| Hawke's Bay | 0 | 1 | 9 | 6 | 4 | 2 | 1 | 9 | 2177 | 0 | 18 | 0 | 13 | 0 | 2 | 3 | 0 | 3 | 0 | 0 | 1 | 0 | 2249 |
| Taranaki | 1 | 1 | 5 | 8 | 2 | 1 | 1 | 0 | 1 | 1352 | 7 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1406 |
| MidCentral | 0 | 0 | 4 | 12 | 6 | 1 | 0 | 3 | 10 | 0 | 1929 | 4 | 56 | 4 | 22 | 0 | 0 | 3 | 0 | 1 | 1 | 0 | 2056 |
| Whanganui | 0 | 1 | 1 | 3 | 2 | 3 | 0 | 1 | 4 | 1 | 128 | 762 | 11 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 919 |
| Capital and Coast | 3 | 1 | 2 | 10 | 4 | 3 | 2 | 2 | 5 | 0 | 36 | 1 | 3508 | 176 | 1 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 3759 |
| Hutt | 0 | 0 | 1 | 10 | 1 | 2 | 2 | 1 | 4 | 2 | 7 | 0 | 174 | 1793 | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 2001 |
| Wairarapa | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 3 | 30 | 14 | 435 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 488 |
| Nelson Marlborough | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 18 | 0 | 0 | 1426 | 0 | 13 | 0 | 0 | 0 | 1 | 1467 |
| West Coast | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 308 | 34 | 0 | 1 | 1 | 0 | 356 |
| Canterbury | 1 | 2 | 3 | 5 | 0 | 1 | 1 | 1 | 0 | 0 | 8 | 0 | 3 | 0 | 0 | 14 | 0 | 5336 | 11 | 9 | 3 | 0 | 5398 |
| South Canterbury | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 12 | 543 | 4 | 1 | 0 | 566 |
| Otago | 0 | 1 | 1 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 11 | 0 | 4 | 0 | 0 | 0 | 0 | 34 | 30 | 1868 | 55 | 8 | 2018 |
| Southland | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 0 | 50 | 1250 | 62 | 1388 |
| Other/Not reported | 0 | 23 | 2 | 87 | 1 | 0 | 0 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 15 | 0 | 0 | 144 |
| Total | 1980 | 5675 | 7958 | 6424 | 4512 | 1586 | 2567 | 750 | 2230 | 1368 | 2173 | 800 | 3829 | 1994 | 461 | 1460 | 308 | 5480 | 585 | 1952 | 1314 | 71 | 55,477 |
| 2001 | | | | | | | | | | | | | | | | | | | | | | | |
| Northland | 1730 | 42 | 31 | 23 | 1 | 1 | 0 | 0 | 0 | 1 | 3 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1836 |
| Waitemata | 19 | 5000 | 1193 | 47 | 2 | 1 | 1 | 1 | 3 | 1 | 8 | 0 | 1 | 1 | 0 | 4 | 1 | 5 | 0 | 0 | 0 | 1 | 6289 |
| Auckland | 10 | 384 | 5000 | 619 | 6 | 1 | 2 | 0 | 1 | 2 | 8 | 1 | 3 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 6042 |
| Counties Manukau | 10 | 30 | 1369 | 5240 | 13 | 7 | 4 | 1 | 2 | 0 | 8 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 6687 |
| Waikato | 2 | 8 | 23 | 48 | 4416 | 26 | 57 | 0 | 2 | 9 | 3 | 2 | 1 | 0 | 0 | 2 | 0 | 9 | 0 | 2 | 1 | 1 | 4612 |
| Lakes | 2 | 0 | 4 | 13 | 55 | 1425 | 6 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1513 |
| Bay of Plenty | 1 | 2 | 14 | 12 | 68 | 46 | 2383 | 3 | 4 | 2 | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 41 | 2585 |
| Tairāwhiti | 1 | 1 | 5 | 1 | 10 | 2 | 4 | 736 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 765 |
| Hawke's Bay | 4 | 0 | 1 | 13 | 4 | 1 | 2 | 15 | 2086 | 1 | 12 | 1 | 17 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 1 | 2164 |
| Taranaki | 2 | 0 | 4 | 3 | 3 | 0 | 0 | 0 | 0 | 1282 | 8 | 30 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1335 |
| MidCentral | 0 | 1 | 2 | 14 | 3 | 0 | 0 | 2 | 5 | 0 | 1817 | 6 | 41 | 4 | 23 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1919 |
| Whanganui | 1 | 1 | 1 | 14 | 2 | 0 | 0 | 2 | 7 | 0 | 125 | 697 | 15 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 868 |
| Capital and Coast | 0 | 0 | 3 | 8 | 1 | 2 | 2 | 2 | 2 | 0 | 24 | 0 | 3447 | 159 | 0 | 0 | 0 | 6 | 0 | 1 | 0 | 0 | 3657 |
| Hutt | 0 | 0 | 1 | 5 | 1 | 0 | 1 | 2 | 3 | 1 | 8 | 0 | 182 | 1891 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2096 |
| Wairarapa | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 12 | 3 | 34 | 10 | 413 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 475 |
| Nelson Marlborough | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 1 | 2 | 0 | 4 | 0 | 13 | 0 | 0 | 1393 | 2 | 8 | 0 | 3 | 0 | 0 | 1430 |
| West Coast | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 305 | 32 | 1 | 3 | 0 | 0 | 346 |
| Canterbury | 1 | 0 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 8 | 0 | 0 | 9 | 2 | 5449 | 16 | 16 | 3 | 0 | 5517 |
| South Canterbury | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 547 | 7 | 0 | 0 | 568 |
| Otago | 0 | 0 | 2 | 5 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 30 | 22 | 1748 | 60 | 8 | 1882 |
| Southland | 1 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 0 | 52 | 1173 | 84 | 1329 |
| Other/Not reported | 0 | 11 | 1 | 322 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 1 | 27 | 0 | 0 | 373 |
| Total | 1786 | 5480 | 7660 | 6395 | 4589 | 1514 | 2462 | 766 | 2123 | 1302 | 2055 | 744 | 3774 | 2068 | 438 | 1416 | 310 | 5581 | 587 | 1863 | 1237 | 138 | 54,288 |

Data source: NMDS

Data integrity

There is a variation in the collection of ethnicity data for health information across regions and hospitals. This variation is due to problems associated with administrative collection processes, inconsistent wording of questions on ethnicity, and a cultural/geographical factor related to the ethnic composition of the population. The latter effect means there is an undercount of Māori in hospitals in regions with a relatively low percentage of Māori, especially in the South Island.

The catchment areas for tertiary maternity and specialist neonatal services are given in Appendix 7. The catchment areas help to explain movement across DHB regions.

DHBs are responsible for providing or buying government-funded health care services for the population of a specific geographical area. There are 21 DHBs in New Zealand, and they have existed since 1 January 2001.

Forty percent (4263/10,647) of Māori women, 77.1 percent (4281/5549) of Pacific women, and 70.9 percent (2555/3605) of Asian women who gave birth in 2000 lived in the Auckland/Waikato area.¹ This trend is repeated in 2001 with 39.7 percent (4191/10,562) of Māori women, 76.2 percent, (4259/5589) of Pacific women, and 71.7 percent (2489/3472) of Asian women who gave birth living in the Auckland/Waikato area.

When analysing data on the mother's place of residence we use domicile codes, which are Statistics New Zealand Area unit codes representing the woman's usual residential address.

Standardised birth rates (Figures 2.4a & 2.4b) are the ratios of observed to expected in-hospital birth rates per 1000 women of childbearing age, multiplied by the overall New Zealand national birth rate for all women. Expected rates are calculated using the age and ethnic population structure of each DHB region.

Figures 2.4a & 2.4b show the rates in the centre of the upper and lower 99 percent confidence limits. If the lower confidence limit is completely above the national rate for all New Zealand, this indicates that the standardised DHB region birth rate is significantly greater than the overall national rate (99 percent confidence interval). If the upper confidence limit is completely below the national rate for all New Zealand, this indicates that the standardised DHB region birth rate is significantly less than the overall national rate (99 percent confidence interval). Otherwise the DHB region birth rate is no different from the overall national rate.

The highest birth rate in New Zealand is for women living in the Tairāwhiti DHB (in 2000 the rate was 81.3 and in 2001 the rate was 83.6 per 1000 women of reproductive age). Women living in the Otago DHB have the lowest birth rate (in 2000 the rate was 52.0 and in 2001 the rate was 48.7 per 1000 women of reproductive age).

Data integrity

Where the data source is recorded as MNIS, please be aware that HB data is currently collected from approximately 70 percent of births. These are births that are managed by LMCs who make claims for payment under the arrangements set down in 1998 in the Notice Issued Pursuant to Section 51 of the Health and Disability Services Act 1993 Concerning the Provision of Maternity Services (Health Funding Authority 1998). Linking of events therefore limits the data contained in MNIS to approximately 70 percent of births.

¹ DHBs included in the Auckland/Waikato area are: Waitemata DHB, Auckland DHB, Counties Manukau DHB and Waikato DHB.

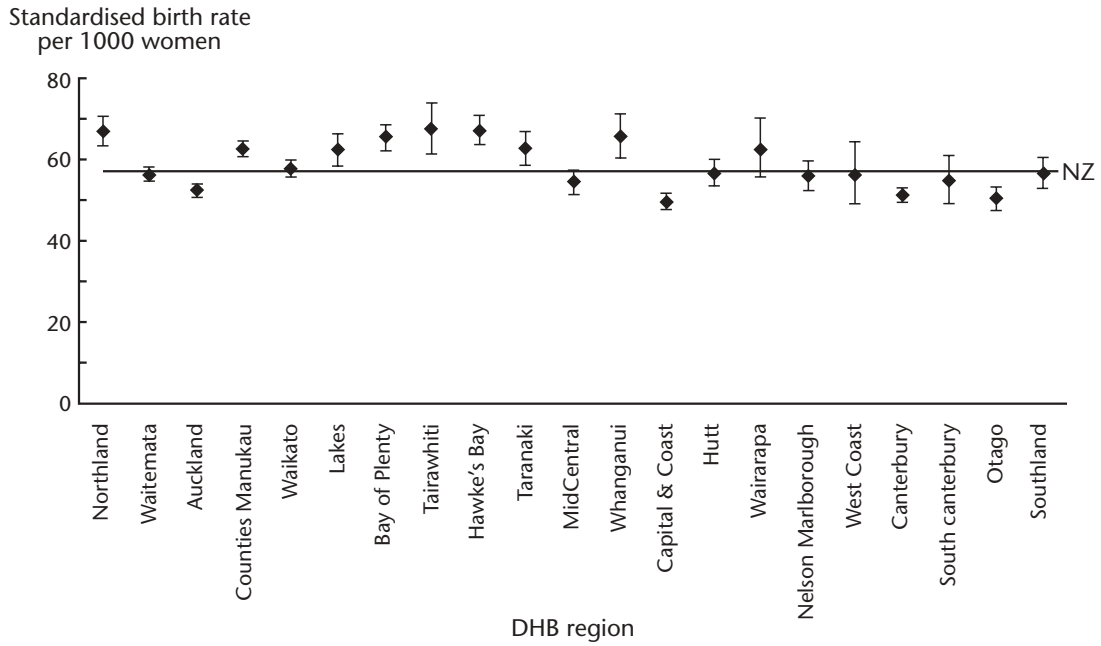


Figure 2.4a: Hospital birth rates (standardised by age and ethnicity) and 99 percent confidence limits per 1000 women of reproductive age, by DHB region of woman's place of residence, 2000
Data source: NMDS

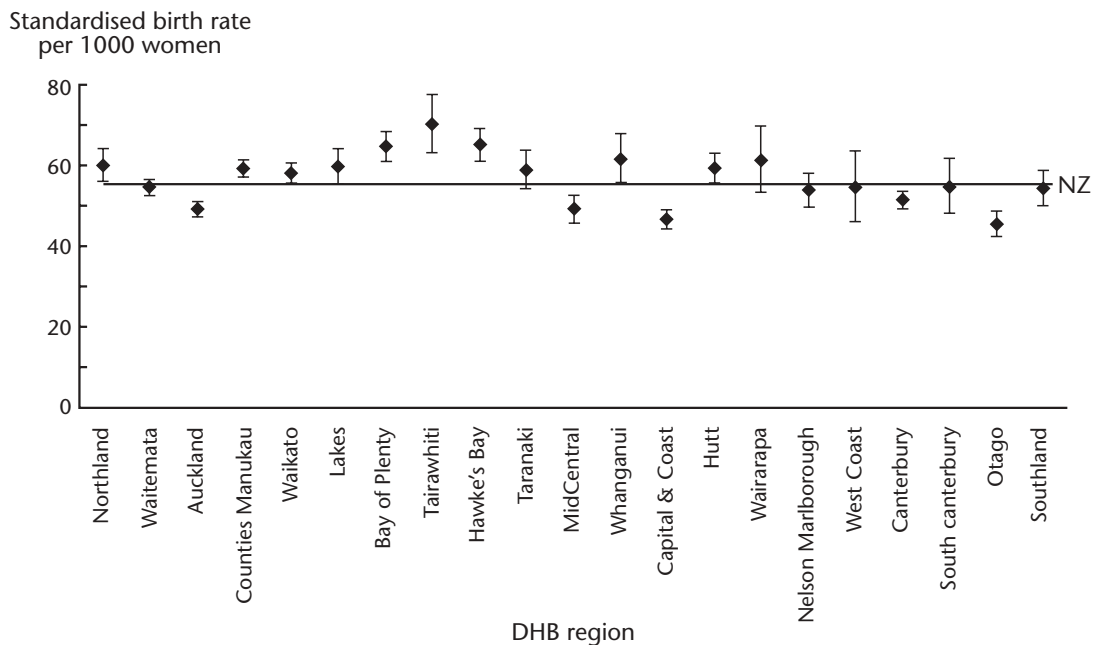


Figure 2.4b: Hospital birth rates (standardised by age and ethnicity) and 99 percent confidence limits per 1000 women of reproductive age, by DHB region of woman's place of residence, 2001
Data source: NMDS

Table 2.6: *Mother's place of residence, by DHB region (hospital data), 2000 and 2001*

| DHB | Number of mothers | Percentage of mothers | Mothers per 1000 women of reproductive age |
|--------------------|-------------------|-----------------------|--|
| 2000 | | | |
| Northland | 2032 | 3.7 | 74.9 |
| Waitemata | 6341 | 11.5 | 64.6 |
| Auckland | 6206 | 11.3 | 65.8 |
| Counties Manukau | 6959 | 12.7 | 81.0 |
| Waikato | 4520 | 8.2 | 66.0 |
| Lakes | 1555 | 2.8 | 74.8 |
| Bay of Plenty | 2606 | 4.7 | 73.9 |
| Tairāwhiti | 742 | 1.4 | 81.3 |
| Hawke's Bay | 2236 | 4.1 | 77.1 |
| Taranaki | 1396 | 2.5 | 67.2 |
| MidCentral | 2037 | 3.7 | 60.5 |
| Whanganui | 922 | 1.7 | 73.1 |
| Capital and Coast | 3734 | 6.8 | 60.6 |
| Hutt | 1980 | 3.6 | 67.3 |
| Wairarapa | 481 | 0.9 | 67.0 |
| Nelson Marlborough | 1452 | 2.6 | 59.0 |
| West Coast | 352 | 0.6 | 59.9 |
| Canterbury | 5335 | 9.7 | 56.2 |
| South Canterbury | 556 | 1.0 | 56.6 |
| Otago | 1993 | 3.6 | 52.0 |
| Southland | 1368 | 2.5 | 61.7 |
| Other/Not reported | 143 | 0.3 | – |
| Total | 54,946 | 100.0 | 66.3 |
| 2001 | | | |
| Northland | 1832 | 3.4 | 67.5 |
| Waitemata | 6222 | 11.6 | 63.4 |
| Auckland | 5983 | 11.1 | 63.4 |
| Counties Manukau | 6651 | 12.4 | 77.4 |
| Waikato | 4566 | 8.5 | 66.7 |
| Lakes | 1497 | 2.8 | 72.0 |
| Bay of Plenty | 2564 | 4.8 | 72.7 |
| Tairāwhiti | 763 | 1.4 | 83.6 |
| Hawke's Bay | 2148 | 4.0 | 74.0 |
| Taranaki | 1317 | 2.4 | 63.4 |
| MidCentral | 1893 | 3.5 | 56.2 |
| Whanganui | 865 | 1.6 | 68.5 |
| Capital and Coast | 3629 | 6.7 | 58.9 |
| Hutt | 2075 | 3.9 | 70.6 |
| Wairarapa | 469 | 0.9 | 65.4 |
| Nelson Marlborough | 1416 | 2.6 | 57.6 |
| West Coast | 344 | 0.6 | 58.6 |
| Canterbury | 5446 | 10.1 | 57.4 |
| South Canterbury | 560 | 1.0 | 57.0 |
| Otago | 1866 | 3.5 | 48.7 |
| Southland | 1327 | 2.5 | 59.9 |
| Other/Not reported | 372 | 0.7 | – |
| Total | 53,805 | 100.0 | 64.9 |

Data source: NMDS

Table 2.7: Number of pregnancies (gravida), 2000 and 2001

| Gravida | 2000 | | 2001 | |
|---------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| 1 | 11,902 | 29.5 | 11,587 | 29.9 |
| 2 | 11,358 | 28.2 | 10,906 | 28.2 |
| 3 | 7547 | 18.7 | 7158 | 18.5 |
| 4 | 4357 | 10.8 | 4075 | 10.5 |
| 5 | 2420 | 6.0 | 2279 | 5.9 |
| 6 | 1245 | 3.1 | 1268 | 3.3 |
| 7 | 693 | 1.7 | 656 | 1.7 |
| 8 | 347 | 0.9 | 344 | 0.9 |
| 9 | 210 | 0.5 | 195 | 0.5 |
| 10 | 106 | 0.3 | 109 | 0.3 |
| 11 | 47 | 0.1 | 58 | 0.1 |
| 12 | 28 | 0.1 | 24 | 0.1 |
| 13 | 14 | 0.0 | 10 | 0.0 |
| 14 | 6 | 0.0 | 11 | 0.0 |
| 15 | 3 | 0.0 | 8 | 0.0 |
| 16 | 1 | 0.0 | 1 | 0.0 |
| 17 | 0 | 0.0 | 2 | 0.0 |
| 18 | 2 | 0.0 | 0 | 0.0 |
| 19 | 1 | 0.0 | 2 | 0.0 |
| Total | 40,287 | 100.0 | 38,693 | 100.0 |

Data source: MNIS

Data integrity

Gravida (number of pregnancies) is calculated at the time of registration with the LMC and at labour and birth. This information is obtained from MNIS, so 30 percent of the data is missing.

Table 2.8: Number of previous births (parity) recorded at registration, 2000 and 2001

| Parity | 2000 | | 2001 | |
|--------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| 0 | 13,677 | 37.2 | 12,975 | 37.4 |
| 1 | 11,640 | 31.7 | 11,061 | 31.9 |
| 2 | 6098 | 16.6 | 5747 | 16.6 |
| 3 | 2827 | 7.7 | 2562 | 7.4 |
| 4 | 1321 | 3.6 | 1196 | 3.5 |
| 5 | 616 | 1.7 | 590 | 1.7 |
| 6 | 310 | 0.8 | 273 | 0.8 |
| 7 | 147 | 0.4 | 143 | 0.4 |
| 8 | 65 | 0.2 | 58 | 0.2 |
| 9 | 18 | 0.0 | 33 | 0.1 |
| 10 | 15 | 0.0 | 14 | 0.0 |
| 11 | 6 | 0.0 | 6 | 0.0 |
| 12 | 2 | 0.0 | 3 | 0.0 |
| Total | 36,742 | 100.0 | 34,661 | 100.0 |

Data source: MNIS

Data integrity

As this information is obtained from MNIS, only 70 percent of women are included (MNIS excludes the 30 percent of births that have non-Section-51 contracts).

In 2000 and 2001, 29.5 percent (11,902/40,287) and 29.9 percent (11,587/38,693) respectively of births were to first-time mothers (gravidia 1), as shown in Table 2.7.

In 2000 there were 3545 women (8.8 percent) for whom there was no parity information recorded (40,287 women are recorded in MNIS as having given birth in 2000). In 2001 there were 4032 women (10.4 percent) for whom there was no parity information recorded (38,693 women are recorded in MNIS as having given birth in 2001).

In 2000 there were 82 women who could not be linked by gravidia and ethnicity, and in 2001 there were 184 women.

The data shown in Table 2.9 demonstrates ethnic differences in the number of pregnancies. In 2000 and 2001 a greater proportion of Māori and Pacific women have a pregnancy (gravidia) rate greater than four.

Table 2.9: Pregnancy rate (gravidia), by ethnicity, 2000 and 2001

| Gravidia | Māori | | Pacific peoples | | Asian | | European | | Other | | Not reported | | Total | |
|-------------|-------|-------|-----------------|-------|-------|-------|----------|-------|-------|-------|--------------|-------|--------|-------|
| | No | % | No | % | No | % | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | | | | | | | |
| 1 | 1380 | 19.8 | 654 | 20.8 | 653 | 31.9 | 5399 | 28.2 | 2403 | 39.0 | 1389 | 51.5 | 11,878 | 29.5 |
| 2 | 1467 | 21.0 | 695 | 22.1 | 663 | 32.4 | 5707 | 29.8 | 2006 | 32.6 | 795 | 29.5 | 11,333 | 28.2 |
| 3 | 1291 | 18.5 | 603 | 19.2 | 412 | 20.1 | 3979 | 20.7 | 956 | 15.5 | 291 | 10.8 | 7532 | 18.7 |
| 4 | 1024 | 14.7 | 462 | 14.7 | 197 | 9.6 | 2105 | 11.0 | 426 | 6.9 | 131 | 4.9 | 4345 | 10.8 |
| 5-7 | 1498 | 21.5 | 617 | 19.6 | 112 | 5.5 | 1722 | 9.0 | 316 | 5.1 | 87 | 3.2 | 4352 | 10.8 |
| 8-10 | 277 | 4.0 | 101 | 3.2 | 7 | 0.3 | 225 | 1.2 | 48 | 0.8 | 5 | 0.2 | 663 | 1.6 |
| >10 | 43 | 0.6 | 11 | 0.3 | 1 | 0.0 | 40 | 0.2 | 7 | 0.1 | 0 | 0.0 | 102 | 0.3 |
| Total | 6980 | 100.0 | 3143 | 100.0 | 2045 | 100.0 | 19,177 | 100.0 | 6162 | 100.0 | 2698 | 100.0 | 40,205 | 100.0 |
| 2001 | | | | | | | | | | | | | | |
| 1 | 1541 | 21.5 | 850 | 25.4 | 827 | 37.3 | 5886 | 30.0 | 1505 | 35.6 | 911 | 47.3 | 11,520 | 29.9 |
| 2 | 1522 | 21.2 | 702 | 21.0 | 698 | 31.5 | 5918 | 30.2 | 1417 | 33.5 | 601 | 31.2 | 10,858 | 28.2 |
| 3 | 1312 | 18.3 | 658 | 19.7 | 409 | 18.5 | 3798 | 19.4 | 707 | 16.7 | 240 | 12.4 | 7124 | 18.5 |
| 4 | 952 | 13.3 | 463 | 13.8 | 165 | 7.4 | 2060 | 10.5 | 311 | 7.3 | 107 | 5.5 | 4058 | 10.5 |
| 5-7 | 1485 | 20.7 | 572 | 17.1 | 113 | 5.1 | 1704 | 8.7 | 248 | 5.9 | 63 | 3.3 | 4185 | 10.9 |
| 8-10 | 301 | 4.2 | 91 | 2.7 | 4 | 0.2 | 212 | 1.1 | 34 | 0.8 | 6 | 0.3 | 648 | 1.7 |
| >10 | 54 | 0.8 | 9 | 0.3 | 0 | 0.0 | 42 | 0.2 | 11 | 0.3 | 0 | 0.0 | 116 | 0.3 |
| Total | 7167 | 100.0 | 3345 | 100.0 | 2216 | 100.0 | 19,620 | 100.0 | 4233 | 100.0 | 1928 | 100.0 | 38,509 | 100.0 |

Data source: MNIS

2.2 DEPRIVATION SCALES

In this analysis, NZ deprivation (NZDep) scores have been grouped into 10 classes (deciles). These vary from 'Least deprived' (those domicile areas that are the least deprived), to 'Most deprived' (those domicile areas judged to be in the most deprived). (See Appendix 1 for further explanation of NZDep scores.)

Table 2.10: Mothers by rural/urban status and NZDep decile of woman's place of residence, 2000 and 2001

| NZDep decile | Rural | | Urban | | Not applicable | |
|----------------|--------|------|--------|------|----------------|------|
| | No | % | No | % | No | % |
| 2000 | | | | | | |
| Least deprived | 1050 | 22.5 | 3608 | 77.5 | 0 | 0.0 |
| 2 | 1413 | 30.4 | 3236 | 69.6 | 0 | 0.0 |
| 3 | 1940 | 40.4 | 2858 | 59.6 | 0 | 0.0 |
| 4 | 2111 | 42.5 | 2855 | 57.5 | 0 | 0.0 |
| 5 | 2362 | 47.5 | 2614 | 52.5 | 0 | 0.0 |
| 6 | 1483 | 28.0 | 3813 | 72.0 | 0 | 0.0 |
| 7 | 1755 | 33.9 | 3417 | 66.1 | 0 | 0.0 |
| 8 | 1826 | 29.1 | 4451 | 70.9 | 0 | 0.0 |
| 9 | 1762 | 29.0 | 4322 | 71.0 | 0 | 0.0 |
| Most deprived | 2039 | 25.8 | 5867 | 74.2 | 0 | 0.0 |
| Not applicable | 8 | 4.9 | 13 | 7.9 | 143 | 87.2 |
| Total | 17,749 | 32.3 | 37,054 | 67.4 | 143 | 0.3 |
| 2001 | | | | | | |
| Least deprived | 993 | 21.3 | 3667 | 78.7 | 0 | 0.0 |
| 2 | 1415 | 31.1 | 3128 | 68.9 | 0 | 0.0 |
| 3 | 1939 | 40.5 | 2845 | 59.5 | 0 | 0.0 |
| 4 | 2031 | 42.0 | 2803 | 58.0 | 0 | 0.0 |
| 5 | 2179 | 46.0 | 2560 | 54.0 | 0 | 0.0 |
| 6 | 1471 | 28.7 | 3648 | 71.3 | 0 | 0.0 |
| 7 | 1691 | 34.4 | 3222 | 65.6 | 0 | 0.0 |
| 8 | 1714 | 28.0 | 4408 | 72.0 | 0 | 0.0 |
| 9 | 1724 | 29.5 | 4111 | 70.5 | 0 | 0.0 |
| Most deprived | 1993 | 25.7 | 5766 | 74.3 | 0 | 0.0 |
| Not applicable | 12 | 2.4 | 113 | 22.7 | 372 | 74.8 |
| Total | 17,162 | 31.9 | 36,271 | 67.4 | 372 | 0.7 |

Data source: NMDS

Data integrity

When a domicile code supplied does not match to a deprivation level in our files, we have assigned it to the 'Not applicable' category. This group is mainly made up of BD codes, which are codes assigned when there is insufficient detail supplied (eg, a PO Box number instead of physical address details).

Mothers have been aggregated by the rural/urban status of the woman's place of residence, and 10 groups (deciles) of socioeconomic deprivation. Note that of women of childbearing age (15–44 years), 69 percent live in an urban area and 31 percent live in a rural area. The percentages provided in Table 2.10 are the proportions of mothers within each deprivation group who are living in either rural or urban areas.

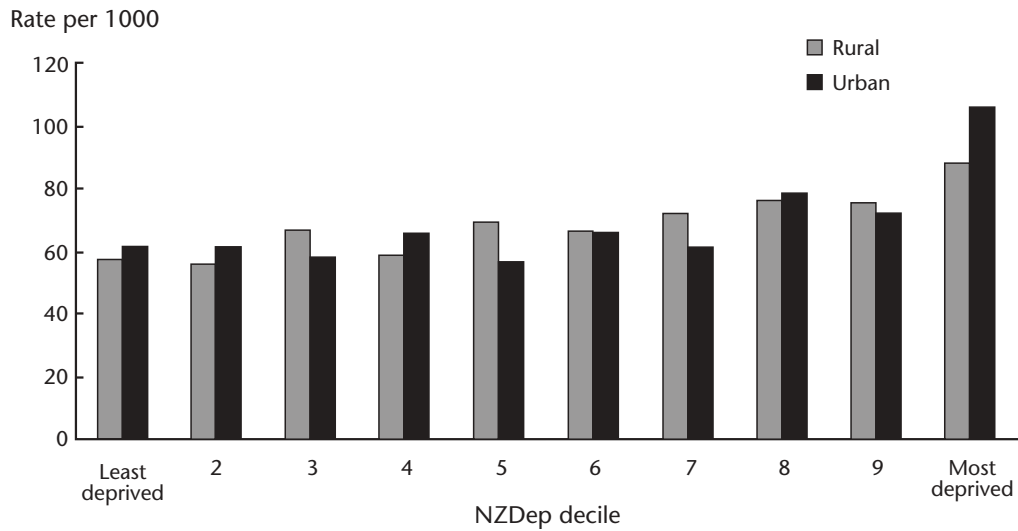


Figure 2.5a: Hospital birth rates per 1000 women of reproductive age, by rural/urban status and NZDep decile of woman's place of residence, 2000

(Note: The 'Not applicable' category has been removed from this graph.)

Data source: NMDS

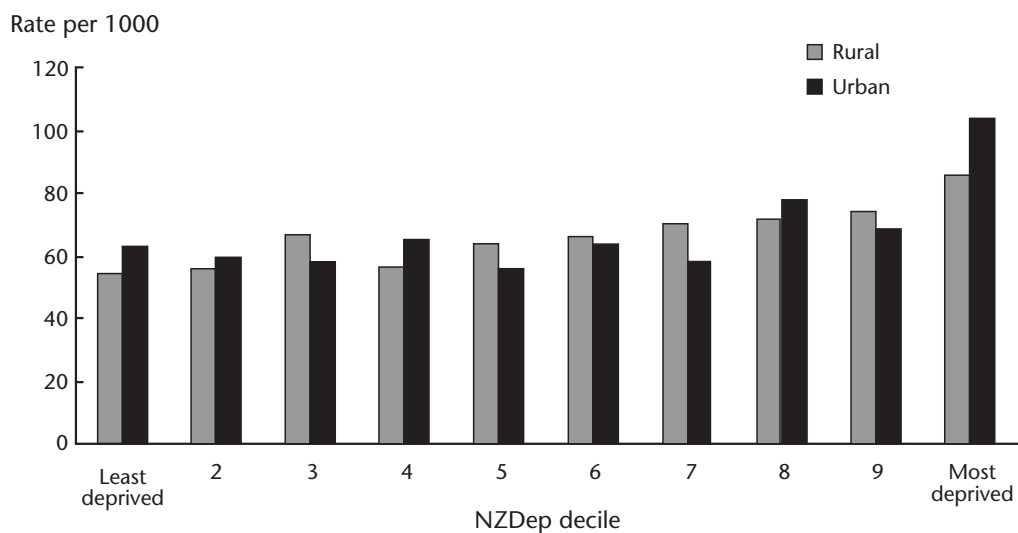


Figure 2.5b: Hospital birth rates per 1000 women of reproductive age, by rural/urban status and NZDep decile of woman's place of residence, 2001

(Note: The 'Not applicable' category has been removed from this graph.)

Data source: NMDS

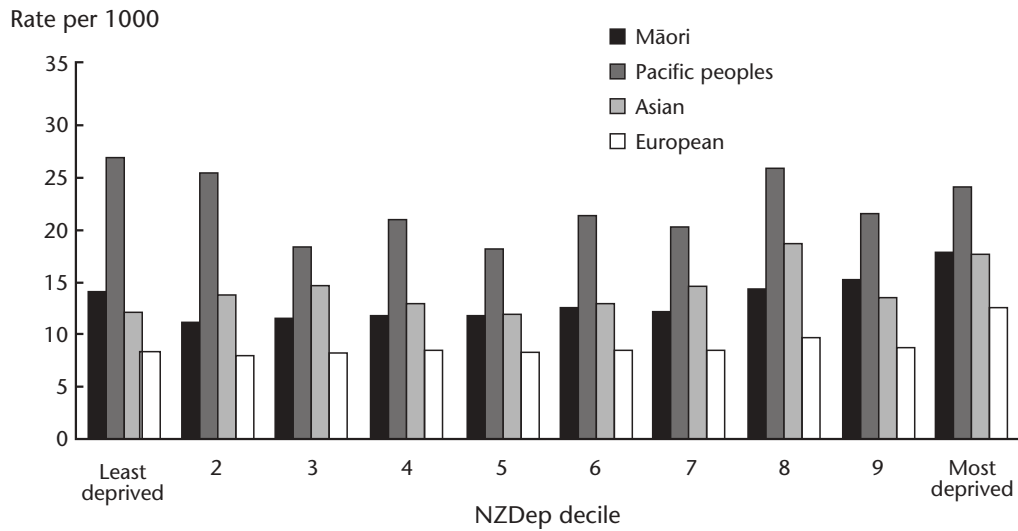


Figure 2.6a: Birth rates per 1000 women of reproductive age, by ethnicity and NZDep decile, 2000
 (Note: The 'Not applicable' category and the 'Other' and 'Not reported' ethnic groups have been removed from this graph.)

Data source: NMDS

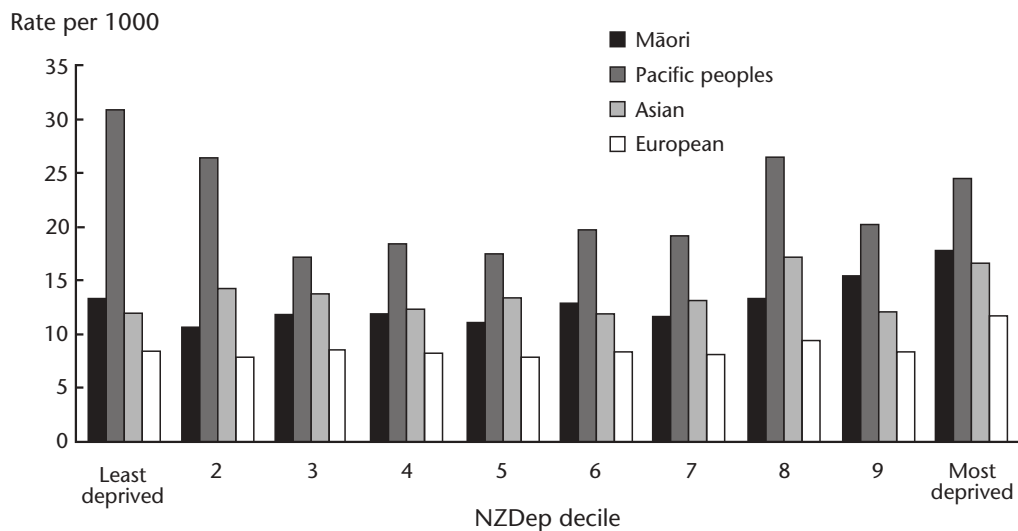


Figure 2.6b: Birth rates per 1000 women of reproductive age, by ethnicity and NZDep decile, 2001
 (Note: The 'Not applicable' category and the 'Other' and 'Not reported' ethnic groups have been removed from this graph.)

Data source: NMDS

2.3 MISCARRIAGES

Data interpretation

Miscarriages are defined as all women whose pregnancies ended spontaneously before 20 weeks gestation. This data does not include termination of pregnancy.

This data on women who miscarry should be interpreted with caution. It must be noted that hospital miscarriages includes all women who are referred to a hospital during a miscarriage. However, women also miscarry at home. If these women are not referred to a hospital, they are not included in this data.

Spontaneous miscarriage is, unfortunately, a common complication of pregnancy. Women at both ends of the reproductive age spectrum have the highest miscarriage rates, as shown in Figures 2.7a and 2.7b.

Table 2.11: Total hospital miscarriages, by mothers' age and ethnicity, 2000 and 2001

| Age group | Māori | | Pacific peoples | | Asian | | European | | Other | | Not reported | | Total | |
|-------------|-------|-------|-----------------|-------|-------|-------|----------|-------|-------|-------|--------------|-------|-------|-------|
| | No | % | No | % | No | % | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | | | | | | | |
| Under 16 | 11 | 1.5 | 0 | 0.0 | 0 | 0.0 | 19 | 0.9 | 0 | 0.0 | 0 | 0.0 | 30 | 0.8 |
| 16–19 | 118 | 15.8 | 27 | 7.1 | 11 | 3.7 | 180 | 8.4 | 13 | 8.1 | 5 | 6.5 | 354 | 9.3 |
| 20–24 | 196 | 26.2 | 83 | 21.8 | 29 | 9.8 | 275 | 12.9 | 41 | 25.5 | 10 | 13.0 | 634 | 16.7 |
| 25–29 | 166 | 22.2 | 90 | 23.6 | 45 | 15.3 | 491 | 23.0 | 33 | 20.5 | 17 | 22.1 | 842 | 22.2 |
| 30–34 | 127 | 17.0 | 88 | 23.1 | 90 | 30.5 | 545 | 25.5 | 34 | 21.1 | 16 | 20.8 | 900 | 23.7 |
| 35–39 | 80 | 10.7 | 68 | 17.8 | 78 | 26.4 | 438 | 20.5 | 26 | 16.1 | 19 | 24.7 | 709 | 18.7 |
| 40+ | 49 | 6.6 | 25 | 6.6 | 42 | 14.2 | 188 | 8.8 | 14 | 8.7 | 10 | 13.0 | 328 | 8.6 |
| Total | 747 | 100.0 | 381 | 100.0 | 295 | 100.0 | 2136 | 100.0 | 161 | 100.0 | 77 | 100.0 | 3797 | 100.0 |
| 2001 | | | | | | | | | | | | | | |
| Under 16 | 13 | 1.6 | 0 | 0.0 | 1 | 0.3 | 15 | 0.7 | 1 | 0.8 | 0 | 0.0 | 30 | 0.8 |
| 16–19 | 117 | 14.3 | 28 | 6.5 | 12 | 4.0 | 155 | 7.2 | 2 | 1.6 | 8 | 10.8 | 322 | 8.2 |
| 20–24 | 219 | 26.7 | 91 | 21.0 | 38 | 12.6 | 318 | 14.7 | 24 | 18.6 | 15 | 20.3 | 705 | 18.0 |
| 25–29 | 201 | 24.5 | 110 | 25.4 | 60 | 19.9 | 453 | 20.9 | 30 | 23.3 | 14 | 18.9 | 868 | 22.1 |
| 30–34 | 128 | 15.6 | 90 | 20.8 | 68 | 22.5 | 588 | 27.2 | 32 | 24.8 | 15 | 20.3 | 921 | 23.5 |
| 35–39 | 95 | 11.6 | 71 | 16.4 | 83 | 27.5 | 441 | 20.4 | 28 | 21.7 | 15 | 20.3 | 733 | 18.7 |
| 40+ | 48 | 5.8 | 43 | 13.2 | 40 | 13.2 | 195 | 9.0 | 12 | 9.3 | 7 | 9.5 | 345 | 8.8 |
| Total | 821 | 100.0 | 433 | 100.0 | 302 | 100.0 | 2165 | 100.0 | 129 | 100.0 | 74 | 100.0 | 3924 | 100.0 |

Data source: NMDS

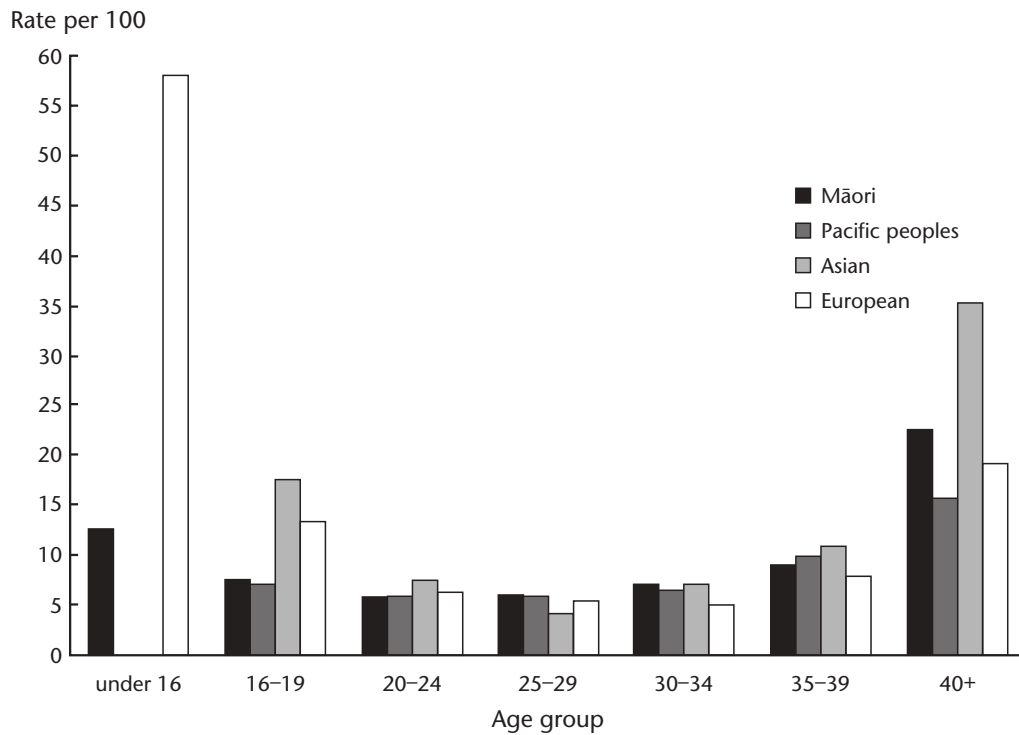


Figure 2.7a: Rate of hospital miscarriages per 100 mothers, by age and ethnicity, 2000 (Data source: NMDS)

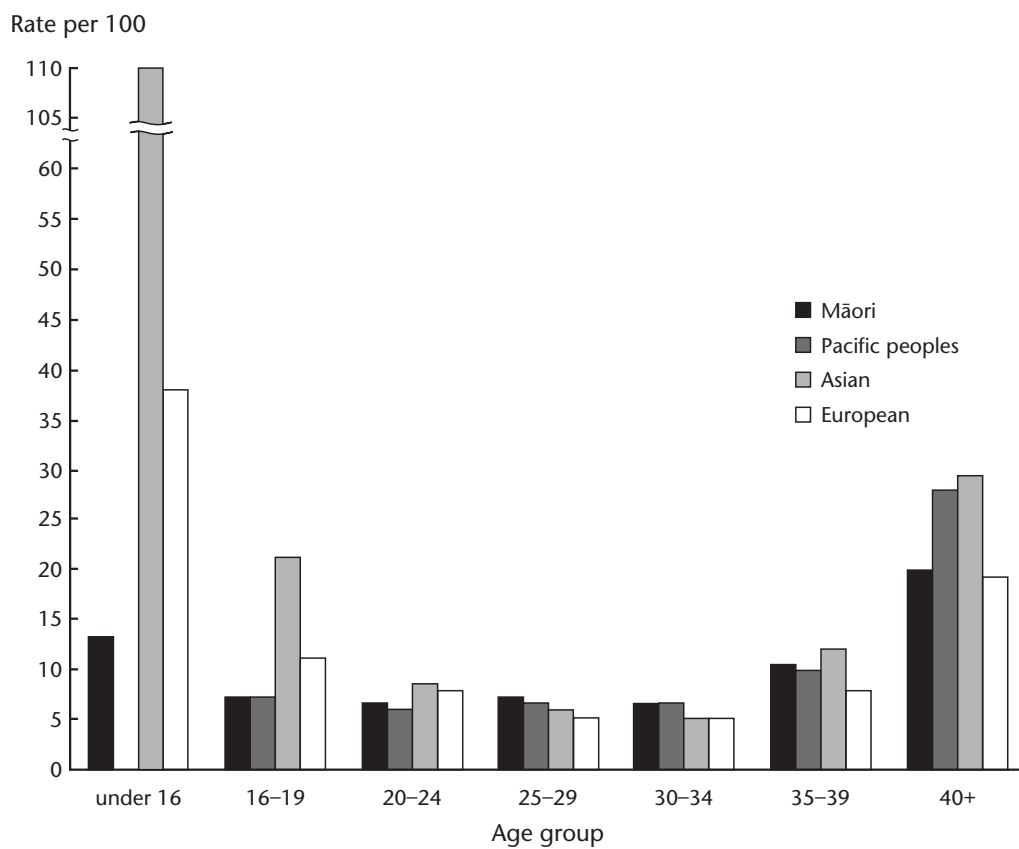


Figure 2.7b: Rate of hospital miscarriages per 100 mothers, by age and ethnicity, 2001 (Data source: NMDS)

2.4 PREGNANCY COMPLICATIONS

Data interpretation

A *Diagnosis-Related Group (DRG)* is a patient classification scheme which provides a clinically meaningful way of relating the number and types of patients treated in a hospital to the resources required by the hospital. DRGs are allocated by 'grouper' software based on the patient's diagnosis and procedure codes, and age. Clinical coding staff select the appropriate diagnosis procedure codes. For more information on the DRG codes used in this publication, see Appendix 2.

Note that the difference between moderate and severe diagnosis is determined by differences in the cost and length of stay of the hospital admission. Note also that Table 2.12 gives the total antenatal admissions, and so may include more than one admission for the same woman. However, it excludes women whose admission source was a transfer from another facility. False labour will include women who were in hospital for three or more hours but who returned to their home, as they were not in established labour.

The figures in Table 2.13 are antenatal admissions for DRGs O65A and O65B only. The figures for antenatal admissions may appear low, but it is only the principal diagnosis that is recorded for each admission. The *principal* diagnosis is the primary reason the woman is admitted to hospital.

Specialist obstetricians can claim in their private capacity for consultations under the Maternity Notice. The Notice that was in place in 2001 and 2002 allowed specialists to claim for three different fee types: a first consultation, a subsequent consultation (being further services for the same medical condition), and labour and birth services (effecting birth for women under the care of a GP or midwife LMC where a short-term transfer of care to a specialist obstetrician was clinically warranted). The specialist obstetrician could not claim where the service formed part of the duties for which she or he was employed.

A budget-holding arrangement exists in some regions, meaning that the hospital has fully employed its specialist obstetricians. Under these arrangements, the hospital is responsible for all claims under the Notice for consultations by specialist obstetricians. The regions concerned are Capital and Coast, Hawke's Bay, Hutt, Nelson Marlborough, Northland, and Southland.

It is reasonable to consider regional variances in the localities that do not have budget-holding arrangements, given that all DHBs are contracted to provide secondary maternity services. A secondary maternity service includes consultations with specialist obstetricians in both an inpatient and an outpatient setting.

Data integrity

As this information is obtained from MNIS, only 70 percent of women are included (MNIS excludes the 30 percent of births that have non-Section-51 contracts). This data includes first and subsequent consultations during the labour and birth period.

Table 2.12: Total antenatal hospital admissions and average length of stay (days) for mothers, by diagnosis related group (DRGs O62Z, O64Z, O65A and O65B only) and ethnicity, 2000 and 2001

| DRG | Ethnic group | Admissions | | Average length of stay |
|---|-----------------|-------------|-------------|------------------------|
| | | No | % | |
| 2000 | | | | |
| O62Z Threatened abortion | Māori | 225 | 1.5 | 0.8 |
| | Pacific peoples | 82 | 0.6 | 0.6 |
| | Asian | 63 | 0.4 | 0.0 |
| | European | 480 | 3.3 | 0.8 |
| | Other | 48 | 0.3 | 0.4 |
| | Not reported | 8 | 0.1 | 0.6 |
| | Total | 906 | 6.2 | 0.7 |
| O64Z False labour | Māori | 850 | 5.8 | 0.9 |
| | Pacific peoples | 353 | 2.4 | 1.7 |
| | Asian | 202 | 1.4 | 0.8 |
| | European | 1614 | 11.0 | 1.1 |
| | Other | 92 | 0.6 | 0.7 |
| | Not reported | 39 | 0.3 | 1.5 |
| | Total | 3150 | 21.5 | 1.1 |
| O65A Other antenatal admission with severe complicating diagnosis | Māori | 747 | 5.1 | 2.0 |
| | Pacific peoples | 381 | 2.6 | 2.3 |
| | Asian | 162 | 1.1 | 2.9 |
| | European | 2215 | 15.1 | 2.1 |
| | Other | 118 | 0.8 | 1.8 |
| | Not reported | 50 | 0.3 | 2.5 |
| | Total | 3673 | 25.1 | 2.1 |
| O65B Other antenatal admission with moderate or no complicating diagnosis | Māori | 1424 | 9.7 | 1.4 |
| | Pacific peoples | 848 | 5.8 | 2.3 |
| | Asian | 437 | 3.0 | 1.7 |
| | European | 3742 | 25.5 | 1.5 |
| | Other | 361 | 2.5 | 1.9 |
| | Not reported | 105 | 0.7 | 1.5 |
| | Total | 6917 | 47.2 | 1.6 |
| Total | | 14,646 | 100.0 | 1.6 |
| 2001 | | | | |
| O62Z Threatened abortion | Māori | 215 | 1.4 | 0.7 |
| | Pacific peoples | 114 | 0.7 | 0.0 |
| | Asian | 65 | 0.4 | 0.3 |
| | European | 462 | 3.0 | 0.6 |
| | Other | 34 | 0.2 | 0.7 |
| | Not reported | 15 | 0.1 | 0.0 |
| | Total | 905 | 5.9 | 0.6 |
| O64Z False labour | Māori | 906 | 5.9 | 0.8 |
| | Pacific peoples | 402 | 2.6 | 0.6 |
| | Asian | 223 | 1.4 | 0.3 |
| | European | 1531 | 10.0 | 1.0 |
| | Other | 103 | 0.7 | 0.7 |
| | Not reported | 33 | 0.2 | 1.5 |
| | Total | 3198 | 20.8 | 0.8 |
| O65A Other antenatal admission with severe complicating diagnosis | Māori | 749 | 4.9 | 2.2 |
| | Pacific peoples | 427 | 2.8 | 1.9 |
| | Asian | 159 | 1.0 | 2.6 |
| | European | 2177 | 14.2 | 2.3 |
| | Other | 131 | 0.9 | 2.5 |
| | Not reported | 47 | 0.3 | 3.6 |
| | Total | 3690 | 24.0 | 2.3 |
| O65B Other antenatal admission with moderate or no complicating diagnosis | Māori | 1631 | 10.6 | 1.4 |
| | Pacific peoples | 1054 | 6.9 | 1.8 |
| | Asian | 440 | 2.9 | 1.6 |
| | European | 4040 | 26.3 | 1.7 |
| | Other | 317 | 2.1 | 1.7 |
| | Not reported | 110 | 0.7 | 2.5 |
| | Total | 7592 | 49.3 | 1.6 |
| Total | | 15,385 | 100.0 | 1.6 |

Data source: NMDS

Table 2.13a: Total antenatal hospital admissions and average length of stay (days) for mothers, by principal diagnosis (DRGs O65A and O65B), 2000

| Principal diagnosis | Admissions | | Average length of stay |
|---|---------------|--------------|------------------------|
| | No | % | |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 15 | 0.1 | 3.2 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 49 | 0.5 | 2.4 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 35 | 0.3 | 2.0 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 1106 | 10.4 | 1.6 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 490 | 4.6 | 2.3 |
| Eclampsia | 4 | 0.0 | 0.3 |
| Unspecified maternal hypertension | 9 | 0.1 | 3.7 |
| Haemorrhage in early pregnancy | 0 | 0.0 | 0.0 |
| Excessive vomiting in pregnancy | 281 | 2.7 | 2.0 |
| Venous complications in pregnancy | 24 | 0.2 | 3.3 |
| Infections of genitourinary tract in pregnancy | 51 | 0.5 | 1.6 |
| Diabetes mellitus in pregnancy | 136 | 1.3 | 3.4 |
| Malnutrition in pregnancy | 0 | 0.0 | 0.0 |
| Maternal care for other conditions predominantly related to pregnancy | 74 | 0.7 | 2.1 |
| Abnormal findings on antenatal screening of mother | 1 | 0.0 | 1.0 |
| Complications of anaesthesia during pregnancy | 0 | 0.0 | 0.0 |
| Multiple gestation | 73 | 0.7 | 3.1 |
| Complications specific to multiple gestation | 4 | 0.0 | 1.0 |
| Maternal care for known or suspected malpresentation of fetus | 15 | 0.1 | 1.3 |
| Maternal care for known or suspected disproportion | 2 | 0.0 | 2.0 |
| Maternal care for known or suspected abnormality of pelvic organs | 105 | 1.0 | 2.4 |
| Maternal care for known or suspected fetal abnormality and damage | 12 | 0.1 | 2.8 |
| Maternal care for other known or suspected fetal problems | 299 | 2.8 | 1.2 |
| Polyhydramnios | 40 | 0.4 | 2.2 |
| Other disorders of amniotic fluid and membranes | 44 | 0.4 | 2.6 |
| Premature rupture of membranes | 148 | 1.4 | 1.9 |
| Placental disorders | 11 | 0.1 | 1.3 |
| Placenta praevia | 248 | 2.3 | 4.5 |
| Premature separation of placenta [abruptio placentae] | 13 | 0.1 | 1.8 |
| Antepartum haemorrhage, not elsewhere classified | 72 | 0.7 | 1.6 |
| False labour | 0 | 0.0 | 0.0 |
| Prolonged pregnancy | 6 | 0.1 | 0.2 |
| Other diagnosis | 306 | 2.9 | 2.1 |
| Other antenatal admission with severe complicating diagnosis total | 3673 | 34.7 | 2.1 |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 83 | 0.8 | 1.9 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 19 | 0.2 | 0.8 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 0 | 0.0 | 0.0 |
| Eclampsia | 0 | 0.0 | 0.0 |
| Unspecified maternal hypertension | 174 | 1.6 | 1.2 |
| Haemorrhage in early pregnancy | 0 | 0.0 | 0.0 |
| Excessive vomiting in pregnancy | 1522 | 14.4 | 2.7 |
| Venous complications in pregnancy | 29 | 0.3 | 1.2 |
| Infections of genitourinary tract in pregnancy | 604 | 5.7 | 1.6 |
| Diabetes mellitus in pregnancy | 0 | 0.0 | 0.0 |
| Malnutrition in pregnancy | 0 | 0.0 | 0.0 |
| Maternal care for other conditions predominantly related to pregnancy | 497 | 4.7 | 1.0 |
| Abnormal findings on antenatal screening of mother | 8 | 0.1 | 0.4 |
| Complications of anaesthesia during pregnancy | 1 | 0.0 | 0.0 |
| Multiple gestation | 0 | 0.0 | 0.0 |
| Complications specific to multiple gestation | 0 | 0.0 | 0.0 |
| Maternal care for known or suspected malpresentation of fetus | 130 | 1.2 | 1.7 |
| Maternal care for known or suspected disproportion | 3 | 0.0 | 1.0 |
| Maternal care for known or suspected abnormality of pelvic organs | 127 | 1.2 | 1.6 |
| Maternal care for known or suspected fetal abnormality and damage | 27 | 0.3 | 1.3 |
| Maternal care for other known or suspected fetal problems | 113 | 1.1 | 0.8 |
| Polyhydramnios | 0 | 0.0 | 0.0 |
| Other disorders of amniotic fluid and membranes | 18 | 0.2 | 1.2 |
| Premature rupture of membranes | 276 | 2.6 | 1.6 |
| Placental disorders | 19 | 0.2 | 1.1 |
| Placenta praevia | 0 | 0.0 | 0.0 |
| Premature separation of placenta [abruptio placentae] | 74 | 0.7 | 2.2 |
| Antepartum haemorrhage, not elsewhere classified | 835 | 7.9 | 1.4 |
| False labour | 0 | 0.0 | 0.0 |
| Prolonged pregnancy | 100 | 0.9 | 0.6 |
| Other diagnosis | 2258 | 21.3 | 1.2 |
| Other antenatal admission with moderate or no complicating diagnosis total | 6917 | 65.3 | 1.6 |
| Total | 10,590 | 100.0 | 1.8 |

Data source: NMDS

Table 2.13b: Total antenatal hospital admissions and average length of stay (days) for mothers, by principal diagnosis (DRGs O65A and O65B), 2001

| Principal diagnosis | Admissions | | Average length of stay |
|---|---------------|--------------|------------------------|
| | No | % | |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 8 | 0.1 | 3.0 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 46 | 0.4 | 5.3 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 32 | 0.3 | 1.8 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 1060 | 9.4 | 1.6 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 504 | 4.5 | 2.4 |
| Eclampsia | 10 | 0.1 | 1.1 |
| Unspecified maternal hypertension | 16 | 0.1 | 3.5 |
| Haemorrhage in early pregnancy | 0 | 0.0 | 0.0 |
| Excessive vomiting in pregnancy | 344 | 3.0 | 2.4 |
| Venous complications in pregnancy | 28 | 0.2 | 2.4 |
| Infections of genitourinary tract in pregnancy | 48 | 0.4 | 2.0 |
| Diabetes mellitus in pregnancy | 175 | 1.6 | 2.4 |
| Malnutrition in pregnancy | 0 | 0.0 | 0.0 |
| Maternal care for other conditions predominantly related to pregnancy | 45 | 0.4 | 2.4 |
| Abnormal findings on antenatal screening of mother | 0 | 0.0 | 0.0 |
| Complications of anaesthesia during pregnancy | 1 | 0.0 | 0.0 |
| Multiple gestation | 70 | 0.6 | 2.3 |
| Complications specific to multiple gestation | 7 | 0.1 | 2.0 |
| Maternal care for known or suspected malpresentation of fetus | 17 | 0.2 | 3.4 |
| Maternal care for known or suspected disproportion | 0 | 0.0 | 0.0 |
| Maternal care for known or suspected abnormality of pelvic organs | 121 | 1.1 | 1.9 |
| Maternal care for known or suspected fetal abnormality and damage | 11 | 0.1 | 2.3 |
| Maternal care for other known or suspected fetal problems | 251 | 2.2 | 2.2 |
| Polyhydramnios | 48 | 0.4 | 2.9 |
| Other disorders of amniotic fluid and membranes | 43 | 0.4 | 1.5 |
| Premature rupture of membranes | 119 | 1.1 | 2.0 |
| Placental disorders | 11 | 0.1 | 1.9 |
| Placenta praevia | 228 | 2.0 | 4.1 |
| Premature separation of placenta [abruptio placentae] | 9 | 0.1 | 2.4 |
| Antepartum haemorrhage, not elsewhere classified | 87 | 0.8 | 3.7 |
| False labour | 0 | 0.0 | 0.0 |
| Prolonged pregnancy | 3 | 0.0 | 0.7 |
| Other diagnosis | 348 | 3.1 | 2.1 |
| Other antenatal admission with severe complicating diagnosis total | 3690 | 32.7 | 2.3 |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 72 | 0.6 | 2.1 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 26 | 0.2 | 1.1 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 0 | 0.0 | 0.0 |
| Eclampsia | 0 | 0.0 | 0.0 |
| Unspecified maternal hypertension | 152 | 1.3 | 1.0 |
| Haemorrhage in early pregnancy | 0 | 0.0 | 0.0 |
| Excessive vomiting in pregnancy | 1661 | 14.7 | 2.8 |
| Venous complications in pregnancy | 23 | 0.2 | 1.7 |
| Infections of genitourinary tract in pregnancy | 614 | 5.4 | 1.7 |
| Diabetes mellitus in pregnancy | 0 | 0.0 | 0.0 |
| Malnutrition in pregnancy | 0 | 0.0 | 0.0 |
| Maternal care for other conditions predominantly related to pregnancy | 431 | 3.8 | 1.8 |
| Abnormal findings on antenatal screening of mother | 13 | 0.1 | 0.5 |
| Complications of anaesthesia during pregnancy | 0 | 0.0 | 0.0 |
| Multiple gestation | 0 | 0.0 | 0.0 |
| Complications specific to multiple gestation | 0 | 0.0 | 0.0 |
| Maternal care for known or suspected malpresentation of fetus | 106 | 0.9 | 1.1 |
| Maternal care for known or suspected disproportion | 5 | 0.0 | 0.2 |
| Maternal care for known or suspected abnormality of pelvic organs | 107 | 0.9 | 1.3 |
| Maternal care for known or suspected fetal abnormality and damage | 23 | 0.2 | 1.7 |
| Maternal care for other known or suspected fetal problems | 145 | 1.3 | 0.9 |
| Polyhydramnios | 0 | 0.0 | 0.0 |
| Other disorders of amniotic fluid and membranes | 17 | 0.2 | 1.8 |
| Premature rupture of membranes | 274 | 2.4 | 1.1 |
| Placental disorders | 13 | 0.1 | 2.2 |
| Placenta praevia | 0 | 0.0 | 0.0 |
| Premature separation of placenta [abruptio placentae] | 42 | 0.4 | 1.5 |
| Antepartum haemorrhage, not elsewhere classified | 984 | 8.7 | 1.4 |
| False labour | 0 | 0.0 | 0.0 |
| Prolonged pregnancy | 120 | 1.1 | 0.4 |
| Other diagnosis | 2764 | 24.5 | 1.2 |
| Other antenatal admission with moderate or no complicating diagnosis total | 7592 | 67.3 | 1.6 |
| Total | 11,282 | 100.0 | 1.8 |

Data source: NMDS

Table 2.14: Claims made for private specialist obstetrician consultations, by DHB region of woman's place of residence, 2000 and 2001

| DHB | First consultation | | Subsequent consultation | | Consultation effecting birth | | Total | |
|--------------------|--------------------|---------------------------------|-------------------------|---------------------------------|------------------------------|---------------------------------|--------|---------------------------------|
| | Number | Rate per 100 births in each DHB | Number | Rate per 100 births in each DHB | Number | Rate per 100 births in each DHB | Number | Rate per 100 births in each DHB |
| 2000 | | | | | | | | |
| Northland | 47 | 2.7 | 8 | 0.5 | 14 | 0.8 | 69 | 3.9 |
| Waitemata | 1812 | 38.7 | 450 | 9.6 | 306 | 6.5 | 2568 | 54.8 |
| Auckland | 849 | 16.4 | 186 | 3.6 | 238 | 4.6 | 1273 | 24.6 |
| Counties Manukau | 1333 | 26.6 | 229 | 4.6 | 235 | 4.7 | 1797 | 35.8 |
| Waikato | 281 | 8.6 | 413 | 12.6 | 81 | 2.5 | 775 | 23.6 |
| Lakes | 722 | 48.7 | 419 | 28.3 | 274 | 18.5 | 1415 | 95.5 |
| Bay of Plenty | 622 | 24.4 | 300 | 11.8 | 69 | 2.7 | 991 | 38.9 |
| Tairāwhiti | 12 | 1.7 | 3 | 0.4 | 1 | 0.1 | 16 | 2.3 |
| Hawke's Bay | 30 | 1.5 | 6 | 0.3 | 7 | 0.3 | 43 | 2.1 |
| Taranaki | 246 | 19.7 | 24 | 1.9 | 32 | 2.6 | 302 | 24.2 |
| MidCentral | 193 | 11.1 | 26 | 1.5 | 13 | 0.7 | 232 | 13.3 |
| Whanganui | 72 | 8.6 | 50 | 6.0 | 5 | 0.6 | 127 | 15.1 |
| Capital and Coast | 50 | 6.9 | 34 | 4.7 | 6 | 0.8 | 90 | 12.4 |
| Hutt | 22 | 1.3 | 6 | 0.4 | 5 | 0.3 | 33 | 2.0 |
| Wairarapa | 1 | 0.2 | 0 | 0.0 | 0 | 0.0 | 1 | 0.2 |
| Nelson Marlborough | 17 | 1.2 | 10 | 0.7 | 11 | 0.8 | 38 | 2.7 |
| West Coast | 12 | 23.5 | 8 | 15.7 | 4 | 7.8 | 24 | 47.1 |
| Canterbury | 1834 | 52.1 | 917 | 26.1 | 647 | 18.4 | 3398 | 96.6 |
| South Canterbury | 12 | 2.4 | 3 | 0.6 | 4 | 0.8 | 19 | 3.8 |
| Otago | 42 | 7.1 | 20 | 3.4 | 11 | 1.9 | 73 | 12.4 |
| Southland | 32 | 5.0 | 6 | 0.9 | 2 | 0.3 | 40 | 6.3 |
| Total | 8241 | 20.6 | 3118 | 7.8 | 1965 | 4.9 | 13324 | 33.3 |
| 2001 | | | | | | | | |
| Northland | 33 | 1.5 | 10 | 0.5 | 7 | 0.3 | 50 | 2.3 |
| Waitemata | 1480 | 31.6 | 378 | 8.1 | 234 | 5.0 | 2092 | 44.6 |
| Auckland | 735 | 13.2 | 189 | 3.4 | 184 | 3.3 | 1108 | 20.0 |
| Counties Manukau | 1487 | 29.5 | 221 | 4.4 | 266 | 5.3 | 1974 | 39.1 |
| Waikato | 272 | 8.4 | 328 | 10.2 | 61 | 1.9 | 661 | 20.5 |
| Lakes | 711 | 53.3 | 465 | 34.8 | 291 | 21.8 | 1467 | 109.9 |
| Bay of Plenty | 694 | 28.9 | 329 | 13.7 | 76 | 3.2 | 1099 | 45.7 |
| Tairāwhiti | 24 | 3.5 | 4 | 0.6 | 6 | 0.9 | 34 | 4.9 |
| Hawke's Bay | 24 | 1.2 | 7 | 0.3 | 5 | 0.2 | 36 | 1.8 |
| Taranaki | 181 | 15.1 | 55 | 4.6 | 9 | 0.8 | 245 | 20.5 |
| MidCentral | 174 | 10.4 | 27 | 1.6 | 16 | 1.0 | 217 | 12.9 |
| Whanganui | 121 | 16.4 | 66 | 8.9 | 11 | 1.5 | 198 | 26.8 |
| Capital and Coast | 24 | 3.3 | 9 | 1.2 | 3 | 0.4 | 36 | 4.9 |
| Hutt | 19 | 1.1 | 4 | 0.2 | 4 | 0.2 | 27 | 1.5 |
| Wairarapa | 4 | 0.9 | 1 | 0.2 | 0 | 0.0 | 5 | 1.1 |
| Nelson Marlborough | 13 | 1.0 | 3 | 0.2 | 1 | 0.1 | 17 | 1.3 |
| West Coast | 11 | 31.4 | 0 | 0.0 | 2 | 5.7 | 13 | 37.1 |
| Canterbury | 1960 | 55.7 | 875 | 24.8 | 582 | 16.5 | 3417 | 97.0 |
| South Canterbury | 11 | 2.1 | 2 | 0.4 | 1 | 0.2 | 14 | 2.7 |
| Otago | 34 | 8.1 | 9 | 2.2 | 15 | 3.6 | 58 | 13.9 |
| Southland | 26 | 3.7 | 6 | 0.9 | 7 | 1.0 | 39 | 5.5 |
| Total | 8038 | 20.0 | 2988 | 7.4 | 1781 | 4.4 | 12807 | 31.8 |

Data source: MNIS

3. Labour and birth

This section includes analysis of events relating to labour and birth. There is an emphasis on type of birth, including an analysis of the method of birth and mothers' characteristics.

In 2000 there were 55,883 babies born in hospital to 54,946 mothers, and in 2001 there were 54,667 babies born in hospital to 53,805 mothers. In 2000, 68.4 percent of mothers (37,601 out of 54,946) had a normal vaginal birth, and 20.8 percent (11,431/54,946) of mothers had a caesarean section. In 2001, 67.6 percent (36,364/53,805) of mothers had a normal vaginal birth, and 22.1 percent (11,891/53,805) of mothers had a caesarean section.

This data is primarily extracted from the NMDS datasets, and the first four tables include only hospital births.

Data integrity

An acute caesarean section is defined as a caesarean section performed urgently for maternal or fetal health once labour has started. An elective caesarean section is defined as a caesarean section performed before the onset of labour. There is inconsistency in the way different hospitals code acute and elective caesarean sections, particularly where a caesarean section has been planned but the woman comes into labour early.

3.1 TYPE OF BIRTH

Table 3.1: Type of birth (percentage), by age, 2000 and 2001

| Age group | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|-------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|-------|
| 2000 | | | | | | | | | |
| Under 16 | 76.6 | 14.5 | 13.8 | 0.7 | 9.0 | 0.7 | 2.1 | 6.2 | 100.0 |
| 16–19 | 76.7 | 12.3 | 10.5 | 1.8 | 11.0 | 0.7 | 4.8 | 5.5 | 100.0 |
| 20–24 | 76.2 | 14.6 | 11.0 | 3.6 | 9.2 | 0.7 | 4.1 | 4.4 | 100.0 |
| 25–29 | 69.4 | 19.2 | 13.1 | 6.1 | 11.4 | 0.8 | 5.0 | 5.6 | 100.0 |
| 30–34 | 65.2 | 23.5 | 14.6 | 8.9 | 11.4 | 0.9 | 5.4 | 5.1 | 100.0 |
| 35–39 | 61.5 | 27.9 | 16.3 | 11.6 | 10.6 | 1.0 | 4.6 | 5.0 | 100.0 |
| 40+ | 59.7 | 31.3 | 17.7 | 13.6 | 9.0 | 1.0 | 3.4 | 4.6 | 100.0 |
| Total | 68.4 | 20.8 | 13.6 | 7.2 | 10.8 | 0.9 | 4.8 | 5.1 | 100.0 |
| 2001 | | | | | | | | | |
| Under 16 | 76.5 | 12.8 | 10.7 | 2.0 | 10.7 | 0.0 | 4.7 | 6.0 | 100.0 |
| 16–19 | 76.5 | 13.5 | 11.3 | 2.2 | 10.0 | 0.5 | 3.7 | 5.8 | 100.0 |
| 20–24 | 75.5 | 15.4 | 11.6 | 3.7 | 9.2 | 0.5 | 3.4 | 5.2 | 100.0 |
| 25–29 | 69.2 | 20.4 | 13.7 | 6.7 | 10.5 | 0.6 | 4.3 | 5.5 | 100.0 |
| 30–34 | 63.8 | 25.1 | 15.4 | 9.7 | 11.1 | 0.6 | 4.8 | 5.7 | 100.0 |
| 35–39 | 60.7 | 29.2 | 16.4 | 12.8 | 10.2 | 0.7 | 4.3 | 5.1 | 100.0 |
| 40+ | 57.3 | 33.2 | 18.0 | 15.1 | 9.5 | 0.6 | 3.6 | 5.3 | 100.0 |
| Total | 67.6 | 22.1 | 14.2 | 7.9 | 10.3 | 0.6 | 4.2 | 5.5 | 100.0 |

Data source: NMDS

This data is a count of women who have given birth to either live born or stillborn, not the number of babies.

The percentages provided in Table 3.1 are the proportions of procedures within each age group from each birth type.

There are many factors, including age and parity, which affect the type of birth. In 2000, 31.3 percent (478/1527) of women over 40 years had a caesarean section, whereas only 12.3 percent (448/3632) of women in the 16–19 age group had a caesarean section. In 2001, 33.2 percent (535/1613) of women over 40 years had a caesarean section, whereas only 13.5 percent (491/3632) of women in the 16–19 age group had a caesarean section.

Table 3.2: Type of birth (numbers), by ethnicity, 2000 and 2001

| Ethnic group | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|-----------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|--------|
| 2000 | | | | | | | | | |
| Māori | 8501 | 1482 | 1057 | 425 | 664 | 89 | 250 | 325 | 10,647 |
| Pacific peoples | 4235 | 1015 | 746 | 269 | 299 | 48 | 87 | 164 | 5549 |
| Asian | 2157 | 928 | 616 | 312 | 520 | 26 | 210 | 284 | 3605 |
| European | 20,656 | 7317 | 4564 | 2753 | 4041 | 281 | 1934 | 1826 | 32,014 |
| Other | 1470 | 483 | 327 | 156 | 264 | 18 | 103 | 143 | 2217 |
| Not reported | 582 | 206 | 159 | 47 | 126 | 7 | 58 | 61 | 914 |
| Total | 37,601 | 11,431 | 7469 | 3962 | 5914 | 469 | 2642 | 2803 | 54,946 |
| 2001 | | | | | | | | | |
| Māori | 8364 | 1605 | 1148 | 457 | 593 | 81 | 211 | 301 | 10,562 |
| Pacific peoples | 4280 | 1005 | 713 | 292 | 304 | 33 | 82 | 189 | 5589 |
| Asian | 1971 | 955 | 622 | 333 | 546 | 17 | 201 | 328 | 3472 |
| European | 19,931 | 7659 | 4681 | 2978 | 3724 | 168 | 1645 | 1911 | 31,314 |
| Other | 1266 | 478 | 321 | 157 | 283 | 15 | 99 | 169 | 2027 |
| Not reported | 552 | 189 | 149 | 40 | 100 | 7 | 41 | 52 | 841 |
| Total | 36,364 | 11,891 | 7634 | 4257 | 5550 | 321 | 2279 | 2950 | 53,805 |

Data source: NMDS

The percentages provided in Table 3.3 (page 38) are the proportions of women within each ethnic group from each birth type.

Māori and Pacific women are the most likely to have a normal vaginal birth, and Asian women the least. As the data illustrates, Asian women have the highest caesarean section rate (25.7 percent in 2000 and 27.5 percent in 2001), compared to European women (22.9 percent in 2000 and 24.5 percent in 2001), Pacific women (18.3 percent in 2000 and 18.0 percent in 2001), and Māori women (13.9 percent in 2000 and 15.2 percent in 2001).

There are also differences in the incidence of elective (pre-labour) and acute (in labour) caesarean sections, although these are less significant than the overall ethnic differences. For women who had a caesarean in 2000, Pacific women were least likely to have an elective procedure (26.5 percent) and European women most likely (37.6 percent). In 2001 European women were still most likely to have had an elective caesarean section (38.9 percent), although it was Māori women who were least likely to have an elective procedure (28.5 percent).

Table 3.3: Type of birth (percentage), by ethnicity, 2000 and 2001

| Ethnic group | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|-----------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|-------|
| 2000 | | | | | | | | | |
| Māori | 79.8 | 13.9 | 9.9 | 4.0 | 6.2 | 0.8 | 2.3 | 3.1 | 100.0 |
| Pacific peoples | 76.3 | 18.3 | 13.4 | 4.8 | 5.4 | 0.9 | 1.6 | 3.0 | 100.0 |
| Asian | 59.8 | 25.7 | 17.1 | 8.7 | 14.4 | 0.7 | 5.8 | 7.9 | 100.0 |
| European | 64.5 | 22.9 | 14.3 | 8.6 | 12.6 | 0.9 | 6.0 | 5.7 | 100.0 |
| Other | 66.3 | 21.8 | 14.7 | 7.0 | 11.9 | 0.8 | 4.6 | 6.5 | 100.0 |
| Not reported | 63.7 | 22.5 | 17.4 | 5.1 | 13.8 | 0.8 | 6.3 | 6.7 | 100.0 |
| Total | 68.4 | 20.8 | 13.6 | 7.2 | 10.8 | 0.9 | 4.8 | 5.1 | 100.0 |
| 2001 | | | | | | | | | |
| Māori | 79.2 | 15.2 | 10.9 | 4.3 | 5.6 | 0.8 | 2.0 | 2.8 | 100.0 |
| Pacific peoples | 76.6 | 18.0 | 12.8 | 5.2 | 5.4 | 0.6 | 1.5 | 3.4 | 100.0 |
| Asian | 56.8 | 27.5 | 17.9 | 9.6 | 15.7 | 0.5 | 5.8 | 9.4 | 100.0 |
| European | 63.6 | 24.5 | 14.9 | 9.5 | 11.9 | 0.5 | 5.3 | 6.1 | 100.0 |
| Other | 62.5 | 23.6 | 15.8 | 7.7 | 14.0 | 0.7 | 4.9 | 8.3 | 100.0 |
| Not reported | 65.6 | 22.5 | 17.7 | 4.8 | 11.9 | 0.8 | 4.9 | 6.2 | 100.0 |
| Total | 67.6 | 22.1 | 14.2 | 7.9 | 10.3 | 0.6 | 4.2 | 5.5 | 100.0 |

Data source: NMDS

There is an association between parity and type of birth. In 2000, women who were in their first pregnancy had a 52.4 percent (7202/13,738) incidence of a normal vaginal birth and in 2001, women who were in their first pregnancy had a 52.3 percent (6512/12,456) incidence of a normal vaginal birth. From these figures, approximately half of New Zealand women in their first birth had a normal vaginal birth, a quarter had an operative vaginal birth and a quarter had a caesarean section.

Table 3.8 (page 44) shows the number and rate of caesarean sections for each DHB region of women's residence.

Data integrity

Parity information is not provided for 4251 babies (10.7 percent) in 2000 and 5259 babies (14.1 percent) in 2001. As this information is obtained from MNIS, only 70 percent of women are included (MNIS excludes the 30 percent of births that have non-Section-51 contracts).

Table 3.4: Type of birth (numbers), by parity, 2000 and 2001

| Parity | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|-------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|--------|
| 2000 | | | | | | | | | |
| 0 | 7202 | 3305 | 2755 | 550 | 3231 | 138 | 1407 | 1686 | 13,738 |
| 1 | 8090 | 2071 | 1175 | 896 | 953 | 123 | 350 | 480 | 11,114 |
| 2 | 4516 | 947 | 423 | 524 | 267 | 80 | 68 | 119 | 5730 |
| 3 | 2116 | 386 | 197 | 189 | 102 | 43 | 16 | 43 | 2604 |
| 4 | 1012 | 185 | 95 | 90 | 39 | 23 | 8 | 8 | 1236 |
| 5 | 458 | 107 | 65 | 42 | 23 | 10 | 7 | 6 | 588 |
| 6 | 227 | 44 | 34 | 10 | 6 | 4 | 0 | 2 | 277 |
| 7+ | 182 | 43 | 29 | 14 | 14 | 10 | 1 | 3 | 239 |
| Total | 23,803 | 7088 | 4773 | 2315 | 4635 | 431 | 1857 | 2347 | 35,526 |
| 2001 | | | | | | | | | |
| 0 | 6512 | 3259 | 2695 | 564 | 2685 | 82 | 1059 | 1544 | 12,456 |
| 1 | 7258 | 2088 | 1114 | 974 | 806 | 85 | 298 | 423 | 10,152 |
| 2 | 3991 | 992 | 423 | 569 | 178 | 33 | 50 | 95 | 5161 |
| 3 | 1813 | 413 | 181 | 232 | 70 | 21 | 16 | 33 | 2296 |
| 4 | 898 | 157 | 99 | 58 | 55 | 29 | 3 | 23 | 1110 |
| 5 | 414 | 81 | 52 | 29 | 19 | 8 | 4 | 7 | 514 |
| 6 | 189 | 34 | 19 | 15 | 11 | 5 | 2 | 4 | 234 |
| 7+ | 198 | 31 | 21 | 10 | 8 | 1 | 4 | 3 | 237 |
| Total | 21,273 | 7055 | 4604 | 2451 | 3832 | 264 | 1436 | 2132 | 32,160 |

Data source: MNIS

Table 3.5: Type of birth (percentage), by parity, 2000 and 2001

| Parity | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|-------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|-------|
| 2000 | | | | | | | | | |
| 0 | 52.4 | 24.1 | 20.1 | 4.0 | 23.5 | 1.0 | 10.2 | 12.3 | 100.0 |
| 1 | 72.8 | 18.6 | 10.6 | 8.1 | 8.6 | 1.1 | 3.1 | 4.3 | 100.0 |
| 2 | 78.8 | 16.5 | 7.4 | 9.1 | 4.7 | 1.4 | 1.2 | 2.1 | 100.0 |
| 3 | 81.3 | 14.8 | 7.6 | 7.3 | 3.9 | 1.7 | 0.6 | 1.7 | 100.0 |
| 4 | 81.9 | 15.0 | 7.7 | 7.3 | 3.2 | 1.9 | 0.6 | 0.6 | 100.0 |
| 5 | 77.9 | 18.2 | 11.1 | 7.1 | 3.9 | 1.7 | 1.2 | 1.0 | 100.0 |
| 6 | 81.9 | 15.9 | 12.3 | 3.6 | 2.2 | 1.4 | 0.0 | 0.7 | 100.0 |
| 7+ | 76.2 | 18.0 | 12.1 | 5.9 | 5.9 | 4.2 | 0.4 | 1.3 | 100.0 |
| Total | 67.0 | 20.0 | 13.4 | 6.5 | 13.0 | 1.2 | 5.2 | 6.6 | 100.0 |
| 2001 | | | | | | | | | |
| 0 | 52.3 | 26.2 | 21.6 | 4.5 | 21.6 | 0.7 | 8.5 | 12.4 | 100.0 |
| 1 | 71.5 | 20.6 | 11.0 | 9.6 | 7.9 | 0.8 | 2.9 | 4.2 | 100.0 |
| 2 | 77.3 | 19.2 | 8.2 | 11.0 | 3.4 | 0.6 | 1.0 | 1.8 | 100.0 |
| 3 | 79.0 | 18.0 | 7.9 | 10.1 | 3.0 | 0.9 | 0.7 | 1.4 | 100.0 |
| 4 | 80.9 | 14.1 | 8.9 | 5.2 | 5.0 | 2.6 | 0.3 | 2.1 | 100.0 |
| 5 | 80.5 | 15.8 | 10.1 | 5.6 | 3.7 | 1.6 | 0.8 | 1.4 | 100.0 |
| 6 | 80.8 | 14.5 | 8.1 | 6.4 | 4.7 | 2.1 | 0.9 | 1.7 | 100.0 |
| 7+ | 83.5 | 13.1 | 8.9 | 4.2 | 3.4 | 0.4 | 1.7 | 1.3 | 100.0 |
| Total | 66.1 | 21.9 | 14.3 | 7.6 | 11.9 | 0.8 | 4.5 | 6.6 | 100.0 |

Data source: MNIS

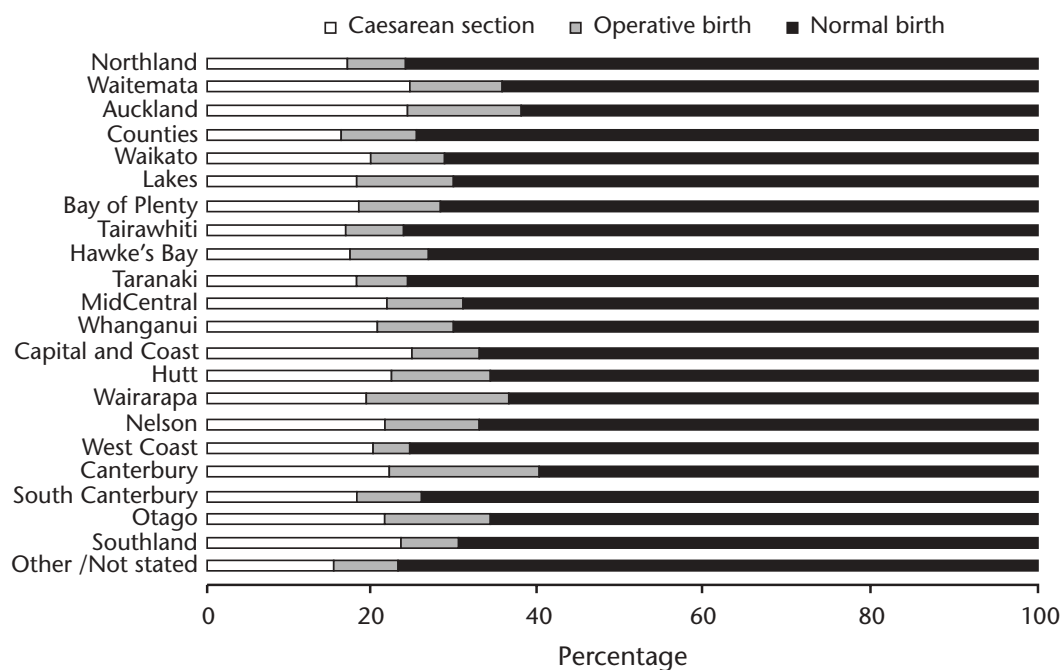


Figure 3.1a: Type of birth (percentage) by DHB of woman's place of residence, 2000
Data source: NMDS

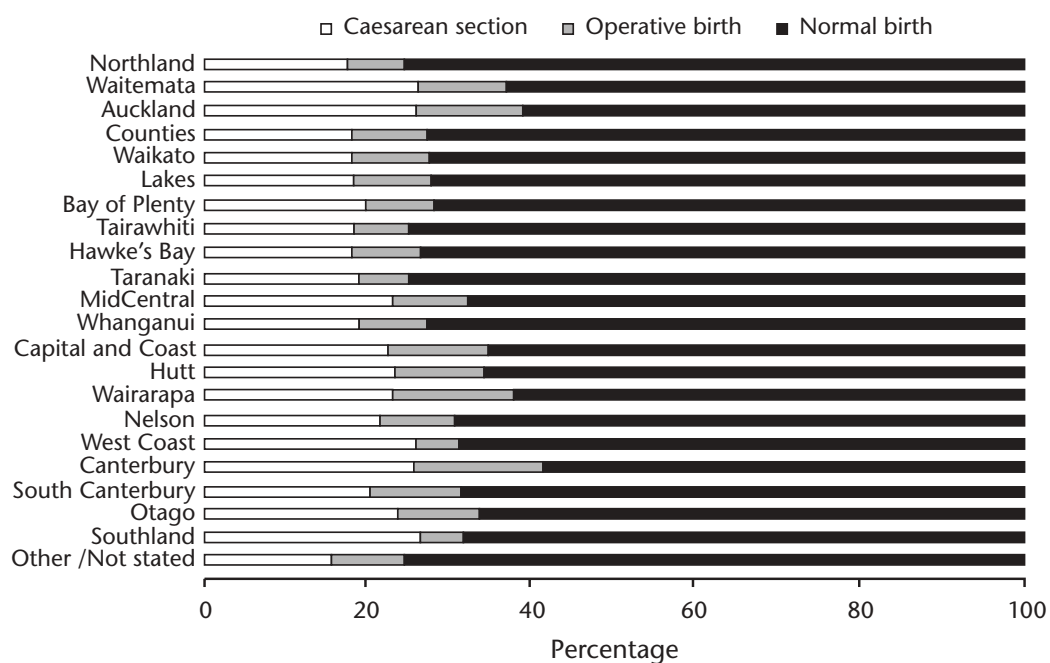


Figure 3.1b: Type of birth (percentage) by DHB of woman's place of residence, 2001
Data source: NMDS

Table 3.6: Type of birth (numbers), by DHB region of woman's place of residence, 2000 and 2001

| DHB region | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|--------------------|---------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|---------------|
| 2000 | | | | | | | | | |
| Northland | 1546 | 343 | 233 | 110 | 143 | 18 | 53 | 72 | 2032 |
| Waitemata | 4097 | 1553 | 999 | 554 | 691 | 46 | 262 | 383 | 6341 |
| Auckland | 3862 | 1489 | 1057 | 432 | 855 | 68 | 362 | 425 | 6206 |
| Counties Manukau | 5206 | 1128 | 760 | 368 | 625 | 63 | 202 | 360 | 6959 |
| Waikato | 3229 | 896 | 563 | 333 | 395 | 40 | 125 | 230 | 4520 |
| Lakes | 1093 | 280 | 206 | 74 | 182 | 17 | 127 | 38 | 1555 |
| Bay of Plenty | 1878 | 479 | 310 | 169 | 249 | 25 | 113 | 111 | 2606 |
| Tairāwhiti | 567 | 124 | 79 | 45 | 51 | 6 | 8 | 37 | 742 |
| Hawke's Bay | 1641 | 386 | 256 | 130 | 209 | 24 | 104 | 81 | 2236 |
| Taranaki | 1061 | 252 | 168 | 84 | 83 | 18 | 26 | 39 | 1396 |
| MidCentral | 1409 | 438 | 278 | 160 | 190 | 22 | 81 | 87 | 2037 |
| Whanganui | 649 | 189 | 125 | 64 | 84 | 6 | 43 | 35 | 922 |
| Capital and Coast | 2508 | 921 | 664 | 257 | 305 | 12 | 206 | 87 | 3734 |
| Hutt | 1305 | 441 | 289 | 152 | 234 | 12 | 119 | 103 | 1980 |
| Wairarapa | 306 | 92 | 54 | 38 | 83 | 5 | 38 | 40 | 481 |
| Nelson Marlborough | 977 | 311 | 224 | 87 | 164 | 6 | 116 | 42 | 1452 |
| West Coast | 266 | 70 | 40 | 30 | 16 | 2 | 8 | 6 | 352 |
| Canterbury | 3208 | 1176 | 636 | 540 | 951 | 43 | 421 | 487 | 5335 |
| South Canterbury | 413 | 100 | 51 | 49 | 43 | 4 | 28 | 11 | 556 |
| Otago | 1316 | 424 | 269 | 155 | 253 | 15 | 121 | 117 | 1993 |
| Southland | 954 | 317 | 194 | 123 | 97 | 17 | 75 | 5 | 1368 |
| Other/Not reported | 110 | 22 | 14 | 8 | 11 | 0 | 4 | 7 | 143 |
| Total | 37,601 | 11,431 | 7469 | 3962 | 5914 | 469 | 2642 | 2803 | 54,946 |
| 2001 | | | | | | | | | |
| Northland | 1385 | 320 | 229 | 91 | 127 | 19 | 18 | 90 | 1832 |
| Waitemata | 3934 | 1630 | 1045 | 585 | 658 | 27 | 262 | 369 | 6222 |
| Auckland | 3653 | 1538 | 1054 | 484 | 792 | 31 | 278 | 483 | 5983 |
| Counties Manukau | 4842 | 1195 | 823 | 372 | 614 | 41 | 168 | 405 | 6651 |
| Waikato | 3309 | 920 | 570 | 350 | 337 | 40 | 55 | 242 | 4566 |
| Lakes | 1082 | 274 | 181 | 93 | 141 | 11 | 88 | 42 | 1497 |
| Bay of Plenty | 1849 | 503 | 333 | 170 | 212 | 13 | 85 | 114 | 2564 |
| Tairāwhiti | 573 | 139 | 83 | 56 | 51 | 6 | 9 | 36 | 763 |
| Hawke's Bay | 1581 | 386 | 256 | 130 | 181 | 20 | 99 | 62 | 2148 |
| Taranaki | 987 | 248 | 168 | 80 | 82 | 12 | 39 | 31 | 1317 |
| MidCentral | 1282 | 435 | 272 | 163 | 176 | 8 | 67 | 101 | 1893 |
| Whanganui | 629 | 164 | 104 | 60 | 72 | 5 | 22 | 45 | 865 |
| Capital and Coast | 2376 | 814 | 571 | 243 | 439 | 15 | 254 | 170 | 3629 |
| Hutt | 1366 | 482 | 275 | 207 | 227 | 11 | 133 | 83 | 2075 |
| Wairarapa | 292 | 108 | 69 | 39 | 69 | 5 | 37 | 27 | 469 |
| Nelson Marlborough | 984 | 302 | 187 | 115 | 130 | 3 | 89 | 38 | 1416 |
| West Coast | 237 | 89 | 54 | 35 | 18 | 1 | 13 | 4 | 344 |
| Canterbury | 3192 | 1384 | 742 | 642 | 870 | 30 | 373 | 467 | 5446 |
| South Canterbury | 384 | 113 | 73 | 40 | 63 | 5 | 43 | 15 | 560 |
| Otago | 1238 | 441 | 279 | 162 | 187 | 8 | 79 | 100 | 1866 |
| Southland | 908 | 348 | 230 | 118 | 71 | 8 | 58 | 5 | 1327 |
| Other/Not reported | 281 | 58 | 36 | 22 | 33 | 2 | 10 | 21 | 372 |
| Total | 36,364 | 11,891 | 7634 | 4257 | 5550 | 321 | 2279 | 2950 | 53,805 |

Data source: NMDS

Table 3.7: Type of birth (percentage), by DHB region of woman's place of residence, 2000 and 2001

| DHB region | Normal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Vaginal breech birth | Forceps birth | Vacuum extraction | Total |
|--------------------|--------------|-------------------------|-------------------------|----------------------------|-------------------------------|----------------------|---------------|-------------------|-------|
| 2000 | | | | | | | | | |
| Northland | 76.1 | 16.9 | 11.5 | 5.4 | 7.0 | 0.9 | 2.6 | 3.5 | 100.0 |
| Waitemata | 64.6 | 24.5 | 15.8 | 8.7 | 10.9 | 0.7 | 4.1 | 6.0 | 100.0 |
| Auckland | 62.2 | 24.0 | 17.0 | 7.0 | 13.8 | 1.1 | 5.8 | 6.8 | 100.0 |
| Counties Manukau | 74.8 | 16.2 | 10.9 | 5.3 | 9.0 | 0.9 | 2.9 | 5.2 | 100.0 |
| Waikato | 71.4 | 19.8 | 12.5 | 7.4 | 8.7 | 0.9 | 2.8 | 5.1 | 100.0 |
| Lakes | 70.3 | 18.0 | 13.2 | 4.8 | 11.7 | 1.1 | 8.2 | 2.4 | 100.0 |
| Bay of Plenty | 72.1 | 18.4 | 11.9 | 6.5 | 9.6 | 1.0 | 4.3 | 4.3 | 100.0 |
| Tairāwhiti | 76.4 | 16.7 | 10.6 | 6.1 | 6.9 | 0.8 | 1.1 | 5.0 | 100.0 |
| Hawke's Bay | 73.4 | 17.3 | 11.4 | 5.8 | 9.3 | 1.1 | 4.7 | 3.6 | 100.0 |
| Taranaki | 76.0 | 18.1 | 12.0 | 6.0 | 5.9 | 1.3 | 1.9 | 2.8 | 100.0 |
| MidCentral | 69.2 | 21.5 | 13.6 | 7.9 | 9.3 | 1.1 | 4.0 | 4.3 | 100.0 |
| Whanganui | 70.4 | 20.5 | 13.6 | 6.9 | 9.1 | 0.7 | 4.7 | 3.8 | 100.0 |
| Capital and Coast | 67.2 | 24.7 | 17.8 | 6.9 | 8.2 | 0.3 | 5.5 | 2.3 | 100.0 |
| Hutt | 65.9 | 22.3 | 14.6 | 7.7 | 11.8 | 0.6 | 6.0 | 5.2 | 100.0 |
| Wairarapa | 63.6 | 19.1 | 11.2 | 7.9 | 17.3 | 1.0 | 7.9 | 8.3 | 100.0 |
| Nelson Marlborough | 67.3 | 21.4 | 15.4 | 6.0 | 11.3 | 0.4 | 8.0 | 2.9 | 100.0 |
| West Coast | 75.6 | 19.9 | 11.4 | 8.5 | 4.5 | 0.6 | 2.3 | 1.7 | 100.0 |
| Canterbury | 60.1 | 22.0 | 11.9 | 10.1 | 17.8 | 0.8 | 7.9 | 9.1 | 100.0 |
| South Canterbury | 74.3 | 18.0 | 9.2 | 8.8 | 7.7 | 0.7 | 5.0 | 2.0 | 100.0 |
| Otago | 66.0 | 21.3 | 13.5 | 7.8 | 12.7 | 0.8 | 6.1 | 5.9 | 100.0 |
| Southland | 69.7 | 23.2 | 14.2 | 9.0 | 7.1 | 1.2 | 5.5 | 0.4 | 100.0 |
| Other/Not reported | 76.9 | 15.4 | 9.8 | 5.6 | 7.7 | 0.0 | 2.8 | 4.9 | 100.0 |
| Total | 68.4 | 20.8 | 13.6 | 7.2 | 10.8 | 0.9 | 4.8 | 5.1 | 100.0 |
| 2001 | | | | | | | | | |
| Northland | 75.6 | 17.5 | 12.5 | 5.0 | 6.9 | 1.0 | 1.0 | 4.9 | 100.0 |
| Waitemata | 63.2 | 26.2 | 16.8 | 9.4 | 10.6 | 0.4 | 4.2 | 5.9 | 100.0 |
| Auckland | 61.1 | 25.7 | 17.6 | 8.1 | 13.2 | 0.5 | 4.6 | 8.1 | 100.0 |
| Counties Manukau | 72.8 | 18.0 | 12.4 | 5.6 | 9.2 | 0.6 | 2.5 | 6.1 | 100.0 |
| Waikato | 72.5 | 20.1 | 12.5 | 7.7 | 7.4 | 0.9 | 1.2 | 5.3 | 100.0 |
| Lakes | 72.3 | 18.3 | 12.1 | 6.2 | 9.4 | 0.7 | 5.9 | 2.8 | 100.0 |
| Bay of Plenty | 72.1 | 19.6 | 13.0 | 6.6 | 8.3 | 0.5 | 3.3 | 4.4 | 100.0 |
| Tairāwhiti | 75.1 | 18.2 | 10.9 | 7.3 | 6.7 | 0.8 | 1.2 | 4.7 | 100.0 |
| Hawke's Bay | 73.6 | 18.0 | 11.9 | 6.1 | 8.4 | 0.9 | 4.6 | 2.9 | 100.0 |
| Taranaki | 74.9 | 18.8 | 12.8 | 6.1 | 6.2 | 0.9 | 3.0 | 2.4 | 100.0 |
| MidCentral | 67.7 | 23.0 | 14.4 | 8.6 | 9.3 | 0.4 | 3.5 | 5.3 | 100.0 |
| Whanganui | 72.7 | 19.0 | 12.0 | 6.9 | 8.3 | 0.6 | 2.5 | 5.2 | 100.0 |
| Capital and Coast | 65.5 | 22.4 | 15.7 | 6.7 | 12.1 | 0.4 | 7.0 | 4.7 | 100.0 |
| Hutt | 65.8 | 23.2 | 13.3 | 10.0 | 10.9 | 0.5 | 6.4 | 4.0 | 100.0 |
| Wairarapa | 62.3 | 23.0 | 14.7 | 8.3 | 14.7 | 1.1 | 7.9 | 5.8 | 100.0 |
| Nelson Marlborough | 69.5 | 21.3 | 13.2 | 8.1 | 9.2 | 0.2 | 6.3 | 2.7 | 100.0 |
| West Coast | 68.9 | 25.9 | 15.7 | 10.2 | 5.2 | 0.3 | 3.8 | 1.2 | 100.0 |
| Canterbury | 58.6 | 25.4 | 13.6 | 11.8 | 16.0 | 0.6 | 6.8 | 8.6 | 100.0 |
| South Canterbury | 68.6 | 20.2 | 13.0 | 7.1 | 11.3 | 0.9 | 7.7 | 2.7 | 100.0 |
| Otago | 66.3 | 23.6 | 15.0 | 8.7 | 10.0 | 0.4 | 4.2 | 5.4 | 100.0 |
| Southland | 68.4 | 26.2 | 17.3 | 8.9 | 5.4 | 0.6 | 4.4 | 0.4 | 100.0 |
| Other/Not reported | 75.5 | 15.6 | 9.7 | 5.9 | 8.9 | 0.5 | 2.7 | 5.6 | 100.0 |
| Total | 67.6 | 22.1 | 14.2 | 7.9 | 10.3 | 0.6 | 4.2 | 5.5 | 100.0 |

Data source: NMDS

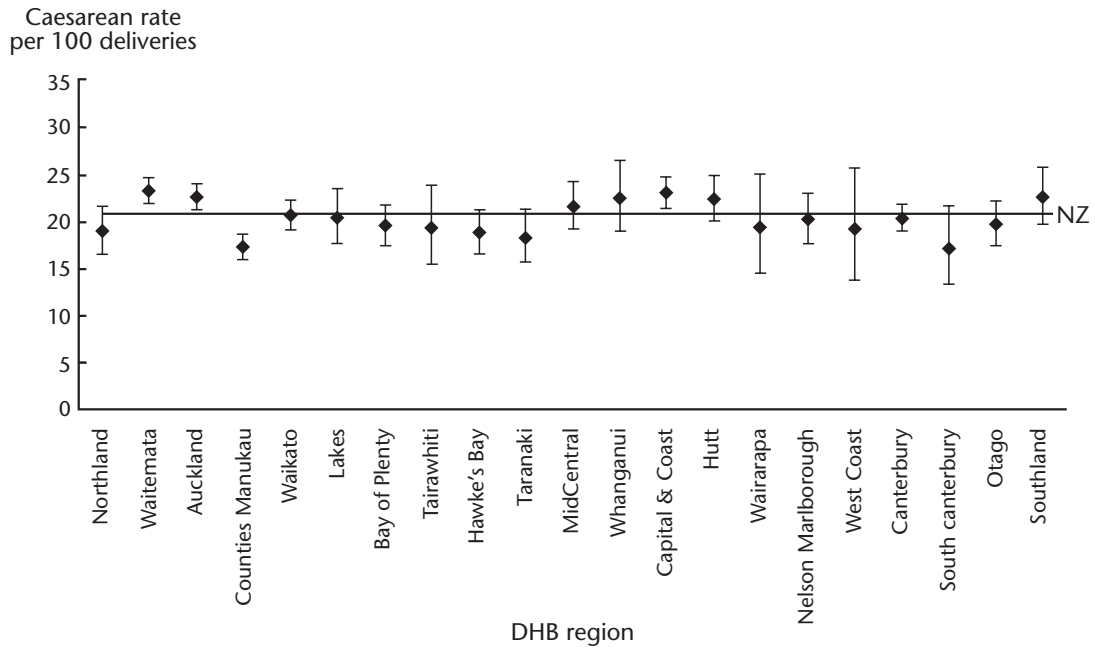


Figure 3.2a: Hospital caesarean section rates (standardised by age and ethnicity) and 99 percent confidence limits per 100 births, by DHB of woman's place of residence, 2000

Data source: NMDS

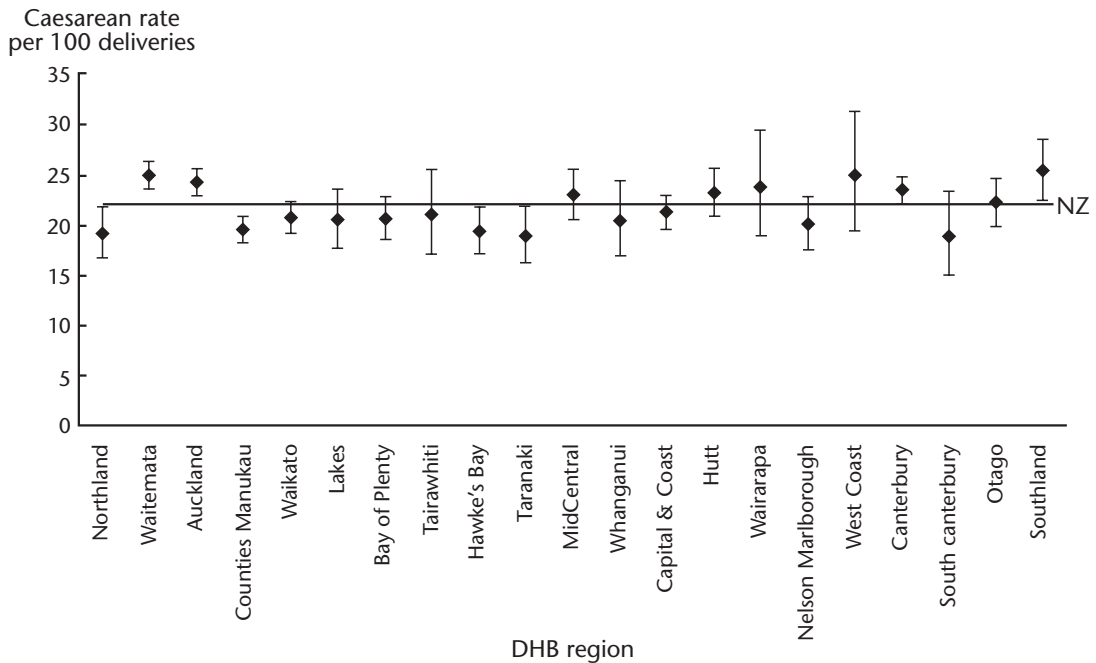


Figure 3.2b: Hospital caesarean section rates (standardised by age and ethnicity) and 99 percent confidence limits per 100 births, by DHB of woman's place of residence, 2001

Data source: NMDS

Standardised caesarean section rates are the ratios of observed to expected in-hospital caesarean births rates per 100 births, multiplied by the overall national caesarean section rate for all women. Expected rates are calculated using the age and ethnic population structure of each DHB region.

Figures 3.2a and 3.2b show the rates in the centre of the upper and lower 99 percent confidence limits. If the lower confidence limit is completely above the national rate for all New Zealand, this indicates that the standardised DHB region birth rate is significantly greater than the overall national rate (99 percent confidence interval). If the upper confidence limit is completely below the national rate for all New Zealand, this indicates that the standardised DHB region birth rate is significantly less than the overall national rate (99 percent confidence interval). Otherwise, the DHB region birth rate is no different from the overall national rate.

There is inconsistency in the way DHB record transfers to other facilities. There were no caesarean sections carried out at Pukekohe, Papakura or Botany Downs, and so the numbers given in Table 3.9 (page 46) can be assumed to be women who transferred postnatally from Middlemore. The same applies to the following primary facilities (with the likely facility where the caesarean section was carried out given in brackets):

Table 3.8: Caesarean sections, by DHB region of women's residence, 2000

| DHB region | 2000 | | 2001 | |
|--------------------|--------|------------------------------------|--------|------------------------------------|
| | Number | Rate per 1000 hospital live births | Number | Rate per 1000 hospital live births |
| Northland | 343 | 167.6 | 320 | 173.7 |
| Waitemata | 1553 | 241.2 | 1630 | 258.6 |
| Auckland | 1489 | 237.7 | 1538 | 254.1 |
| Counties Manukau | 1128 | 155.0 | 1195 | 170.0 |
| Waikato | 896 | 195.9 | 920 | 199.7 |
| Lakes | 280 | 180.6 | 274 | 184.4 |
| Bay of Plenty | 479 | 183.5 | 503 | 195.9 |
| Tairāwhiti | 124 | 163.2 | 139 | 180.1 |
| Hawke's Bay | 386 | 175.0 | 386 | 178.8 |
| Taranaki | 252 | 179.1 | 248 | 184.7 |
| MidCentral | 438 | 205.2 | 435 | 219.1 |
| Whanganui | 189 | 203.9 | 164 | 186.8 |
| Capital and Coast | 921 | 242.6 | 814 | 221.2 |
| Hutt | 441 | 221.3 | 482 | 231.0 |
| Wairarapa | 92 | 190.5 | 108 | 232.3 |
| Nelson Marlborough | 311 | 211.9 | 302 | 211.2 |
| West Coast | 70 | 198.9 | 89 | 260.2 |
| Canterbury | 1176 | 217.0 | 1384 | 248.7 |
| South Canterbury | 100 | 175.7 | 113 | 196.2 |
| Otago | 424 | 207.8 | 441 | 231.1 |
| Southland | 317 | 229.4 | 348 | 262.2 |
| Not reported | 22 | 271.6 | 58 | 408.5 |
| Total | 11,431 | 204.9 | 11,891 | 218.0 |

Source: NMDS

Kenepuru and Paraparaumu (Wellington), Burwood (Christchurch Women's), Napier (Hastings) and Buller (Greymouth).

Caesarean sections were performed at Kaitia and Ashburton, although these facilities do not have a secondary maternity service as described in the national service specification. St George's has a contract to perform elective caesarean sections, but not acute caesarean sections.

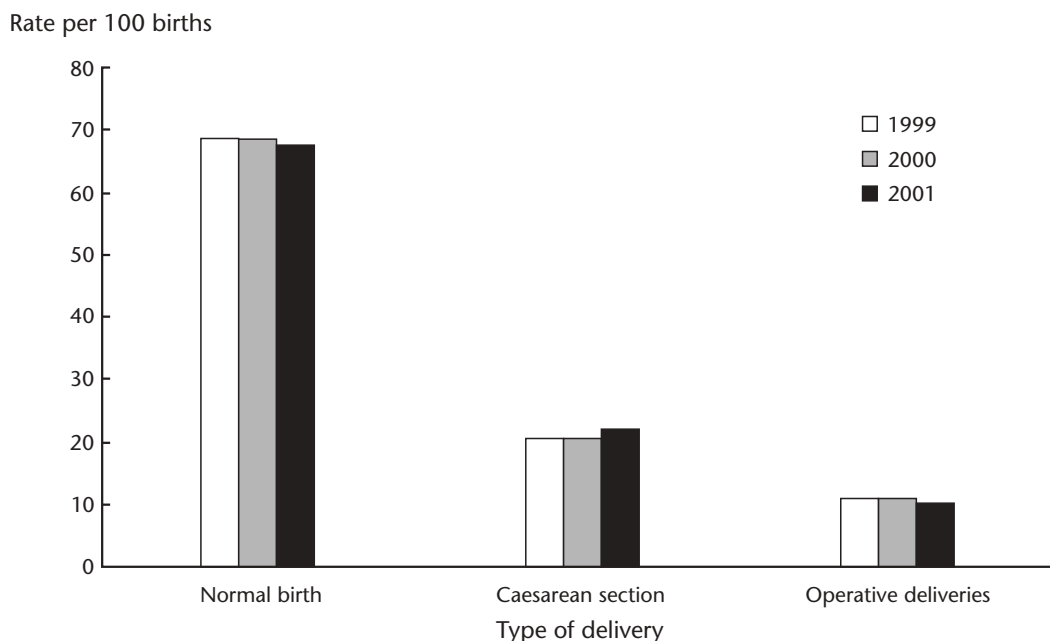


Figure 3.3: Type of birth by year (percentage), 1999–2001

Data source: NMDS

3.2 PROCEDURES

The rates for inductions and epidurals are expressed per 100 babies, excluding elective caesarean sections. The rates for episiotomies, manual removals of placentas, and post-partum haemorrhages are expressed per 100 babies, excluding caesarean sections (ie, the rate per vaginal birth). The rates for hysterectomies and epidurals are also expressed per 100 babies.

There are ethnic differences in the usage of epidurals. European and Asian women have almost double the usage of Māori and Pacific women. The rate of epidurals also increases with age for women 25 years and over.

Induction rates are expressed per 100 babies. In 2000, 20.7 percent of mothers were induced and in 2001, 20.9 percent of mothers were induced. There are also ethnic differences apparent in the rate of induced births, although the ethnic disparities are not as great as those for epidurals.

Data integrity

Any hospital not considered a designated maternity facility and which reported data in 2000 or 2001 has been reported in the 'other facilities' grouping.

Table 3.9: Caesarean sections, by facility, 2000 and 2001

| Facility | 2000 | | 2001 | |
|--|---------------|--------------|---------------|--------------|
| | Number | Percentage | Number | Percentage |
| Greenlane/National Women's | 2084 | 18.2 | 2127 | 17.9 |
| Middlemore | 585 | 5.1 | 630 | 5.3 |
| Waikato | 901 | 7.9 | 953 | 8.0 |
| Wellington | 990 | 8.7 | 892 | 7.5 |
| Christchurch Women's | 873 | 7.6 | 1035 | 8.7 |
| Dunedin | 413 | 3.6 | 451 | 3.8 |
| Tertiary total | 5846 | 51.1 | 6088 | 51.2 |
| Whangarei | 279 | 2.4 | 278 | 2.3 |
| North Shore | 832 | 7.3 | 876 | 7.4 |
| Waitakere | 467 | 4.1 | 471 | 4.0 |
| Rotorua | 279 | 2.4 | 263 | 2.2 |
| Tauranga | 356 | 3.1 | 350 | 2.9 |
| Whakatane (including Opotiki and Murupara) | 103 | 0.9 | 115 | 1.0 |
| Gisborne | 119 | 1.0 | 134 | 1.1 |
| Taranaki Base | 242 | 2.1 | 240 | 2.0 |
| Wanganui | 144 | 1.3 | 113 | 1.0 |
| Hastings | 370 | 3.2 | 356 | 3.0 |
| Masterton | 85 | 0.7 | 92 | 0.8 |
| Palmerston North | 459 | 4.0 | 480 | 4.0 |
| Hutt | 408 | 3.6 | 454 | 3.8 |
| Wairau (Blenheim) | 94 | 0.8 | 100 | 0.8 |
| Nelson | 208 | 1.8 | 190 | 1.6 |
| Grey (Greymouth) | 51 | 0.4 | 69 | 0.6 |
| Timaru | 105 | 0.9 | 121 | 1.0 |
| Southland (Invercargill) | 306 | 2.7 | 333 | 2.8 |
| Secondary total | 4907 | 42.9 | 5035 | 42.3 |
| Kaitia | 47 | 0.4 | 28 | 0.2 |
| Pukekohe | 73 | 0.6 | 101 | 0.8 |
| Papakura Obstetric | 98 | 0.9 | 92 | 0.8 |
| Botany Downs Maternity (South Auckland) | 114 | 1.0 | 151 | 1.3 |
| Napier | 0 | 0.0 | 14 | 0.1 |
| Paraparaumu | 0 | 0.0 | 1 | 0.0 |
| Kenepuru (Porirua) | 10 | 0.1 | 1 | 0.0 |
| St George's (Christchurch) | 322 | 2.8 | 377 | 3.2 |
| Burwood | 1 | 0.0 | 0 | 0.0 |
| Ashburton | 11 | 0.1 | 2 | 0.0 |
| Tuatapere Maternity Hospital | 2 | 0.0 | 0 | 0.0 |
| Primary total | 298 | 2.6 | 360 | 3.0 |
| Other facilities | 0 | 0.0 | 1 | 0.0 |
| Total | 11,431 | 100.0 | 11,891 | 100.0 |

Source: NMDS

Table 3.10: Birth procedures and post-partum haemorrhages (numbers) for mothers during birth events, by DHB region of woman's place of residence, 2000 and 2001

| DHB region | Induction | Epidural | Episiotomy | Manual removal of placenta | Post-partum haemorrhage | Hysterectomy |
|--------------------|-----------|----------|------------|----------------------------|-------------------------|--------------|
| 2000 | | | | | | |
| Northland | 324 | 152 | 129 | 25 | 163 | 2 |
| Waitemata | 1514 | 2169 | 744 | 160 | 681 | 6 |
| Auckland | 1397 | 2375 | 1050 | 170 | 752 | 6 |
| Counties Manukau | 1217 | 1366 | 694 | 128 | 570 | 8 |
| Waikato | 829 | 829 | 295 | 77 | 538 | 1 |
| Lakes | 243 | 227 | 104 | 23 | 114 | 0 |
| Bay of Plenty | 444 | 460 | 360 | 41 | 197 | 0 |
| Tairāwhiti | 113 | 92 | 46 | 9 | 46 | 0 |
| Hawke's Bay | 425 | 599 | 218 | 43 | 136 | 1 |
| Taranaki | 268 | 78 | 88 | 19 | 72 | 0 |
| MidCentral | 322 | 473 | 211 | 37 | 170 | 2 |
| Whanganui | 177 | 142 | 69 | 16 | 98 | 0 |
| Capital and Coast | 630 | 1359 | 555 | 72 | 296 | 2 |
| Hutt | 496 | 648 | 231 | 38 | 101 | 1 |
| Wairarapa | 56 | 118 | 87 | 10 | 36 | 0 |
| Nelson Marlborough | 532 | 325 | 174 | 32 | 71 | 0 |
| West Coast | 74 | 9 | 36 | 4 | 30 | 0 |
| Canterbury | 1289 | 1623 | 908 | 78 | 385 | 1 |
| South Canterbury | 115 | 77 | 44 | 1 | 28 | 1 |
| Otago | 558 | 573 | 130 | 37 | 194 | 0 |
| Southland | 311 | 163 | 190 | 31 | 100 | 0 |
| Other/Not reported | 33 | 33 | 12 | 0 | 9 | 0 |
| Total | 11,367 | 13,890 | 6375 | 1051 | 4787 | 31 |
| 2001 | | | | | | |
| Northland | 319 | 157 | 106 | 34 | 171 | 0 |
| Waitemata | 1474 | 2074 | 680 | 147 | 570 | 5 |
| Auckland | 1293 | 2283 | 1002 | 127 | 655 | 2 |
| Counties Manukau | 1123 | 1434 | 719 | 109 | 490 | 3 |
| Waikato | 832 | 759 | 258 | 59 | 449 | 3 |
| Lakes | 225 | 147 | 65 | 25 | 135 | 0 |
| Bay of Plenty | 478 | 394 | 256 | 60 | 224 | 1 |
| Tairāwhiti | 90 | 77 | 42 | 15 | 45 | 0 |
| Hawke's Bay | 356 | 527 | 192 | 33 | 168 | 0 |
| Taranaki | 328 | 109 | 83 | 18 | 72 | 0 |
| MidCentral | 331 | 360 | 176 | 40 | 181 | 0 |
| Whanganui | 169 | 130 | 54 | 5 | 76 | 0 |
| Capital and Coast | 747 | 1501 | 559 | 68 | 321 | 2 |
| Hutt | 453 | 647 | 238 | 26 | 107 | 0 |
| Wairarapa | 82 | 102 | 78 | 10 | 51 | 0 |
| Nelson Marlborough | 523 | 468 | 171 | 14 | 57 | 0 |
| West Coast | 87 | 21 | 58 | 2 | 23 | 0 |
| Canterbury | 1273 | 1679 | 874 | 83 | 532 | 0 |
| South Canterbury | 148 | 98 | 59 | 13 | 47 | 0 |
| Otago | 497 | 500 | 83 | 27 | 174 | 2 |
| Southland | 371 | 154 | 150 | 24 | 100 | 0 |
| Other/Not reported | 33 | 33 | 12 | 0 | 9 | 0 |
| Total | 11,232 | 13,654 | 5915 | 939 | 4657 | 18 |

Data source: NMDS

Table 3.11: Birth procedure and post-partum haemorrhages (rate per 100 births) for mothers during birth events, by DHB region of woman's place of residence, 2000 and 2001

| DHB region | Induction | Epidural | Episiotomy | Manual removal of placenta | Post-partum haemorrhage | Hysterectomy |
|--------------------|-----------|----------|------------|----------------------------|-------------------------|--------------|
| 2000 | | | | | | |
| Northland | 15.9 | 7.5 | 6.3 | 1.2 | 8.0 | 0.098 |
| Waitemata | 23.9 | 34.2 | 11.7 | 2.5 | 10.7 | 0.095 |
| Auckland | 22.5 | 38.3 | 16.9 | 2.7 | 12.1 | 0.097 |
| Counties Manukau | 17.5 | 19.6 | 10.0 | 1.8 | 8.2 | 0.115 |
| Waikato | 18.3 | 18.3 | 6.5 | 1.7 | 11.9 | 0.022 |
| Lakes | 15.6 | 14.6 | 6.7 | 1.5 | 7.3 | 0.000 |
| Bay of Plenty | 17.0 | 17.7 | 13.8 | 1.6 | 7.6 | 0.000 |
| Tairāwhiti | 15.2 | 12.4 | 6.2 | 1.2 | 6.2 | 0.000 |
| Hawke's Bay | 30.4 | 42.9 | 15.6 | 3.1 | 9.7 | 0.072 |
| Taranaki | 12.0 | 3.5 | 3.9 | 0.8 | 3.2 | 0.000 |
| MidCentral | 15.8 | 23.2 | 10.4 | 1.8 | 8.3 | 0.098 |
| Whanganui | 19.2 | 15.4 | 7.5 | 1.7 | 10.6 | 0.000 |
| Capital and Coast | 16.9 | 36.4 | 14.9 | 1.9 | 7.9 | 0.054 |
| Hutt | 25.1 | 32.7 | 11.7 | 1.9 | 5.1 | 0.051 |
| Wairarapa | 11.6 | 24.5 | 18.1 | 2.1 | 7.5 | 0.000 |
| Nelson Marlborough | 36.6 | 22.4 | 12.0 | 2.2 | 4.9 | 0.000 |
| West Coast | 21.0 | 2.6 | 10.2 | 1.1 | 8.5 | 0.000 |
| Canterbury | 24.2 | 30.4 | 17.0 | 1.5 | 7.2 | 0.019 |
| South Canterbury | 20.7 | 13.8 | 7.9 | 0.2 | 5.0 | 0.180 |
| Otago | 28.0 | 28.8 | 6.5 | 1.9 | 9.7 | 0.000 |
| Southland | 22.7 | 11.9 | 13.9 | 2.3 | 7.3 | 0.000 |
| Other/Not reported | 23.1 | 23.1 | 8.4 | 0.0 | 6.3 | 0.000 |
| Total | 20.7 | 25.3 | 11.6 | 1.9 | 8.7 | 0.056 |
| 2001 | | | | | | |
| Northland | 17.4 | 8.6 | 5.8 | 1.9 | 9.3 | 0.000 |
| Waitemata | 23.7 | 33.3 | 10.9 | 2.4 | 9.2 | 0.080 |
| Auckland | 21.6 | 38.2 | 16.7 | 2.1 | 10.9 | 0.033 |
| Counties Manukau | 16.9 | 21.6 | 10.8 | 1.6 | 7.4 | 0.045 |
| Waikato | 18.2 | 16.6 | 5.7 | 1.3 | 9.8 | 0.066 |
| Lakes | 15.0 | 9.8 | 4.3 | 1.7 | 9.0 | 0.000 |
| Bay of Plenty | 18.6 | 15.4 | 10.0 | 2.3 | 8.7 | 0.039 |
| Tairāwhiti | 11.8 | 10.1 | 5.5 | 2.0 | 5.9 | 0.000 |
| Hawke's Bay | 27.0 | 40.0 | 14.6 | 2.5 | 12.8 | 0.000 |
| Taranaki | 15.3 | 5.1 | 3.9 | 0.8 | 3.4 | 0.000 |
| MidCentral | 17.5 | 19.0 | 9.3 | 2.1 | 9.6 | 0.000 |
| Whanganui | 19.5 | 15.0 | 6.2 | 0.6 | 8.8 | 0.000 |
| Capital and Coast | 20.6 | 41.4 | 15.4 | 1.9 | 8.8 | 0.055 |
| Hutt | 21.8 | 31.2 | 11.5 | 1.3 | 5.2 | 0.000 |
| Wairarapa | 17.5 | 21.7 | 16.6 | 2.1 | 10.9 | 0.000 |
| Nelson Marlborough | 36.9 | 33.1 | 12.1 | 1.0 | 4.0 | 0.000 |
| West Coast | 25.3 | 6.1 | 16.9 | 0.6 | 6.7 | 0.000 |
| Canterbury | 23.4 | 30.8 | 16.0 | 1.5 | 9.8 | 0.000 |
| South Canterbury | 26.4 | 17.5 | 10.5 | 2.3 | 8.4 | 0.000 |
| Otago | 26.6 | 26.8 | 4.4 | 1.4 | 9.3 | 0.107 |
| Southland | 28.0 | 11.6 | 11.3 | 1.8 | 7.5 | 0.000 |
| Other/Not reported | 8.9 | 8.9 | 3.2 | 0.0 | 2.4 | 0.000 |
| Total | 20.9 | 25.4 | 11.0 | 1.7 | 8.7 | 0.033 |

Data source: NMDS

Table 3.12: Epidurals, by age and ethnicity, 2000 and 2001

| Age group | Number of epidurals | | | | | | | Rate per 100 babies | | | | | | |
|-------------|---------------------|-----------------|-------|----------|-------|--------------|--------|---------------------|-----------------|-------|----------|-------|--------------|-------|
| | Māori | Pacific peoples | Asian | European | Other | Not reported | Total | Māori | Pacific peoples | Asian | European | Other | Not reported | Total |
| | 2000 | | | | | | | | | | | | | |
| Under 16 | 22 | 3 | 0 | 13 | 1 | 1 | 40 | 25.3 | 17.6 | 0.0 | 39.4 | 20.0 | 33.3 | 27.4 |
| 16–19 | 355 | 99 | 21 | 432 | 35 | 37 | 979 | 22.4 | 25.3 | 33.9 | 31.6 | 25.0 | 29.6 | 26.7 |
| 20–24 | 534 | 296 | 127 | 1206 | 94 | 49 | 2306 | 16.3 | 20.9 | 32.7 | 27.7 | 23.3 | 26.1 | 23.0 |
| 25–29 | 339 | 278 | 357 | 2624 | 180 | 56 | 3834 | 11.9 | 18.0 | 33.8 | 28.8 | 27.5 | 22.4 | 24.8 |
| 30–34 | 200 | 205 | 398 | 3335 | 194 | 73 | 4405 | 10.8 | 14.8 | 30.5 | 29.5 | 28.4 | 29.1 | 26.3 |
| 35–39 | 111 | 81 | 182 | 1528 | 74 | 21 | 1997 | 12.0 | 11.3 | 25.5 | 27.9 | 23.8 | 21.9 | 24.2 |
| 40+ | 27 | 21 | 23 | 241 | 13 | 4 | 329 | 12.3 | 12.5 | 19.0 | 24.4 | 26.5 | 23.5 | 21.1 |
| Total | 1588 | 983 | 1108 | 9379 | 591 | 241 | 13,890 | 14.7 | 17.4 | 30.4 | 28.8 | 26.3 | 25.9 | 24.9 |
| 2001 | | | | | | | | | | | | | | |
| Under 16 | 27 | 2 | 0 | 18 | 0 | 1 | 48 | 27.8 | 25.0 | 0.0 | 46.2 | 0.0 | 100.0 | 32.2 |
| 16–19 | 323 | 114 | 16 | 472 | 48 | 23 | 996 | 20.5 | 29.1 | 28.1 | 34.0 | 36.9 | 19.5 | 27.2 |
| 20–24 | 476 | 324 | 149 | 1142 | 100 | 47 | 2238 | 14.5 | 22.2 | 35.2 | 28.0 | 27.6 | 25.8 | 22.9 |
| 25–29 | 340 | 271 | 359 | 2490 | 132 | 68 | 3660 | 12.5 | 17.0 | 36.6 | 29.3 | 23.1 | 29.6 | 25.0 |
| 30–34 | 231 | 182 | 421 | 3264 | 168 | 52 | 4318 | 12.3 | 13.5 | 34.3 | 29.0 | 27.0 | 25.6 | 26.1 |
| 35–39 | 96 | 82 | 194 | 1596 | 78 | 16 | 2062 | 10.7 | 11.6 | 28.7 | 28.5 | 26.3 | 16.8 | 24.9 |
| 40+ | 30 | 25 | 39 | 253 | 19 | 3 | 369 | 12.4 | 16.6 | 28.7 | 25.0 | 24.7 | 16.7 | 22.6 |
| Total | 1523 | 1000 | 1178 | 9235 | 545 | 210 | 13,691 | 14.2 | 17.6 | 33.6 | 29.0 | 26.4 | 24.8 | 25.0 |

Data source: NMDS

Table 3.13: Inductions, by age and ethnicity, 2000 and 2001

| Age group | Number of inductions | | | | | | | Rate per 100 babies | | | | | | |
|-------------|----------------------|-----------------|-------|----------|-------|--------------|--------|---------------------|-----------------|-------|----------|-------|--------------|-------|
| | Māori | Pacific peoples | Asian | European | Other | Not reported | Total | Māori | Pacific peoples | Asian | European | Other | Not reported | Total |
| | 2000 | | | | | | | | | | | | | |
| Under 16 | 16 | 2 | 0 | 7 | 0 | 0 | 25 | 18.4 | 11.8 | 0.0 | 21.2 | 0.0 | 0.0 | 17.1 |
| 16–19 | 244 | 76 | 14 | 314 | 21 | 21 | 690 | 15.4 | 19.4 | 22.6 | 23.0 | 15.0 | 16.8 | 18.8 |
| 20–24 | 542 | 233 | 67 | 944 | 81 | 39 | 1906 | 16.6 | 16.4 | 17.3 | 21.7 | 20.0 | 20.7 | 19.0 |
| 25–29 | 487 | 283 | 163 | 2022 | 133 | 38 | 3126 | 17.1 | 18.3 | 15.4 | 22.2 | 20.3 | 15.2 | 20.2 |
| 30–34 | 323 | 277 | 200 | 2519 | 131 | 48 | 3498 | 17.4 | 20.0 | 15.3 | 22.3 | 19.2 | 19.1 | 20.9 |
| 35–39 | 175 | 147 | 120 | 1196 | 57 | 21 | 1716 | 18.9 | 20.5 | 16.8 | 21.9 | 18.3 | 21.9 | 20.8 |
| 40+ | 64 | 42 | 23 | 263 | 9 | 5 | 406 | 29.1 | 25.0 | 19.0 | 26.7 | 18.4 | 29.4 | 26.0 |
| Total | 1851 | 1060 | 587 | 7265 | 432 | 172 | 11,367 | 17.1 | 18.8 | 16.1 | 22.3 | 19.2 | 18.5 | 20.3 |
| 2001 | | | | | | | | | | | | | | |
| Under 16 | 22 | 4 | 0 | 8 | 0 | 0 | 34 | 22.7 | 50.0 | 0.0 | 20.5 | 0.0 | 0.0 | 22.8 |
| 16–19 | 226 | 60 | 4 | 318 | 37 | 17 | 662 | 14.3 | 15.3 | 7.0 | 22.9 | 28.5 | 14.4 | 18.1 |
| 20–24 | 514 | 227 | 64 | 968 | 71 | 31 | 1875 | 15.7 | 15.6 | 15.1 | 23.7 | 19.6 | 17.0 | 19.2 |
| 25–29 | 450 | 249 | 173 | 1985 | 106 | 55 | 3018 | 16.5 | 15.6 | 17.6 | 23.3 | 18.5 | 23.9 | 20.6 |
| 30–34 | 336 | 208 | 180 | 2575 | 139 | 40 | 3478 | 17.9 | 15.4 | 14.7 | 22.9 | 22.3 | 19.7 | 21.0 |
| 35–39 | 182 | 129 | 125 | 1248 | 68 | 18 | 1770 | 20.2 | 18.3 | 18.5 | 22.3 | 22.9 | 18.9 | 21.4 |
| 40+ | 62 | 40 | 23 | 274 | 22 | 3 | 424 | 25.7 | 26.5 | 16.9 | 27.1 | 28.6 | 16.7 | 25.9 |
| Total | 1792 | 917 | 569 | 7376 | 443 | 164 | 11,261 | 16.7 | 16.2 | 16.2 | 23.1 | 21.5 | 19.4 | 20.6 |

Data source: NMDS

4. Babies

This chapter reviews newborn babies in New Zealand. In 2000 there were 55,883 babies born in hospital, of which 406 (0.7 percent) were stillbirths and 191 perinatal deaths, and in 2001 there were 54,667 babies born in hospital of which 379 (0.7 percent) were stillbirths and 134 perinatal deaths. Home births are not included in this section.

Table 4.1: Babies, by mother's age and ethnicity (hospital data), 2000 and 2001

| Age group | Māori | Pacific peoples | Asian | European | Other | Not stated | Total | Total % |
|-------------|--------|-----------------|-------|----------|-------|------------|--------|---------|
| 2000 | | | | | | | | |
| Under 16 | 87 | 17 | 1 | 33 | 5 | 3 | 146 | 0.3 |
| 16–19 | 1583 | 391 | 62 | 1367 | 140 | 125 | 3668 | 6.6 |
| 20–24 | 3267 | 1417 | 388 | 4355 | 404 | 188 | 10,019 | 17.9 |
| 25–29 | 2855 | 1545 | 1057 | 9121 | 655 | 250 | 15,483 | 27.7 |
| 30–34 | 1858 | 1386 | 1307 | 11,286 | 682 | 251 | 16,770 | 30.0 |
| 35–39 | 927 | 716 | 713 | 5473 | 311 | 96 | 8236 | 14.7 |
| 40+ | 220 | 168 | 121 | 986 | 49 | 17 | 1561 | 2.8 |
| Total | 10,797 | 5640 | 3649 | 32,621 | 2246 | 930 | 55,883 | 100.0 |
| Total % | 19.3 | 10.1 | 6.5 | 58.4 | 4.0 | 1.7 | 100.0 | |
| 2001 | | | | | | | | |
| Under 16 | 97 | 8 | 1 | 39 | 3 | 1 | 149 | 0.3 |
| 16–19 | 1577 | 392 | 57 | 1390 | 130 | 118 | 3664 | 6.7 |
| 20–24 | 3275 | 1459 | 423 | 4083 | 362 | 182 | 9784 | 17.9 |
| 25–29 | 2730 | 1597 | 981 | 8508 | 572 | 230 | 14,618 | 26.7 |
| 30–34 | 1881 | 1353 | 1227 | 11,264 | 623 | 203 | 16,551 | 30.3 |
| 35–39 | 900 | 706 | 677 | 5592 | 297 | 95 | 8267 | 15.1 |
| 40+ | 241 | 151 | 136 | 1011 | 77 | 18 | 1634 | 3.0 |
| Total | 10,701 | 5666 | 3502 | 31,887 | 2064 | 847 | 54,667 | 100.0 |
| Total % | 19.6 | 10.4 | 6.4 | 58.3 | 3.8 | 1.5 | 100.0 | |

Data source: NMDS

4.1 BABIES AT BIRTH

The number of babies born includes both live and stillbirths.

In both 2000 and 2001, just over 1 percent of New Zealand babies weighed less than 1500 g at birth.

Table 4.2: Baby numbers and average birthweight for babies born in hospital, by sex and ethnicity, 2000 and 2001

| Ethnic group | Newborns | | | | Average birthweight (kg) (standard deviation – kg) | | | |
|-----------------|----------|--------|---------------|--------|--|-------------|---------------|-------------|
| | Male | Female | Not specified | Total | Male | Female | Not specified | Total |
| 2000 | | | | | | | | |
| Māori | 5603 | 5330 | 3 | 10,936 | 3.36 (0.64) | 3.29 (0.60) | 3.45 (0.24) | 3.32 (0.62) |
| Pacific peoples | 2846 | 2755 | 3 | 5604 | 3.58 (0.64) | 3.50 (0.64) | 3.48 (0.57) | 3.54 (0.64) |
| Asian | 1804 | 1816 | 0 | 3620 | 3.29 (0.56) | 3.18 (0.54) | 0.00 (0.00) | 3.24 (0.55) |
| European | 16,517 | 15,425 | 2 | 31,944 | 3.49 (0.64) | 3.37 (0.60) | 3.33 (0.71) | 3.43 (0.62) |
| Other | 1034 | 978 | 0 | 2012 | 3.44 (0.61) | 3.34 (0.59) | 0.00 (0.00) | 3.39 (0.61) |
| Not reported | 865 | 798 | 3 | 1666 | 3.50 (0.60) | 3.35 (0.56) | 3.85 (0.27) | 3.43 (0.58) |
| Total | 28,669 | 27,102 | 11 | 55,782 | 3.46 (0.64) | 3.35 (0.60) | 3.55 (0.46) | 3.41 (0.62) |
| 2001 | | | | | | | | |
| Māori | 5623 | 5256 | 6 | 10,885 | 3.36 (0.65) | 3.26 (0.64) | 3.06 (1.34) | 3.31 (0.65) |
| Pacific peoples | 2858 | 2796 | 0 | 5654 | 3.60 (0.67) | 3.50 (0.66) | 0.00 (0.00) | 3.55 (0.66) |
| Asian | 1792 | 1728 | 0 | 3520 | 3.28 (0.64) | 3.19 (0.60) | 0.00 (0.00) | 3.23 (0.62) |
| European | 15,743 | 15,558 | 7 | 31,308 | 3.50 (0.67) | 3.37 (0.63) | 3.18 (0.34) | 3.43 (0.65) |
| Other | 1027 | 903 | 1 | 1931 | 3.44 (0.64) | 3.34 (0.59) | 2.80 (0.00) | 3.39 (0.62) |
| Not reported | 628 | 617 | 2 | 1247 | 3.52 (0.63) | 3.40 (0.59) | 3.43 (0.02) | 3.46 (0.61) |
| Total | 27,671 | 26,858 | 16 | 54,545 | 3.46 (0.67) | 3.35 (0.64) | 3.14 (0.84) | 3.41 (0.65) |

Data source: NMDS

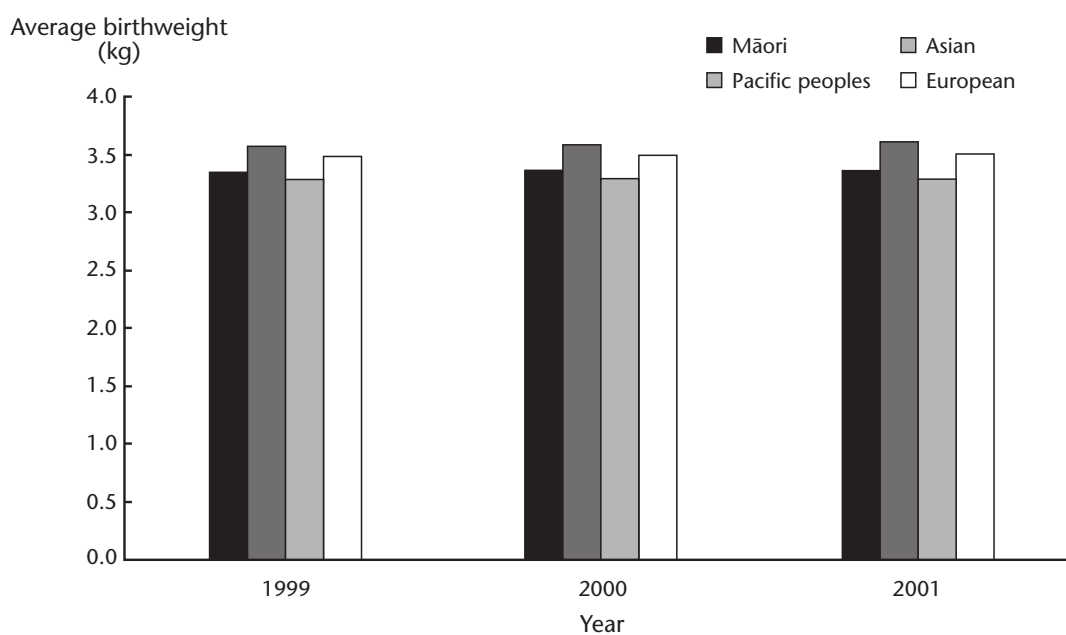


Figure 4.1: Male babies by ethnicity and average birthweight, 1999–2001

Data source: NMDS

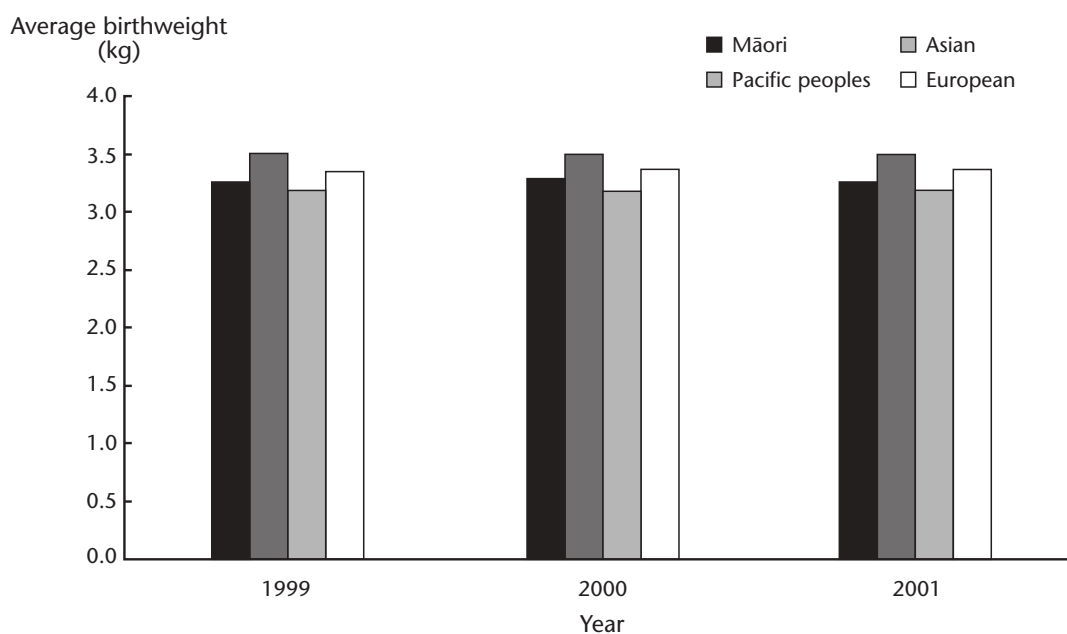


Figure 4.2: Female babies by ethnicity and average birthweight, 1999–2001

Data source: NMDS

Table 4.3: Gestational age (weeks) at birth for babies born in hospital, by ethnicity, 2000 and 2001

| Ethnic group | Babies by gestational age | | | | | | | Percentage by gestational age | | | | | | |
|-----------------|---------------------------|-------|-------|-------|--------|------|--------------|-------------------------------|-------|-------|-------|-------|-----|--------------|
| | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | Not reported | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | Not reported |
| 2000 | | | | | | | | | | | | | | |
| Māori | 16 | 44 | 86 | 692 | 9377 | 362 | 359 | 0.1 | 0.4 | 0.8 | 6.3 | 85.7 | 3.3 | 3.3 |
| Pacific peoples | 11 | 23 | 45 | 271 | 4929 | 232 | 93 | 0.2 | 0.4 | 0.8 | 4.8 | 88.0 | 4.1 | 1.7 |
| Asian | 2 | 16 | 19 | 233 | 3241 | 70 | 39 | 0.1 | 0.4 | 0.5 | 6.4 | 89.5 | 1.9 | 1.1 |
| European | 34 | 121 | 270 | 2015 | 27,338 | 804 | 1362 | 0.1 | 0.4 | 0.8 | 6.3 | 85.6 | 2.5 | 4.3 |
| Other | 4 | 6 | 12 | 123 | 1755 | 86 | 26 | 0.2 | 0.3 | 0.6 | 6.1 | 87.2 | 4.3 | 1.3 |
| Not reported | 3 | 2 | 10 | 96 | 1461 | 47 | 47 | 0.2 | 0.1 | 0.6 | 5.8 | 87.7 | 2.8 | 2.8 |
| Total | 70 | 212 | 442 | 3430 | 48,101 | 1601 | 1926 | 0.1 | 0.4 | 0.8 | 6.1 | 86.2 | 2.9 | 3.5 |
| 2001 | | | | | | | | | | | | | | |
| Māori | 24 | 44 | 113 | 680 | 9511 | 303 | 210 | 0.2 | 0.4 | 1.0 | 6.2 | 87.4 | 2.8 | 1.9 |
| Pacific peoples | 6 | 16 | 57 | 273 | 5018 | 202 | 82 | 0.1 | 0.3 | 1.0 | 4.8 | 88.8 | 3.6 | 1.5 |
| Asian | 4 | 11 | 35 | 200 | 3186 | 50 | 34 | 0.1 | 0.3 | 1.0 | 5.7 | 90.5 | 1.4 | 1.0 |
| European | 26 | 108 | 268 | 1988 | 27,536 | 805 | 577 | 0.1 | 0.3 | 0.9 | 6.3 | 88.0 | 2.6 | 1.8 |
| Other | 0 | 8 | 12 | 110 | 1711 | 71 | 19 | 0.0 | 0.4 | 0.6 | 5.7 | 88.6 | 3.7 | 1.0 |
| Not reported | 0 | 3 | 7 | 62 | 1110 | 36 | 29 | 0.0 | 0.2 | 0.6 | 5.0 | 89.0 | 2.9 | 2.3 |
| Total | 60 | 190 | 492 | 3313 | 48,072 | 1467 | 951 | 0.1 | 0.3 | 0.9 | 6.1 | 88.1 | 2.7 | 1.7 |

Data source: NMDS

Table 4.4: Number of babies born in hospital, by birthweight and DHB of woman's place of residence, 2000 and 2001

| DHB region | Birthweight (grams) | | | | | | Not reported | Total |
|--------------------|---------------------|------------|------------|-------------|---------------|-------------|--------------|---------------|
| | 0–999 | 1000–1499 | 1500–1999 | 2000–2499 | 2500–4499 | 4500+ | | |
| 2000 | | | | | | | | |
| Northland | 8 | 21 | 15 | 76 | 1815 | 53 | 59 | 2047 |
| Waitemata | 26 | 46 | 92 | 224 | 5850 | 169 | 32 | 6439 |
| Auckland | 30 | 35 | 65 | 256 | 5678 | 166 | 35 | 6265 |
| Counties Manukau | 39 | 38 | 109 | 291 | 6428 | 262 | 112 | 7279 |
| Waikato | 22 | 32 | 60 | 172 | 4134 | 116 | 38 | 4574 |
| Lakes | 8 | 11 | 29 | 67 | 1386 | 31 | 18 | 1550 |
| Bay of Plenty | 10 | 8 | 31 | 93 | 2358 | 70 | 41 | 2611 |
| Tairāwhiti | 4 | 2 | 11 | 24 | 695 | 17 | 7 | 760 |
| Hawke's Bay | 10 | 9 | 34 | 98 | 1985 | 39 | 31 | 2206 |
| Taranaki | 6 | 7 | 25 | 52 | 1268 | 31 | 18 | 1407 |
| MidCentral | 10 | 8 | 34 | 87 | 1917 | 66 | 12 | 2134 |
| Whanganui | 4 | 3 | 10 | 36 | 842 | 24 | 8 | 927 |
| Capital and Coast | 19 | 39 | 47 | 148 | 3355 | 97 | 91 | 3796 |
| Hutt | 10 | 18 | 35 | 97 | 1783 | 50 | 0 | 1993 |
| Wairarapa | 2 | 3 | 7 | 19 | 425 | 21 | 6 | 483 |
| Nelson Marlborough | 8 | 13 | 16 | 46 | 1346 | 35 | 4 | 1468 |
| West Coast | 1 | 1 | 3 | 17 | 316 | 9 | 5 | 352 |
| Canterbury | 27 | 45 | 94 | 200 | 4899 | 112 | 42 | 5419 |
| South Canterbury | 2 | 3 | 9 | 20 | 504 | 11 | 20 | 569 |
| Otago | 6 | 19 | 31 | 89 | 1751 | 50 | 94 | 2040 |
| Southland | 4 | 3 | 2 | 2 | 184 | 6 | 1181 | 1382 |
| Other/Not reported | 0 | 2 | 3 | 1 | 69 | 6 | 0 | 81 |
| Total | 256 | 366 | 762 | 2115 | 48,988 | 1441 | 1854 | 55,782 |
| 2001 | | | | | | | | |
| Northland | 8 | 4 | 18 | 60 | 1681 | 49 | 22 | 1842 |
| Waitemata | 25 | 38 | 97 | 250 | 5624 | 228 | 41 | 6303 |
| Auckland | 30 | 48 | 79 | 225 | 5485 | 154 | 32 | 6053 |
| Counties Manukau | 26 | 40 | 92 | 258 | 6306 | 215 | 91 | 7028 |
| Waikato | 22 | 29 | 53 | 180 | 4172 | 103 | 48 | 4607 |
| Lakes | 6 | 15 | 21 | 52 | 1350 | 32 | 10 | 1486 |
| Bay of Plenty | 14 | 16 | 36 | 94 | 2310 | 64 | 34 | 2568 |
| Tairāwhiti | 4 | 9 | 13 | 36 | 683 | 17 | 10 | 772 |
| Hawke's Bay | 9 | 18 | 29 | 91 | 1945 | 43 | 24 | 2159 |
| Taranaki | 5 | 8 | 22 | 72 | 1183 | 31 | 22 | 1343 |
| MidCentral | 11 | 13 | 25 | 85 | 1803 | 44 | 4 | 1985 |
| Whanganui | 6 | 7 | 17 | 32 | 789 | 20 | 7 | 878 |
| Capital and Coast | 12 | 41 | 52 | 124 | 3264 | 76 | 111 | 3680 |
| Hutt | 14 | 20 | 33 | 96 | 1864 | 55 | 5 | 2087 |
| Wairarapa | 4 | 4 | 5 | 17 | 426 | 8 | 1 | 465 |
| Nelson Marlborough | 8 | 10 | 17 | 50 | 1308 | 33 | 4 | 1430 |
| West Coast | 2 | 2 | 8 | 12 | 306 | 7 | 5 | 342 |
| Canterbury | 32 | 45 | 69 | 229 | 5028 | 115 | 46 | 5564 |
| South Canterbury | 0 | 1 | 5 | 11 | 533 | 18 | 8 | 576 |
| Otago | 9 | 16 | 29 | 78 | 1690 | 44 | 42 | 1908 |
| Southland | 8 | 7 | 12 | 32 | 950 | 29 | 289 | 1327 |
| Other/Not reported | 1 | 0 | 0 | 8 | 130 | 1 | 2 | 142 |
| Total | 256 | 391 | 732 | 2092 | 48,830 | 1386 | 858 | 54,545 |

Data source: NMDS

Table 4.5: Percentage of babies born in hospital, by birthweight and DHB of woman's place of residence, 2000 and 2001

| DHB region | Birthweight (grams) | | | | | | Not reported | Total |
|--------------------|---------------------|-----------|-----------|-----------|-----------|-------|--------------|-------|
| | 0–999 | 1000–1499 | 1500–1999 | 2000–2499 | 2500–4499 | 4500+ | | |
| 2000 | | | | | | | | |
| Northland | 0.4 | 1.0 | 0.7 | 3.7 | 88.7 | 2.6 | 2.9 | 100 |
| Waitemata | 0.4 | 0.7 | 1.4 | 3.5 | 90.9 | 2.6 | 0.5 | 100 |
| Auckland | 0.5 | 0.6 | 1.0 | 4.1 | 90.6 | 2.6 | 0.6 | 100 |
| Counties Manukau | 0.5 | 0.5 | 1.5 | 4.0 | 88.3 | 3.6 | 1.5 | 100 |
| Waikato | 0.5 | 0.7 | 1.3 | 3.8 | 90.4 | 2.5 | 0.8 | 100 |
| Lakes | 0.5 | 0.7 | 1.9 | 4.3 | 89.4 | 2.0 | 1.2 | 100 |
| Bay of Plenty | 0.4 | 0.3 | 1.2 | 3.6 | 90.3 | 2.7 | 1.6 | 100 |
| Tairāwhiti | 0.5 | 0.3 | 1.4 | 3.2 | 91.4 | 2.2 | 0.9 | 100 |
| Hawke's Bay | 0.5 | 0.4 | 1.5 | 4.4 | 90.0 | 1.8 | 1.4 | 100 |
| Taranaki | 0.4 | 0.5 | 1.8 | 3.7 | 90.1 | 2.2 | 1.3 | 100 |
| MidCentral | 0.5 | 0.4 | 1.6 | 4.1 | 89.8 | 3.1 | 0.6 | 100 |
| Whanganui | 0.4 | 0.3 | 1.1 | 3.9 | 90.8 | 2.6 | 0.9 | 100 |
| Capital and Coast | 0.5 | 1.0 | 1.2 | 3.9 | 88.4 | 2.6 | 2.4 | 100 |
| Hutt | 0.5 | 0.9 | 1.8 | 4.9 | 89.5 | 2.5 | 0.0 | 100 |
| Wairarapa | 0.4 | 0.6 | 1.4 | 3.9 | 88.0 | 4.3 | 1.2 | 100 |
| Nelson Marlborough | 0.5 | 0.9 | 1.1 | 3.1 | 91.7 | 2.4 | 0.3 | 100 |
| West Coast | 0.3 | 0.3 | 0.9 | 4.8 | 89.8 | 2.6 | 1.4 | 100 |
| Canterbury | 0.5 | 0.8 | 1.7 | 3.7 | 90.4 | 2.1 | 0.8 | 100 |
| South Canterbury | 0.4 | 0.5 | 1.6 | 3.5 | 88.6 | 1.9 | 3.5 | 100 |
| Otago | 0.3 | 0.9 | 1.5 | 4.4 | 85.8 | 2.5 | 4.6 | 100 |
| Southland | 0.3 | 0.2 | 0.1 | 0.1 | 13.3 | 0.4 | 85.5 | 100 |
| Other/Not reported | 0.0 | 2.5 | 3.7 | 1.2 | 85.2 | 7.4 | 0.0 | 100 |
| Total | 0.5 | 0.7 | 1.4 | 3.8 | 87.8 | 2.6 | 3.3 | 100 |
| 2001 | | | | | | | | |
| Northland | 0.4 | 0.2 | 1.0 | 3.3 | 91.3 | 2.7 | 1.2 | 100 |
| Waitemata | 0.4 | 0.6 | 1.5 | 4.0 | 89.2 | 3.6 | 0.7 | 100 |
| Auckland | 0.5 | 0.8 | 1.3 | 3.7 | 90.6 | 2.5 | 0.5 | 100 |
| Counties Manukau | 0.4 | 0.6 | 1.3 | 3.7 | 89.7 | 3.1 | 1.3 | 100 |
| Waikato | 0.5 | 0.6 | 1.2 | 3.9 | 90.6 | 2.2 | 1.0 | 100 |
| Lakes | 0.4 | 1.0 | 1.4 | 3.5 | 90.8 | 2.2 | 0.7 | 100 |
| Bay of Plenty | 0.5 | 0.6 | 1.4 | 3.7 | 90.0 | 2.5 | 1.3 | 100 |
| Tairāwhiti | 0.5 | 1.2 | 1.7 | 4.7 | 88.5 | 2.2 | 1.3 | 100 |
| Hawke's Bay | 0.4 | 0.8 | 1.3 | 4.2 | 90.1 | 2.0 | 1.1 | 100 |
| Taranaki | 0.4 | 0.6 | 1.6 | 5.4 | 88.1 | 2.3 | 1.6 | 100 |
| MidCentral | 0.6 | 0.7 | 1.3 | 4.3 | 90.8 | 2.2 | 0.2 | 100 |
| Whanganui | 0.7 | 0.8 | 1.9 | 3.6 | 89.9 | 2.3 | 0.8 | 100 |
| Capital and Coast | 0.3 | 1.1 | 1.4 | 3.4 | 88.7 | 2.1 | 3.0 | 100 |
| Hutt | 0.7 | 1.0 | 1.6 | 4.6 | 89.3 | 2.6 | 0.2 | 100 |
| Wairarapa | 0.9 | 0.9 | 1.1 | 3.7 | 91.6 | 1.7 | 0.2 | 100 |
| Nelson Marlborough | 0.6 | 0.7 | 1.2 | 3.5 | 91.5 | 2.3 | 0.3 | 100 |
| West Coast | 0.6 | 0.6 | 2.3 | 3.5 | 89.5 | 2.0 | 1.5 | 100 |
| Canterbury | 0.6 | 0.8 | 1.2 | 4.1 | 90.4 | 2.1 | 0.8 | 100 |
| South Canterbury | 0.0 | 0.2 | 0.9 | 1.9 | 92.5 | 3.1 | 1.4 | 100 |
| Otago | 0.5 | 0.8 | 1.5 | 4.1 | 88.6 | 2.3 | 2.2 | 100 |
| Southland | 0.6 | 0.5 | 0.9 | 2.4 | 71.6 | 2.2 | 21.8 | 100 |
| Other/Not reported | 0.7 | 0.0 | 0.0 | 5.6 | 91.5 | 0.7 | 1.4 | 100 |
| Total | 0.5 | 0.7 | 1.3 | 3.8 | 89.5 | 2.5 | 1.6 | 100 |

Data source: NMDS

Table 4.6: Apgar score at five minutes, 2000 and 2001

| Apgar score | 2000 | | 2001 | |
|-------------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| 0 | 2507 | 6.9 | 2120 | 6.0 |
| 1-4 | 130 | 0.4 | 152 | 0.4 |
| 5-8 | 1700 | 4.7 | 1712 | 4.8 |
| 9-10 | 31,900 | 88.0 | 31,638 | 88.8 |
| Total | 36,237 | 100.0 | 35,622 | 100.0 |

Data source: MNIS

Data integrity

Apgar score data is not available for 3540 babies in MNIS (8.9 percent) in 2000 and 1797 (4.8 percent) in 2001. The 2507 (2000 year) and 2120 (2001 year) babies with Apgar zero are likely to be an error as this greatly exceeds the death rate. However, there is no method of checking this retrospectively. It may be that some records left blank were entered as zero, or that a score of 10 was mistaken for a score of zero.

4.2 BIRTH OUTCOMES

This section examines perinatal deaths in New Zealand in 2000 and 2001. In 2000, there were 597 babies who died between 20 weeks of pregnancy and one month of life, an incidence of just over 1 percent of all births. In 2001, there were 513 babies who died between 20 weeks of pregnancy and one month of life, which is an incidence of just under 1 percent of all births. In 2000 the perinatal mortality rate (which includes stillbirths and deaths at less than seven days) was 10.2 per 1000 babies and in 2001, 9.0 per 1000 babies.

Table 4.7: In-hospital live births, stillbirths and neonatal deaths, by DHB of mother's place of residence, 2000 and 2001

| DHB region | Numbers | | | | Rate per 1000 babies | | | |
|--------------------|---------------|-------------|---------------------------|-----------------------------|----------------------|---------------------------|------------------------|-----------------------------|
| | Live births | Stillbirths | Deaths <7 days from birth | Deaths 7-27 days from birth | Stillbirths | Deaths <7 days from birth | Total perinatal deaths | Deaths 7-27 days from birth |
| 2000 | | | | | | | | |
| Northland | 2048 | 18 | 7 | 1 | 8.7 | 3.4 | 12.1 | 0.5 |
| Waitemata | 6398 | 43 | 14 | 6 | 6.7 | 2.2 | 8.8 | 0.9 |
| Auckland | 6291 | 45 | 21 | 6 | 7.1 | 3.3 | 10.4 | 1.0 |
| Counties Manukau | 7030 | 57 | 28 | 1 | 8.0 | 4.0 | 12.0 | 0.1 |
| Waikato | 4556 | 27 | 16 | 3 | 5.9 | 3.5 | 9.4 | 0.7 |
| Lakes | 1570 | 11 | 10 | 0 | 7.0 | 6.4 | 13.3 | 0.0 |
| Bay of Plenty | 2622 | 15 | 3 | 0 | 5.7 | 1.1 | 6.8 | 0.0 |
| Tairāwhiti | 747 | 5 | 1 | 0 | 6.6 | 1.3 | 8.0 | 0.0 |
| Hawke's Bay | 2249 | 18 | 9 | 1 | 7.9 | 4.0 | 11.9 | 0.4 |
| Taranaki | 1406 | 8 | 7 | 3 | 5.7 | 5.0 | 10.6 | 2.1 |
| MidCentral | 2056 | 17 | 4 | 1 | 8.2 | 1.9 | 10.1 | 0.5 |
| Whanganui | 919 | 10 | 2 | 2 | 10.8 | 2.2 | 12.9 | 2.2 |
| Capital and Coast | 3759 | 36 | 3 | 0 | 9.5 | 0.8 | 10.3 | 0.0 |
| Hutt | 2001 | 20 | 4 | 0 | 9.9 | 2.0 | 11.9 | 0.0 |
| Wairarapa | 488 | 1 | 2 | 0 | 2.0 | 4.1 | 6.1 | 0.0 |
| Nelson Marlborough | 1467 | 8 | 6 | 0 | 5.4 | 4.1 | 9.5 | 0.0 |
| West Coast | 356 | 3 | 0 | 0 | 8.4 | 0.0 | 8.4 | 0.0 |
| Canterbury | 5398 | 37 | 16 | 2 | 6.8 | 3.0 | 9.8 | 0.4 |
| South Canterbury | 566 | 5 | 1 | 0 | 8.8 | 1.8 | 10.5 | 0.0 |
| Otago | 2018 | 12 | 6 | 0 | 5.9 | 3.0 | 8.9 | 0.0 |
| Southland | 1388 | 10 | 4 | 1 | 7.2 | 2.9 | 10.0 | 0.7 |
| Other/Not reported | 144 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 55,477 | 406 | 164 | 27 | 7.3 | 3.0 | 10.2 | 0.5 |
| 2001 | | | | | | | | |
| Northland | 1836 | 25 | 1 | 1 | 13.4 | 0.5 | 14.0 | 0.5 |
| Waitemata | 6289 | 53 | 8 | 5 | 8.4 | 1.3 | 9.6 | 0.8 |
| Auckland | 6042 | 37 | 17 | 1 | 6.1 | 2.8 | 8.9 | 0.2 |
| Counties Manukau | 6687 | 48 | 11 | 3 | 7.1 | 1.6 | 8.8 | 0.4 |
| Waikato | 4612 | 25 | 11 | 3 | 5.4 | 2.4 | 7.8 | 0.7 |
| Lakes | 1513 | 8 | 4 | 0 | 5.3 | 2.6 | 7.9 | 0.0 |
| Bay of Plenty | 2585 | 12 | 7 | 2 | 4.6 | 2.7 | 7.3 | 0.8 |
| Tairāwhiti | 765 | 6 | 3 | 0 | 7.8 | 3.9 | 11.7 | 0.0 |
| Hawke's Bay | 2164 | 19 | 2 | 0 | 8.7 | 0.9 | 9.6 | 0.0 |
| Taranaki | 1335 | 11 | 4 | 0 | 8.2 | 3.0 | 11.1 | 0.0 |
| MidCentral | 1919 | 17 | 5 | 1 | 8.8 | 2.6 | 11.4 | 0.5 |
| Whanganui | 868 | 7 | 4 | 1 | 8.0 | 4.6 | 12.6 | 1.2 |
| Capital and Coast | 3657 | 28 | 4 | 0 | 7.6 | 1.1 | 8.7 | 0.0 |
| Hutt | 2096 | 14 | 7 | 1 | 6.6 | 3.3 | 10.0 | 0.5 |
| Wairarapa | 475 | 4 | 4 | 0 | 8.4 | 8.4 | 16.7 | 0.0 |
| Nelson Marlborough | 1430 | 9 | 2 | 1 | 6.3 | 1.4 | 7.6 | 0.7 |
| West Coast | 346 | 3 | 1 | 0 | 8.6 | 2.9 | 11.5 | 0.0 |
| Canterbury | 5517 | 25 | 8 | 1 | 4.5 | 1.5 | 6.0 | 0.2 |
| South Canterbury | 568 | 3 | 1 | 0 | 5.3 | 1.8 | 7.0 | 0.0 |
| Otago | 1882 | 14 | 4 | 0 | 7.4 | 2.1 | 9.5 | 0.0 |
| Southland | 1329 | 9 | 4 | 0 | 6.7 | 3.0 | 9.7 | 0.0 |
| Other/Not reported | 373 | 2 | 2 | 0 | 5.3 | 5.4 | 10.7 | 0.0 |
| Total | 54,288 | 379 | 114 | 20 | 6.9 | 2.1 | 9.0 | 0.4 |

Data source: NMDS

There were 597 babies in 2000, and 513 babies in 2001, who died between 20 weeks of pregnancy and one month of life, from a wide range of localities. The rate of perinatal death remains high for Pacific peoples.

Table 4.8: *In-hospital stillbirths and neonatal deaths, by ethnicity, 2000 and 2001*

| DHB region | Numbers | | | Rate per 1000 babies | | | |
|-----------------|-------------|---------------------------|-----------------------------|----------------------|---------------------------|------------------------|-----------------------------|
| | Stillbirths | Deaths <7 days from birth | Deaths 7–27 days from birth | Stillbirths | Deaths <7 days from birth | Total perinatal deaths | Deaths 7–27 days from birth |
| 2000 | | | | | | | |
| Māori | 78 | 34 | 3 | 7.2 | 3.2 | 10.4 | 0.3 |
| Pacific peoples | 42 | 23 | 4 | 7.4 | 4.1 | 11.5 | 0.7 |
| Asian | 25 | 6 | 2 | 6.9 | 1.7 | 8.5 | 0.6 |
| European | 238 | 90 | 17 | 7.3 | 2.8 | 10.1 | 0.5 |
| Other | 13 | 6 | 1 | 5.8 | 2.7 | 8.5 | 0.4 |
| Not reported | 10 | 5 | 0 | 10.8 | 5.4 | 16.1 | 0.0 |
| Total | 406 | 164 | 27 | 7.3 | 3.0 | 10.2 | 0.5 |
| 2001 | | | | | | | |
| Māori | 83 | 28 | 2 | 7.8 | 2.6 | 10.4 | 0.2 |
| Pacific peoples | 49 | 14 | 2 | 8.6 | 2.5 | 11.1 | 0.4 |
| Asian | 23 | 6 | 0 | 6.6 | 1.7 | 8.3 | 0.0 |
| European | 197 | 61 | 15 | 6.2 | 1.9 | 8.1 | 0.5 |
| Other | 21 | 3 | 1 | 10.2 | 1.5 | 11.6 | 0.5 |
| Not reported | 6 | 2 | 0 | 7.1 | 2.4 | 9.4 | 0.0 |
| Total | 379 | 114 | 20 | 6.9 | 2.1 | 9.0 | 0.4 |

Data source: NMDS

The perinatal mortality has continued to fall in recent years (10.2 per 1000 babies in 2000 and 9.0 per 1000 babies in 2001).

Table 4.9: Stillbirths (numbers), by mother's age and NZDep decile of woman's place of residence, 2000 and 2001

| NZDep level | Mother's age (years) | | | | | | Total |
|----------------|----------------------|-------|-------|-------|-------|-----|-------|
| | <20 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | |
| 2000 | | | | | | | |
| Least deprived | 1 | 3 | 11 | 10 | 13 | 3 | 41 |
| 2 | 4 | 5 | 6 | 11 | 5 | 1 | 32 |
| 3 | 1 | 5 | 7 | 10 | 12 | 1 | 36 |
| 4 | 3 | 8 | 10 | 10 | 7 | 0 | 38 |
| 5 | 3 | 5 | 9 | 8 | 7 | 0 | 32 |
| 6 | 2 | 6 | 4 | 18 | 3 | 2 | 35 |
| 7 | 1 | 6 | 8 | 17 | 3 | 1 | 36 |
| 8 | 4 | 13 | 15 | 11 | 6 | 2 | 51 |
| 9 | 6 | 8 | 11 | 8 | 6 | 1 | 40 |
| Most deprived | 8 | 15 | 20 | 8 | 10 | 4 | 65 |
| Not reported | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 33 | 74 | 101 | 111 | 72 | 15 | 406 |
| 2001 | | | | | | | |
| Least deprived | 0 | 1 | 5 | 8 | 6 | 4 | 24 |
| 2 | 3 | 7 | 10 | 12 | 8 | 1 | 41 |
| 3 | 2 | 4 | 4 | 6 | 6 | 0 | 22 |
| 4 | 0 | 6 | 12 | 7 | 5 | 3 | 33 |
| 5 | 2 | 5 | 6 | 10 | 6 | 1 | 30 |
| 6 | 2 | 8 | 11 | 13 | 9 | 2 | 45 |
| 7 | 4 | 6 | 6 | 10 | 8 | 1 | 35 |
| 8 | 3 | 7 | 11 | 7 | 8 | 2 | 38 |
| 9 | 5 | 8 | 13 | 10 | 7 | 0 | 43 |
| Most deprived | 9 | 12 | 26 | 11 | 4 | 1 | 63 |
| Not reported | 0 | 0 | 2 | 3 | 0 | 0 | 5 |
| Total | 30 | 64 | 106 | 97 | 67 | 15 | 379 |

Data source: NMDS

There is an impression from these data that women from more deprived areas have a higher rate of stillbirths. Also, both extremes of the reproductive age group have a higher stillbirth rate.

Table 4.10: Stillbirths (rates per 1000 total births), by mother's age and NZDep decile of woman's place of residence, 2000 and 2001

| NZDep level | Mother's age (years) | | | | | | Total |
|----------------|----------------------|-------|-------|-------|-------|------|-------|
| | <20 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | |
| 2000 | | | | | | | |
| Least deprived | 7.5 | 6.8 | 9.9 | 5.3 | 13.4 | 13.7 | 8.6 |
| 2 | 29.0 | 10.2 | 4.8 | 6.3 | 5.4 | 6.0 | 6.8 |
| 3 | 5.0 | 9.0 | 5.3 | 5.7 | 13.5 | 6.8 | 7.4 |
| 4 | 14.0 | 10.9 | 7.0 | 5.8 | 8.6 | 0.0 | 7.5 |
| 5 | 9.9 | 6.2 | 6.1 | 5.0 | 9.2 | 0.0 | 6.3 |
| 6 | 5.5 | 6.3 | 2.6 | 11.1 | 4.0 | 15.3 | 6.5 |
| 7 | 2.4 | 5.9 | 5.5 | 10.9 | 4.4 | 8.3 | 6.8 |
| 8 | 8.1 | 9.2 | 8.0 | 6.8 | 7.1 | 14.3 | 8.0 |
| 9 | 9.7 | 5.5 | 6.3 | 5.4 | 8.4 | 5.8 | 6.5 |
| Most deprived | 8.7 | 7.1 | 9.1 | 4.6 | 11.6 | 20.8 | 8.1 |
| Not reported | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total | 8.7 | 7.4 | 6.5 | 6.6 | 8.7 | 9.6 | 7.3 |
| 2001 | | | | | | | |
| Least deprived | 0.0 | 2.4 | 4.5 | 4.5 | 5.4 | 18.0 | 5.1 |
| 2 | 17.9 | 15.5 | 8.7 | 6.8 | 8.6 | 6.2 | 8.9 |
| 3 | 9.9 | 6.6 | 3.2 | 3.4 | 6.8 | 0.0 | 4.5 |
| 4 | 0.0 | 8.4 | 9.3 | 4.1 | 5.9 | 18.3 | 6.7 |
| 5 | 6.9 | 6.8 | 4.4 | 6.4 | 8.2 | 7.2 | 6.2 |
| 6 | 5.6 | 8.6 | 7.3 | 8.1 | 13.1 | 15.5 | 8.6 |
| 7 | 10.4 | 6.2 | 4.4 | 6.8 | 11.6 | 8.3 | 7.0 |
| 8 | 6.1 | 5.3 | 6.2 | 4.1 | 10.4 | 13.4 | 6.1 |
| 9 | 8.7 | 5.7 | 8.1 | 6.9 | 9.8 | 0.0 | 7.3 |
| Most deprived | 9.6 | 5.6 | 12.6 | 6.6 | 4.7 | 4.9 | 8.0 |
| Not reported | 0.0 | 0.0 | 13.9 | 23.6 | 0.0 | 0.0 | 10.0 |
| Total | 7.9 | 6.5 | 7.3 | 5.9 | 8.1 | 9.2 | 6.9 |

Data source: NMDS

Table 4.11: In-hospital neonatal deaths by ethnicity and gestational age, 1999–2001

| Ethnic group | 1999 | | | 2000 | | | 2001 | | |
|-----------------|--------------------|-----------------------|--------------|--------------------|-----------------------|--------------|--------------------|-----------------------|--------------|
| | Less than 37 weeks | Greater than 37 weeks | Not reported | Less than 37 weeks | Greater than 37 weeks | Not reported | Less than 37 weeks | Greater than 37 weeks | Not reported |
| Māori | 22 | 3 | 5 | 26 | 7 | 4 | 25 | 4 | 1 |
| Pacific peoples | 11 | 2 | 1 | 15 | 10 | 2 | 11 | 4 | 1 |
| Asian | 6 | 2 | 1 | 5 | 2 | 1 | 5 | 1 | 0 |
| European | 65 | 16 | 5 | 72 | 27 | 8 | 48 | 18 | 10 |
| Other | 4 | 0 | 0 | 4 | 3 | 0 | 3 | 0 | 1 |
| Not reported | 2 | 0 | 0 | 4 | 1 | 0 | 1 | 1 | 0 |
| Total | 110 | 23 | 12 | 126 | 50 | 15 | 93 | 28 | 13 |

Data source: NMDS

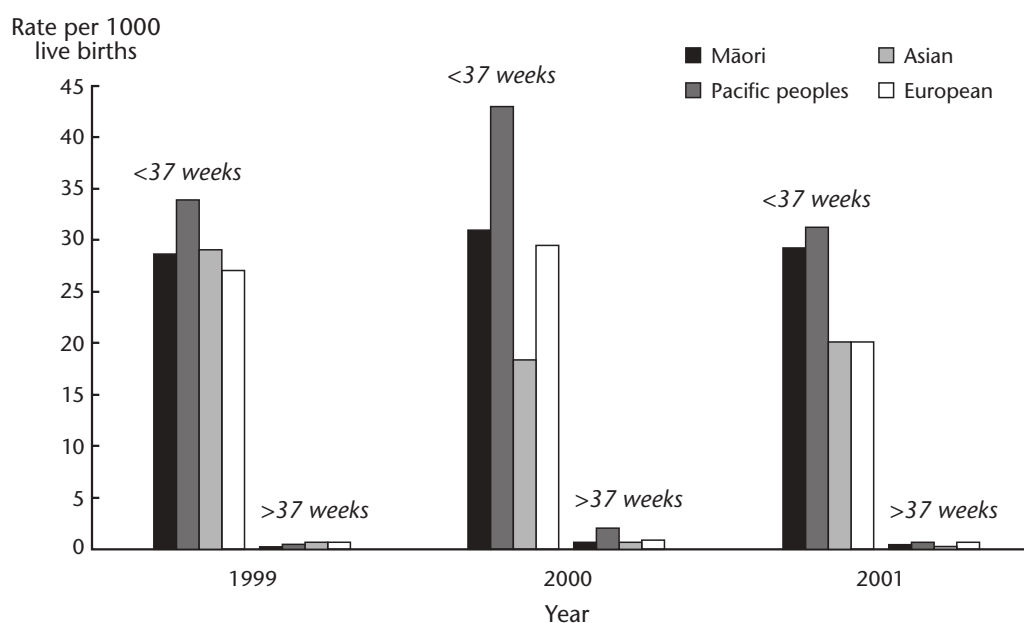


Figure 4.3: In-hospital neonatal deaths, 1999–2001

Data source: NMDS

Table 4.12a: In-hospital neonatal deaths, by principal diagnosis leading to admission, 2000

| Principal diagnosis | Number | | Rate per 1000 babies | |
|--|---------------------------|--------------------------------|---------------------------|--------------------------------|
| | Deaths <7 days from birth | Deaths 7 to 27 days from birth | Deaths <7 days from birth | Deaths 7 to 27 days from birth |
| P01 Fetus and newborn affected by maternal complications of pregnancy | 0 | 1 | 0.00 | 0.02 |
| P02 Fetus and newborn affected by complications of placenta, cord and membranes | 1 | 0 | 0.02 | 0.00 |
| P05 Slow fetal growth and fetal malnutrition | 1 | 0 | 0.02 | 0.00 |
| P07 Disorders related to short gestation and low birthweight, not elsewhere classified | 105 | 10 | 1.88 | 0.18 |
| P08 Disorders related to long gestation and high birthweight | 1 | 0 | 0.02 | 0.00 |
| P20 Intrauterine hypoxia | 1 | 0 | 0.02 | 0.00 |
| P21 Birth asphyxia | 12 | 0 | 0.22 | 0.00 |
| P24 Neonatal aspiration syndromes | 3 | 0 | 0.05 | 0.00 |
| P25 Interstitial emphysema and related conditions originating in the perinatal period | 1 | 0 | 0.02 | 0.00 |
| P28 Other respiratory conditions originating in the perinatal period | 0 | 1 | 0.00 | 0.02 |
| P29 Cardiovascular disorders originating in the perinatal period | 2 | 1 | 0.04 | 0.02 |
| P36 Bacterial sepsis of newborn | 1 | 0 | 0.02 | 0.00 |
| P52 Intracranial nontraumatic haemorrhage of fetus and newborn | 0 | 1 | 0.00 | 0.02 |
| P90 Convulsions of newborn | 0 | 1 | 0.00 | 0.02 |
| P91 Other disturbances of cerebral status of newborn | 6 | 0 | 0.11 | 0.00 |
| P96 Other conditions originating in the perinatal period | 3 | 1 | 0.05 | 0.02 |
| Q00 Anencephaly and similar malformations | 2 | 0 | 0.04 | 0.00 |
| Q20 Congenital malformations of cardiac chambers and connections | 0 | 1 | 0.00 | 0.02 |
| Q21 Congenital malformations of cardiac septa | 1 | 0 | 0.02 | 0.00 |
| Q22 Congenital malformations of pulmonary and tricuspid valves | 1 | 1 | 0.02 | 0.02 |
| Q23 Congenital malformations of aortic and mitral valves | 1 | 3 | 0.02 | 0.05 |
| Q24 Other congenital malformations of heart | 1 | 0 | 0.02 | 0.00 |
| Q25 Congenital malformations of great arteries | 1 | 0 | 0.02 | 0.00 |
| Q32 Congenital malformations of trachea and bronchus | 1 | 0 | 0.02 | 0.00 |
| Q43 Other congenital malformations of intestine | 1 | 0 | 0.02 | 0.00 |
| Q61 Cystic kidney disease | 1 | 0 | 0.02 | 0.00 |
| Q79 Congenital malformations of the musculoskeletal system, not elsewhere classified | 3 | 2 | 0.05 | 0.04 |
| Q89 Other congenital malformations, not elsewhere classified | 3 | 0 | 0.05 | 0.00 |
| Q90 Down's syndrome | 1 | 0 | 0.02 | 0.00 |
| Q91 Edwards' syndrome and Patau's syndrome | 1 | 1 | 0.02 | 0.02 |
| Q93 Monosomies and deletions from the autosomes, not elsewhere classified | 0 | 1 | 0.00 | 0.02 |
| Q99 Other chromosome abnormalities, not elsewhere classified | 1 | 0 | 0.02 | 0.00 |
| Other | 8 | 2 | 0.14 | 0.04 |
| Total | 164 | 27 | 2.94 | 0.48 |

Data source: NMDS

Table 4.12b: In-hospital neonatal deaths, by principal diagnosis leading to admission, 2001

| Principal diagnosis | Number | | Rate per 1000 babies | |
|--|---------------------------|--------------------------------|---------------------------|--------------------------------|
| | Deaths <7 days from birth | Deaths 7 to 27 days from birth | Deaths <7 days from birth | Deaths 7 to 27 days from birth |
| P01 Fetus and newborn affected by maternal complications of pregnancy | 1 | 0 | 0.02 | 0.00 |
| P02 Fetus and newborn affected by complications of placenta, cord and membranes | 2 | 0 | 0.04 | 0.00 |
| P05 Slow fetal growth and fetal malnutrition | 2 | 0 | 0.04 | 0.00 |
| P07 Disorders related to short gestation and low birthweight, not elsewhere classified | 79 | 10 | 1.45 | 0.18 |
| P08 Disorders related to long gestation and high birthweight | 0 | 0 | 0.00 | 0.00 |
| P20 Intrauterine hypoxia | 1 | 0 | 0.02 | 0.00 |
| P21 Birth asphyxia | 9 | 0 | 0.17 | 0.00 |
| P24 Neonatal aspiration syndromes | 1 | 0 | 0.02 | 0.00 |
| P25 Interstitial emphysema and related conditions originating in the perinatal period | 0 | 0 | 0.00 | 0.00 |
| P28 Other respiratory conditions originating in the perinatal period | 0 | 0 | 0.00 | 0.00 |
| P29 Cardiovascular disorders originating in the perinatal period | 1 | 0 | 0.02 | 0.00 |
| P36 Bacterial sepsis of newborn | 0 | 0 | 0.00 | 0.00 |
| P52 Intracranial nontraumatic haemorrhage of fetus and newborn | 0 | 0 | 0.00 | 0.00 |
| P90 Convulsions of newborn | 0 | 1 | 0.00 | 0.02 |
| P91 Other disturbances of cerebral status of newborn | 0 | 1 | 0.00 | 0.02 |
| P96 Other conditions originating in the perinatal period | 0 | 0 | 0.00 | 0.00 |
| Q00 Anencephaly and similar malformations | 0 | 0 | 0.00 | 0.00 |
| Q20 Congenital malformations of cardiac chambers and connections | 1 | 1 | 0.02 | 0.02 |
| Q21 Congenital malformations of cardiac septa | 0 | 0 | 0.00 | 0.00 |
| Q22 Congenital malformations of pulmonary and tricuspid valves | 1 | 0 | 0.02 | 0.00 |
| Q23 Congenital malformations of aortic and mitral valves | 2 | 3 | 0.04 | 0.06 |
| Q24 Other congenital malformations of heart | 1 | 0 | 0.02 | 0.00 |
| Q25 Congenital malformations of great arteries | 1 | 0 | 0.02 | 0.00 |
| Q32 Congenital malformations of trachea and bronchus | 0 | 0 | 0.00 | 0.00 |
| Q43 Other congenital malformations of intestine | 0 | 0 | 0.00 | 0.00 |
| Q61 Cystic kidney disease | 1 | 0 | 0.02 | 0.00 |
| Q79 Congenital malformations of the musculoskeletal system, not elsewhere classified | 3 | 0 | 0.06 | 0.00 |
| Q89 Other congenital malformations, not elsewhere classified | 0 | 0 | 0.00 | 0.00 |
| Q90 Down's syndrome | 0 | 0 | 0.00 | 0.00 |
| Q91 Edwards' syndrome and Patau's syndrome | 0 | 0 | 0.00 | 0.00 |
| Q93 Monosomies and deletions from the autosomes, not elsewhere classified | 0 | 0 | 0.00 | 0.00 |
| Q99 Other chromosome abnormalities, not elsewhere classified | 0 | 0 | 0.00 | 0.00 |
| Other | 8 | 4 | 0.15 | 0.07 |
| Total | 114 | 20 | 2.09 | 0.37 |

Data source: NMDS

In 2000, 14.7 percent (28/191) of baby deaths were due to congenital anomalies of newborn, and the most common cause of death was prematurity, which accounted for 60.2 percent (115/191).¹ In 2001, 10.4 percent (14/134) of baby deaths were due to congenital anomalies of newborn, and the most common cause of death was prematurity, which accounted for 66.4 percent (89/134).¹

Data interpretation

This data is derived from ICD codes, making it difficult to assign a cause of death. Information on cause of death is available from the mortality database.

Table 4.13: In-hospital neonatal deaths, by birthweight, 2000 and 2001

| Birthweight (g) | Number | | Rate per 1000 babies | |
|-----------------|---------------------------|--------------------------------|---------------------------|--------------------------------|
| | Deaths <7 days from birth | Deaths 7 to 27 days from birth | Deaths <7 days from birth | Deaths 7 to 27 days from birth |
| 2000 | | | | |
| 0–999 | 91 | 4 | 355.5 | 15.6 |
| 1000–1499 | 10 | 3 | 27.3 | 8.2 |
| 1500–1999 | 4 | 1 | 5.2 | 1.3 |
| 2000–2499 | 4 | 4 | 1.9 | 1.9 |
| 2500–4499 | 43 | 10 | 0.9 | 0.2 |
| 4500+ | 4 | 1 | 2.8 | 0.7 |
| Not reported | 8 | 4 | 4.3 | 2.2 |
| Total | 164 | 27 | 2.9 | 0.5 |
| 2001 | | | | |
| 0–999 | 60 | 7 | 234.4 | 27.3 |
| 1000–1499 | 5 | 1 | 12.8 | 2.6 |
| 1500–1999 | 0 | 0 | 0.0 | 0.0 |
| 2000–2499 | 0 | 0 | 0.0 | 0.0 |
| 2500–4499 | 21 | 7 | 0.4 | 0.1 |
| 4500+ | 2 | 1 | 1.4 | 0.7 |
| Not reported | 10 | 2 | 11.7 | 2.3 |
| Total | 98 | 18 | 1.8 | 0.3 |

Data source: NMDS

Babies are included only if the death occurred in hospital.

¹ The ICD-10-AM codes used to identify congenital anomalies were Q00-Q99, and ICD-10-AM code P07 was used to identify prematurity.

Table 4.14: In-hospital neonatal deaths, by gestational age, 2000 and 2001

| Gestational age (weeks) | Number | | Rate per 1000 babies | |
|----------------------------|---------------------------------|--------------------------------------|---------------------------------|--------------------------------------|
| | Deaths <7 days from birth | Deaths 7 to 27 days from birth | Deaths <7 days from birth | Deaths 7 to 27 days from birth |
| 2000 | | | | |
| 20–23 | 64 | 0 | 914.3 | 0.0 |
| 24–27 | 27 | 6 | 127.4 | 28.3 |
| 28–31 | 11 | 2 | 24.9 | 4.5 |
| 32–36 | 11 | 5 | 3.2 | 1.5 |
| 37–41 | 39 | 9 | 0.8 | 0.2 |
| 42+ | 1 | 1 | 0.6 | 0.6 |
| Not reported | 11 | 4 | 5.7 | 2.1 |
| Total | 164 | 27 | 2.9 | 0.5 |
| 2001 | | | | |
| 20–23 | 40 | 0 | 666.7 | 0.0 |
| 24–27 | 18 | 7 | 94.7 | 36.8 |
| 28–31 | 10 | 2 | 20.3 | 4.1 |
| 32–36 | 14 | 2 | 4.2 | 0.6 |
| 37–41 | 20 | 7 | 0.4 | 0.1 |
| 42+ | 1 | 0 | 0.7 | 0.0 |
| Not reported | 11 | 2 | 11.6 | 2.1 |
| Total | 114 | 20 | 2.1 | 0.4 |

Data source: NMDS

Babies are included only if the death occurred in hospital.

5. Postnatal period

This chapter describes the mother and baby in the first 42 days after birth. This data includes information on community care for mothers and babies in the postnatal period. Re-admission to hospital for either the mother or her newborn is often a sign of morbidity occurring in the postnatal period.

Data interpretation

In the 1999 edition of this report the hospital re-admission data was filtered to exclude data not seen to be relevant, eg, mental health admissions. Consequently, the larger number of re-admissions that appear this year is not comparable to the figures published for 1999. In the 1999 report the definition of postnatal period was only a month long, instead of the 42 days we are using in this publication. Events where the admission was a transfer from another facility have been excluded.

In 2000, 17.0 percent (9360/54,946) of mothers and 23.1 percent (12,829/55,477) of babies required a postnatal admission. In 2001, 19.6 percent (10,521/53,805) of mothers and 25.2 percent (13,699/54,288) of babies required a postnatal admission

Hospital data is obtained from the NMDS, and postnatal community aspects are obtained from HB in MNIS. It is not always possible from this data to determine the reason for re-admission.

5.1 POSTNATAL HOSPITAL ADMISSIONS OF THE MOTHER

Only re-admissions for postpartum and post-abortion diagnoses (DRGs O04Z and O61Z) are included. Of these postnatal re-admissions for problems relating to pregnancy, there were 971 women re-admitted for postpartum care and examination in 2000 and 1074 women in 2001. A neonatal re-admission is any admission in the first 42 days after birth.

Table 5.1a: Postnatal re-admissions for problems relating to pregnancy, average length of stay and number of significant operations, by principal diagnosis (DRGs O04Z and O61Z only), 2000

| Principal diagnosis | Re-admissions | | Number of significant operations | | Average length of stay (d) |
|---|---------------|--------------|----------------------------------|--------------|----------------------------|
| | No | % | No | % | |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 10 | 0.4 | 0 | 0.0 | 1.5 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 0 | 0.0 | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 0 | 0.0 | 0 | 0.0 | 0.0 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 23 | 0.8 | 0 | 0.0 | 2.4 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 21 | 0.8 | 0 | 0.0 | 2.1 |
| Eclampsia | 7 | 0.3 | 1 | 0.2 | 4.4 |
| Unspecified maternal hypertension | 32 | 1.2 | 1 | 0.2 | 1.7 |
| Infections of genitourinary tract in pregnancy | 2 | 0.1 | 0 | 0.0 | 2.5 |
| Diabetes mellitus in pregnancy | 4 | 0.1 | 0 | 0.0 | 2.0 |
| Maternal care for other conditions predominantly related to pregnancy | 13 | 0.5 | 0 | 0.0 | 2.5 |
| Maternal care for known or suspected abnormality of pelvic organs | 2 | 0.1 | 0 | 0.0 | 0.5 |
| Maternal care for other known or suspected fetal problems | 0 | 0.0 | 0 | 0.0 | 0.0 |
| Postpartum haemorrhage | 373 | 13.5 | 263 | 52.1 | 1.3 |
| Puerperal sepsis | 246 | 8.9 | 29 | 5.7 | 2.4 |
| Other puerperal infections | 251 | 9.1 | 23 | 4.6 | 2.6 |
| Venous complications in the puerperium | 44 | 1.6 | 7 | 1.4 | 2.6 |
| Obstetric embolism | 11 | 0.4 | 1 | 0.2 | 3.8 |
| Complications of anaesthesia during the puerperium | 21 | 0.8 | 13 | 2.6 | 1.2 |
| Complications of the puerperium, not elsewhere classified | 96 | 3.5 | 27 | 5.3 | 2.6 |
| Infections of breast associated with childbirth | 356 | 12.9 | 112 | 22.2 | 2.4 |
| Other disorders of breast and lactation associated with childbirth | 83 | 3.0 | 4 | 0.8 | 2.6 |
| Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium | 8 | 0.3 | 0 | 0.0 | 1.6 |
| Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium | 156 | 5.6 | 21 | 4.2 | 2.7 |
| Postpartum care and examination | 971 | 35.1 | 3 | 0.6 | 3.5 |
| Other diagnosis | 33 | 1.2 | 0.0 | 0.0 | 6.7 |
| Total | 2763 | 100.0 | 505 | 100.0 | 2.7 |

Data source: NMDS

Table 5.1b: Postnatal re-admissions for problems relating to pregnancy, average length of stay and number of significant operations, by principal diagnosis (DRGs O04Z and O61Z only), 2001

| Principal diagnosis | Re-admissions | | Number of significant operations | | Average length of stay (d) |
|---|---------------|--------------|----------------------------------|--------------|----------------------------|
| | No | % | No | % | |
| Pre-existing hypertension complicating pregnancy, childbirth and the puerperium | 11 | 0.4 | 0 | 0.0 | 2.0 |
| Pre-existing hypertensive disorder with superimposed proteinuria | 3 | 0.1 | 0 | 0.0 | 3.7 |
| Gestational [pregnancy-induced] oedema and proteinuria without hypertension | 3 | 0.1 | 2 | 0.6 | 5.0 |
| Gestational [pregnancy-induced] hypertension without significant proteinuria | 15 | 0.5 | 0 | 0.0 | 2.4 |
| Gestational [pregnancy-induced] hypertension with significant proteinuria | 17 | 0.6 | 1 | 0.3 | 5.7 |
| Eclampsia | 8 | 0.3 | 0 | 0.0 | 1.9 |
| Unspecified maternal hypertension | 19 | 0.7 | 0 | 0.0 | 2.3 |
| Infections of genitourinary tract in pregnancy | 2 | 0.1 | 0 | 0.0 | 1.5 |
| Diabetes mellitus in pregnancy | 5 | 0.2 | 0 | 0.0 | 2.2 |
| Maternal care for other conditions predominantly related to pregnancy | 10 | 0.4 | 0 | 0.0 | 3.8 |
| Maternal care for known or suspected abnormality of pelvic organs | 0 | 0.0 | 0 | 0.0 | 0.0 |
| Maternal care for other known or suspected fetal problems | 1 | 0.0 | 0 | 0.0 | 1.0 |
| Postpartum haemorrhage | 279 | 10.0 | 143 | 39.9 | 1.4 |
| Puerperal sepsis | 267 | 9.6 | 31 | 8.7 | 2.3 |
| Other puerperal infections | 272 | 9.8 | 25 | 7.0 | 2.5 |
| Venous complications in the puerperium | 55 | 2.0 | 7 | 2.0 | 2.4 |
| Obstetric embolism | 11 | 0.4 | 0 | 0.0 | 2.4 |
| Complications of anaesthesia during the puerperium | 15 | 0.5 | 12 | 3.4 | 1.5 |
| Complications of the puerperium, not elsewhere classified | 102 | 3.7 | 40 | 11.2 | 1.9 |
| Infections of breast associated with childbirth | 338 | 12.2 | 93 | 26.0 | 2.5 |
| Other disorders of breast and lactation associated with childbirth | 92 | 3.3 | 1 | 0.3 | 2.2 |
| Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium | 12 | 0.4 | 0 | 0.0 | 1.7 |
| Other maternal diseases classifiable elsewhere but complicating pregnancy, childbirth and the puerperium | 141 | 5.1 | 3 | 0.8 | 1.8 |
| Postpartum care and examination | 1074 | 38.7 | 0 | 0.0 | 3.3 |
| Other diagnosis | 25 | 0.9 | 0.0 | 0.0 | 7.6 |
| Total | 2777 | 100.0 | 358 | 100.0 | 2.7 |

Data source: NMDS

Table 5.2 shows re-admissions to hospital, within 6 weeks of birth, for babies born in hospital.

Figures 5.1a and 5.1b show the rates in the centre of the upper and lower 99 percent confidence limits. If the lower confidence limit is completely above the national rate for all New Zealand, this indicates that the DHB region re-admission rate is significantly greater than the overall national rate (99 percent confidence interval). If the upper confidence limit is completely below the national rate for all New Zealand, this indicates the DHB region re-admission rate is significantly less than the overall national rate (99 percent confidence interval). Otherwise, the DHB region re-admission rate is no different from the overall national rate.

Table 5.2: Re-admissions to hospital within 6 weeks for newborns born in hospital, by DHB region of baby's place of residence, 2000 and 2001

| DHB region | Re-admissions 2000 | | Re-admissions 2001 | |
|--------------------|--------------------|------------------------------------|--------------------|------------------------------------|
| | Number | Rate per 1000 hospital live births | Number | Rate per 1000 hospital live births |
| Northland | 207 | 101.1 | 163 | 88.5 |
| Waitemata | 293 | 45.5 | 286 | 45.4 |
| Auckland | 341 | 54.4 | 395 | 65.3 |
| Counties Manukau | 519 | 71.3 | 517 | 73.6 |
| Waikato | 534 | 116.7 | 500 | 108.5 |
| Lakes | 143 | 92.3 | 165 | 111.0 |
| Bay of Plenty | 226 | 86.6 | 214 | 83.3 |
| Tairāwhiti | 73 | 96.1 | 67 | 86.8 |
| Hawke's Bay | 119 | 53.9 | 114 | 52.8 |
| Taranaki | 180 | 127.9 | 171 | 127.3 |
| MidCentral | 189 | 88.6 | 148 | 74.6 |
| Whanganui | 83 | 89.5 | 84 | 95.7 |
| Capital and Coast | 419 | 110.4 | 454 | 123.4 |
| Hutt | 177 | 88.8 | 173 | 82.9 |
| Wairarapa | 39 | 80.7 | 49 | 105.4 |
| Nelson Marlborough | 86 | 58.6 | 75 | 52.4 |
| West Coast | 31 | 88.1 | 38 | 111.1 |
| Canterbury | 361 | 66.6 | 350 | 62.9 |
| South Canterbury | 45 | 79.1 | 32 | 55.6 |
| Otago | 139 | 68.1 | 140 | 73.4 |
| Southland | 151 | 109.3 | 117 | 88.2 |
| Not reported | 3 | 37.0 | 22 | 154.9 |
| Total | 4358 | 78.1 | 4274 | 78.4 |

Data source: NMDS

Re-admission rate per 1000 live births

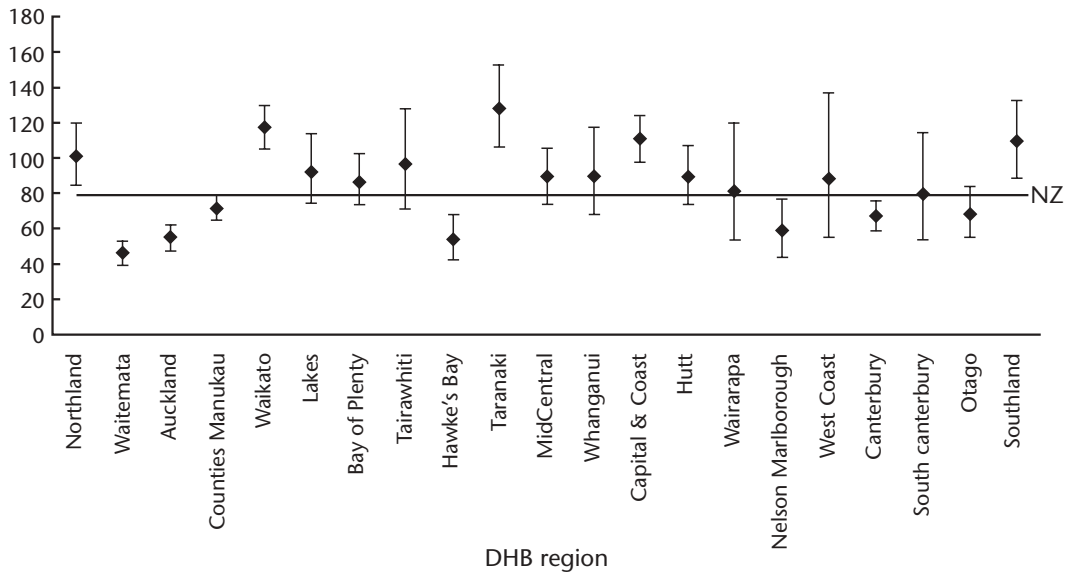


Figure 5.1a: Re-admission rate to hospital and 99 percent confidence limits per 1000 births, by DHB of baby's place of residence, 2000

Data source: NMDS

Re-admission rate per 1000 live births

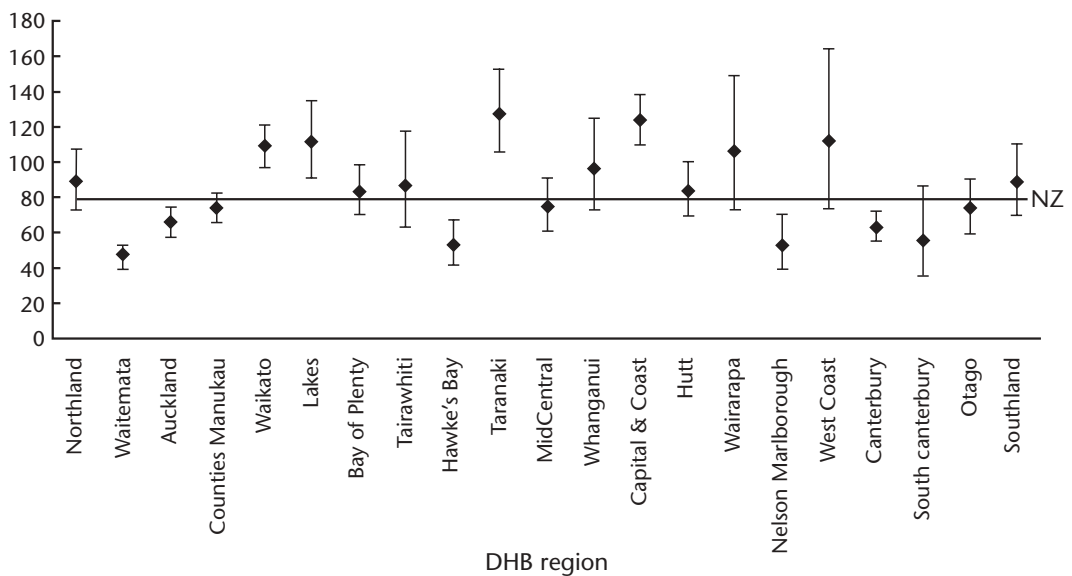


Figure 5.1b: Re-admission rate to hospital and 99 percent confidence limits per 1000 births, by DHB of baby's place of residence, 2001

Data source: NMDS

5.2 BREASTFEEDING

Data integrity

Breastfeeding status is not recorded for a high percentage of women, since the field was not enforced as a mandatory reporting requirement. The breastfeeding data is also limited by a lack of definition – the Section 51 Notice applicable to 2000 and 2001 did not define the terms ‘exclusively’ and ‘partially’ breastfeeding, nor did it define the exact time for recording breastfeeding status (given that transfer to a well-child provider can take place between four and six weeks). These problems have been rectified with the new Section 88 Maternity Notice, effective from 1 July 2002.

Table 5.3: Breastfeeding status at time of transfer to well-child provider, 2000 and 2001

| Breastfeeding status | 2000 | | 2001 | |
|----------------------|--------|-------|--------|-------|
| | No | % | No | % |
| Exclusively | 18,084 | 71.7 | 16,065 | 67.6 |
| Partially | 2884 | 11.4 | 2703 | 11.4 |
| Not at all | 4269 | 16.9 | 4995 | 21.0 |
| Total | 25,237 | 100.0 | 23,763 | 100.0 |

Data source: MNIS

In 2000, breastfeeding status was unrecorded for 14,540 babies (36.6 percent), and in 2001 for 13,656 babies (36.5 percent).

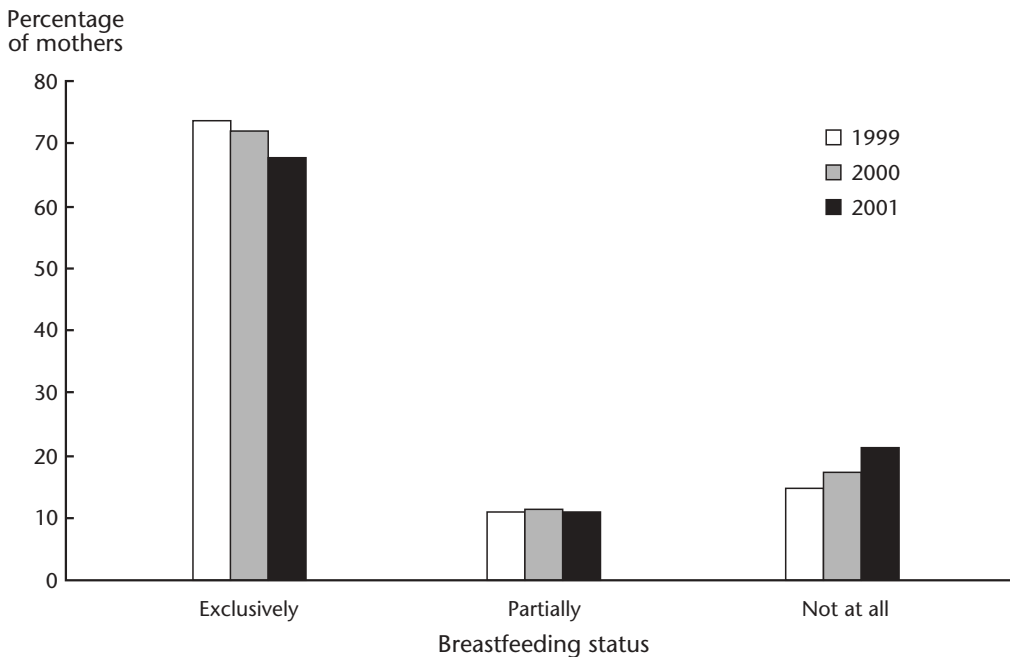


Figure 5.2: Trends in breastfeeding (percentage) in New Zealand, 1999–2001

Data source: MNIS

Table 5.3 seems to show that a high percentage of women are exclusively breastfeeding at the time of transfer to the well-child provider (71.7 percent in 2000 and 67.6 percent in 2001). Variations in the definitions of breastfeeding status make it difficult to obtain an accurate picture.

Figure 5.2 shows that in instances where breastfeeding has been reported in the years 1999–2001, it appears that more mothers are choosing not to breastfeed.

Table 5.4: Breastfeeding status, by age of mother, 2000 and 2001

| Age of mother | Exclusively | | Partially | | Not at all | | Total | |
|---------------|-------------|------|-----------|------|------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Under 16 | 22 | 46.8 | 4 | 8.5 | 21 | 44.7 | 47 | 100.0 |
| 16–19 | 819 | 59.1 | 184 | 13.3 | 383 | 27.6 | 1386 | 100.0 |
| 20–24 | 2917 | 67.6 | 506 | 11.7 | 889 | 20.6 | 4312 | 100.0 |
| 25–29 | 4645 | 70.8 | 747 | 11.4 | 1166 | 17.8 | 6558 | 100.0 |
| 30–34 | 5593 | 75.2 | 802 | 10.8 | 1044 | 14.0 | 7439 | 100.0 |
| 35–39 | 2817 | 75.9 | 425 | 11.5 | 469 | 12.6 | 3711 | 100.0 |
| 40+ | 578 | 70.6 | 133 | 16.2 | 108 | 13.2 | 819 | 100.0 |
| Total | 17,391 | 71.7 | 2801 | 11.5 | 4080 | 16.8 | 24,272 | 100.0 |
| 2001 | | | | | | | | |
| Under 16 | 18 | 43.9 | 3 | 7.3 | 20 | 48.8 | 41 | 100.0 |
| 16–19 | 699 | 52.6 | 198 | 14.9 | 431 | 32.5 | 1328 | 100.0 |
| 20–24 | 2523 | 62.3 | 522 | 12.9 | 1005 | 24.8 | 4050 | 100.0 |
| 25–29 | 4092 | 68.0 | 696 | 11.6 | 1232 | 20.5 | 6020 | 100.0 |
| 30–34 | 5137 | 72.6 | 701 | 9.9 | 1240 | 17.5 | 7078 | 100.0 |
| 35–39 | 2585 | 71.6 | 415 | 11.5 | 610 | 16.9 | 3610 | 100.0 |
| 40+ | 552 | 67.6 | 102 | 12.5 | 162 | 19.9 | 816 | 100.0 |
| Total | 15,606 | 68.0 | 2637 | 11.5 | 4700 | 20.5 | 22,943 | 100.0 |

Data source: MNIS

Data integrity

In 2000, breastfeeding status is unrecorded for 14,540 babies (36.6 percent), and for a further 965 babies (2.4 percent) the age of the mother is unknown. In 2001, breastfeeding status is unrecorded for 13,656 babies (36.5 percent), and for a further 820 babies (2.2 percent) the age of the mother is unknown.

Table 5.5: Breastfeeding status, by ethnicity, 2000 and 2001

| Ethnic group | Exclusively | | Partially | | Not at all | | Total | |
|-----------------|-------------|------|-----------|------|------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Māori | 2862 | 61.9 | 675 | 14.6 | 1085 | 23.5 | 4622 | 100.0 |
| Pacific peoples | 750 | 75.6 | 133 | 13.4 | 109 | 11.0 | 992 | 100.0 |
| Asian | 637 | 72.6 | 146 | 16.6 | 95 | 10.8 | 878 | 100.0 |
| European | 9709 | 73.6 | 1290 | 9.8 | 2187 | 16.6 | 13,186 | 100.0 |
| Other | 2894 | 75.3 | 427 | 11.1 | 520 | 13.5 | 3841 | 100.0 |
| Not reported | 1214 | 71.8 | 211 | 12.5 | 266 | 15.7 | 1691 | 100.0 |
| Total | 18,066 | 71.7 | 2882 | 11.4 | 4262 | 16.9 | 25,210 | 100.0 |
| 2001 | | | | | | | | |
| Māori | 2595 | 59.3 | 619 | 14.2 | 1160 | 26.5 | 4374 | 100.0 |
| Pacific peoples | 728 | 57.1 | 203 | 15.9 | 344 | 27.0 | 1275 | 100.0 |
| Asian | 520 | 53.4 | 196 | 20.1 | 257 | 26.4 | 973 | 100.0 |
| European | 9239 | 71.8 | 1217 | 9.5 | 2404 | 18.7 | 12,860 | 100.0 |
| Other | 1995 | 69.9 | 307 | 10.8 | 552 | 19.3 | 2854 | 100.0 |
| Not reported | 917 | 68.7 | 154 | 11.5 | 263 | 19.7 | 1334 | 100.0 |
| Total | 15,994 | 67.6 | 2696 | 11.4 | 4980 | 21.0 | 23,670 | 100.0 |

Data source: MNIS

Data integrity

In 2000, breastfeeding status is unknown for 14,540 babies (36.6 percent), and for a further 27 babies the ethnicity of the mother is unknown. In 2001, breastfeeding status is unknown for 13,656 babies (36.5 percent), and for a further 93 babies the ethnicity of the mother is unknown.

Table 5.6: Mothers recorded as having either exclusively or partially breastfed by age and ethnicity, 2000 and 2001

| Ethnic group | Age group | | | | | | | Not reported | Total |
|-----------------|-----------|-------|-------|-------|-------|-------|-----|--------------|--------|
| | Under 16 | 16–19 | 20–24 | 25–29 | 30–34 | 35–39 | 40+ | | |
| 2000 | | | | | | | | | |
| Māori | 10 | 343 | 968 | 991 | 641 | 332 | 84 | 168 | 3537 |
| Pacific peoples | 1 | 36 | 180 | 206 | 206 | 134 | 37 | 83 | 883 |
| Asian | 0 | 11 | 61 | 183 | 269 | 159 | 27 | 73 | 783 |
| European | 9 | 328 | 1378 | 2838 | 3727 | 1937 | 407 | 375 | 10,999 |
| Other | 4 | 155 | 545 | 827 | 1097 | 511 | 103 | 79 | 3321 |
| Not reported | 1 | 130 | 287 | 343 | 447 | 167 | 44 | 6 | 1425 |
| Total | 25 | 1003 | 3419 | 5388 | 6387 | 3240 | 702 | 784 | 20,948 |
| 2001 | | | | | | | | | |
| Māori | 7 | 338 | 910 | 855 | 603 | 296 | 70 | 135 | 3214 |
| Pacific peoples | 0 | 34 | 202 | 270 | 229 | 117 | 28 | 51 | 931 |
| Asian | 0 | 6 | 76 | 189 | 248 | 135 | 27 | 35 | 716 |
| European | 13 | 322 | 1243 | 2625 | 3658 | 1936 | 413 | 246 | 10,456 |
| Other | 0 | 98 | 356 | 580 | 772 | 377 | 78 | 41 | 2302 |
| Not reported | 1 | 97 | 249 | 251 | 304 | 127 | 30 | 12 | 1071 |
| Total | 21 | 895 | 3036 | 4770 | 5814 | 2988 | 646 | 520 | 18,690 |

Data source: MNIS

Note: This table contains data only from those mothers who reported partial or exclusive breastfeeding.

Table 5.7: Breastfeeding status, by DHB region of woman's place of residence, 2000 and 2001

| DHB region | Exclusively | | Partially | | Not at all | | Total | |
|--------------------|-------------|------|-----------|------|------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Northland | 858 | 62.0 | 116 | 8.4 | 410 | 29.6 | 1384 | 100.0 |
| Waitemata | 1396 | 77.3 | 201 | 11.1 | 208 | 11.5 | 1805 | 100.0 |
| Auckland | 1703 | 85.6 | 165 | 8.3 | 122 | 6.1 | 1990 | 100.0 |
| Counties Manukau | 897 | 73.1 | 127 | 10.4 | 203 | 16.5 | 1227 | 100.0 |
| Waikato | 1878 | 68.3 | 321 | 11.7 | 552 | 20.1 | 2751 | 100.0 |
| Lakes | 864 | 70.3 | 172 | 14.0 | 193 | 15.7 | 1229 | 100.0 |
| Bay of Plenty | 1616 | 72.4 | 259 | 11.6 | 357 | 16.0 | 2232 | 100.0 |
| Tairāwhiti | 358 | 70.8 | 59 | 11.7 | 89 | 17.6 | 506 | 100.0 |
| Hawke's Bay | 1088 | 67.2 | 231 | 14.3 | 299 | 18.5 | 1618 | 100.0 |
| Taranaki | 748 | 73.7 | 91 | 9.0 | 176 | 17.3 | 1015 | 100.0 |
| MidCentral | 929 | 69.7 | 188 | 14.1 | 216 | 16.2 | 1333 | 100.0 |
| Whanganui | 443 | 64.9 | 79 | 11.6 | 161 | 23.6 | 683 | 100.0 |
| Capital and Coast | 241 | 70.1 | 52 | 15.1 | 51 | 14.8 | 344 | 100.0 |
| Hutt | 951 | 68.4 | 209 | 15.0 | 231 | 16.6 | 1391 | 100.0 |
| Wairarapa | 114 | 65.9 | 21 | 12.1 | 38 | 22.0 | 173 | 100.0 |
| Nelson Marlborough | 945 | 76.2 | 115 | 9.3 | 180 | 14.5 | 1240 | 100.0 |
| West Coast | 18 | 75.0 | 2 | 8.3 | 4 | 16.7 | 24 | 100.0 |
| Canterbury | 2012 | 68.5 | 372 | 12.7 | 555 | 18.9 | 2939 | 100.0 |
| South Canterbury | 161 | 84.3 | 11 | 5.8 | 19 | 9.9 | 191 | 100.0 |
| Otago | 260 | 74.7 | 23 | 6.6 | 65 | 18.7 | 348 | 100.0 |
| Southland | 273 | 73.8 | 38 | 10.3 | 59 | 15.9 | 370 | 100.0 |
| Total | 17,753 | 71.6 | 2852 | 11.5 | 4188 | 16.9 | 24,793 | 100.0 |
| 2001 | | | | | | | | |
| Northland | 816 | 55.7 | 84 | 5.7 | 566 | 38.6 | 1466 | 100.0 |
| Waitemata | 845 | 61.7 | 118 | 8.6 | 406 | 29.7 | 1369 | 100.0 |
| Auckland | 1325 | 61.2 | 242 | 11.2 | 599 | 27.7 | 2166 | 100.0 |
| Counties Manukau | 936 | 64.2 | 175 | 12.0 | 347 | 23.8 | 1458 | 100.0 |
| Waikato | 1702 | 66.6 | 307 | 12.0 | 547 | 21.4 | 2556 | 100.0 |
| Lakes | 714 | 69.8 | 134 | 13.1 | 175 | 17.1 | 1023 | 100.0 |
| Bay of Plenty | 1324 | 72.5 | 220 | 12.1 | 281 | 15.4 | 1825 | 100.0 |
| Tairāwhiti | 228 | 63.7 | 57 | 15.9 | 73 | 20.4 | 358 | 100.0 |
| Hawke's Bay | 989 | 68.7 | 189 | 13.1 | 261 | 18.1 | 1439 | 100.0 |
| Taranaki | 685 | 71.9 | 90 | 9.4 | 178 | 18.7 | 953 | 100.0 |
| MidCentral | 851 | 70.0 | 141 | 11.6 | 223 | 18.4 | 1215 | 100.0 |
| Whanganui | 343 | 64.0 | 68 | 12.7 | 125 | 23.3 | 536 | 100.0 |
| Capital and Coast | 194 | 67.6 | 48 | 16.7 | 45 | 15.7 | 287 | 100.0 |
| Hutt | 952 | 67.1 | 220 | 15.5 | 246 | 17.3 | 1418 | 100.0 |
| Wairarapa | 214 | 77.8 | 27 | 9.8 | 34 | 12.4 | 275 | 100.0 |
| Nelson Marlborough | 913 | 78.4 | 90 | 7.7 | 162 | 13.9 | 1165 | 100.0 |
| West Coast | 14 | 93.3 | 1 | 6.7 | 0 | 0.0 | 15 | 100.0 |
| Canterbury | 1962 | 67.4 | 422 | 14.5 | 529 | 18.2 | 2913 | 100.0 |
| South Canterbury | 476 | 96.0 | 5 | 1.0 | 15 | 3.0 | 496 | 100.0 |
| Otago | 184 | 75.4 | 12 | 4.9 | 48 | 19.7 | 244 | 100.0 |
| Southland | 292 | 71.0 | 39 | 9.5 | 80 | 19.5 | 411 | 100.0 |
| Total | 15,959 | 67.7 | 2689 | 11.4 | 4940 | 20.9 | 23,588 | 100.0 |

Data source: MNIS

Data integrity

In 2000, breastfeeding status is unknown for 14,540 babies (36.6 percent), and for a further 444 (1.1 percent) babies the DHB region is unknown. In 2001, breastfeeding status is unknown for 13,656 babies (36.5 percent), and for a further 175 (0.5 percent) babies the DHB region is unknown.

5.3 POSTNATAL CARE

Data integrity

This information is obtained from MNIS, and 30 percent of the data is therefore missing. Additionally, data is missing through non-mandatory fields not being populated.

Table 5.8: Number of postnatal midwifery home visits, 2000 and 2001

| Number of home visits | 2000 | | 2001 | |
|-----------------------|--------|-------|--------|-------|
| | No | % | No | % |
| 1–4 | 799 | 3.7 | 592 | 2.7 |
| 5–7 | 11,350 | 52.6 | 12,144 | 55.6 |
| 8–10 | 7240 | 33.6 | 7182 | 32.9 |
| >10 | 2170 | 10.1 | 1906 | 8.7 |
| Total | 21,559 | 100.0 | 21,824 | 100.0 |

Data source: MNIS

Data integrity

In 2000 the number of home visits was not recorded for 18,728 women (46.5 percent), and in 2001 the number of home visits was not recorded for 16,869 women (43.7 percent).

Lead maternity carers (LMCs) are required to provide 5 to 10 midwifery home visits under the Maternity Payment Schedule. The high number of unrecorded visits makes analysis impossible.

Table 5.9: Transfer of maternity services to well-child provider, 2000 and 2001

| Baby age at transfer (weeks) | 2000 | | 2001 | |
|------------------------------|--------|-------|--------|-------|
| | No | % | No | % |
| 0–2 | 1348 | 5.7 | 967 | 4.4 |
| 2–4 | 6169 | 26.2 | 5284 | 24.1 |
| 4–6 | 12,666 | 53.9 | 12,465 | 56.8 |
| 6–8 | 2948 | 12.5 | 2696 | 12.3 |
| >8 | 372 | 1.6 | 546 | 2.5 |
| Total | 23,503 | 100.0 | 21,958 | 100.0 |

Data source: MNIS

Data integrity

In 2000 the date of transfer to the well-child provider is not recorded, or is recorded incorrectly, for 16,274 babies (40.9 percent). In 2001 the date of transfer to the well child provider is not recorded, or is recorded incorrectly, for 15,461 babies (41.3 percent).

Table 5.10: Claims made for private specialist paediatrician consultations, by DHB of woman's area of residence, 2000 and 2001

| DHB region | First consultation | | Subsequent consultation | | Attendance at birth or urgent paediatric attendance consultation | | Total | |
|--------------------|--------------------|---------------------------------|-------------------------|---------------------------------|--|---------------------------------|-------|---------------------------------|
| | No | Rate per 100 births in each DHB | No | Rate per 100 births in each DHB | No | Rate per 100 births in each DHB | No | Rate per 100 births in each DHB |
| 2000 | | | | | | | | |
| Northland | 9 | 5.1 | 6 | 0.3 | 7 | 0.4 | 22 | 1.3 |
| Waitemata | 97 | 20.7 | 79 | 1.7 | 77 | 1.6 | 253 | 5.4 |
| Auckland | 258 | 49.8 | 348 | 6.7 | 449 | 8.7 | 1055 | 20.4 |
| Counties Manukau | 167 | 33.3 | 83 | 1.7 | 157 | 3.1 | 407 | 8.1 |
| Waikato | 86 | 26.2 | 4 | 0.1 | 7 | 0.2 | 97 | 3.0 |
| Lakes | 7 | 4.7 | 2 | 0.1 | 3 | 0.2 | 12 | 0.8 |
| Bay of Plenty | 667 | 261.8 | 33 | 1.3 | 14 | 0.5 | 714 | 28.0 |
| Tairāwhiti | 15 | 21.7 | 2 | 0.3 | 4 | 0.6 | 21 | 3.0 |
| Hawke's Bay | 7 | 3.4 | 1 | 0.0 | 6 | 0.3 | 14 | 0.7 |
| Taranaki | 5 | 4.0 | 3 | 0.2 | 9 | 0.7 | 17 | 1.4 |
| MidCentral | 5 | 2.9 | 1 | 0.1 | 6 | 0.3 | 12 | 0.7 |
| Whanganui | 20 | 23.8 | 0 | 0.0 | 2 | 0.2 | 22 | 2.6 |
| Capital and Coast | 18 | 24.7 | 2 | 0.3 | 2 | 0.3 | 22 | 3.0 |
| Hutt | 10 | 6.0 | 0 | 0.0 | 1 | 0.1 | 11 | 0.7 |
| Wairarapa | 3 | 6.6 | 0 | 0.0 | 0 | 0.0 | 3 | 0.7 |
| Nelson Marlborough | 48 | 34.4 | 6 | 0.4 | 90 | 6.5 | 144 | 10.3 |
| West Coast | 6 | 117.6 | 0 | 0.0 | 1 | 2.0 | 7 | 13.7 |
| Canterbury | 1308 | 371.7 | 54 | 1.5 | 39 | 1.1 | 1401 | 39.8 |
| South Canterbury | 122 | 246.0 | 5 | 1.0 | 74 | 14.9 | 201 | 40.5 |
| Otago | 47 | 79.5 | 0 | 0.0 | 6 | 1.0 | 53 | 9.0 |
| Southland | 13 | 20.3 | 0 | 0.0 | 0 | 0.0 | 13 | 2.0 |
| Total | 2918 | 72.8 | 629 | 1.6 | 954 | 2.4 | 4501 | 11.2 |
| 2001 | | | | | | | | |
| Northland | 5 | 0.2 | 4 | 0.2 | 7 | 0.3 | 16 | 0.7 |
| Waitemata | 146 | 3.1 | 92 | 2.0 | 143 | 3.1 | 381 | 8.1 |
| Auckland | 304 | 5.5 | 417 | 7.5 | 582 | 10.5 | 1303 | 23.5 |
| Counties Manukau | 165 | 3.3 | 109 | 2.2 | 181 | 3.6 | 455 | 9.0 |
| Waikato | 69 | 2.1 | 4 | 0.1 | 3 | 0.1 | 76 | 2.4 |
| Lakes | 5 | 0.4 | 0 | 0.0 | 2 | 0.1 | 7 | 0.5 |
| Bay of Plenty | 599 | 24.9 | 21 | 0.9 | 11 | 0.5 | 631 | 26.2 |
| Tairāwhiti | 3 | 0.4 | 0 | 0.0 | 1 | 0.1 | 4 | 0.6 |
| Hawke's Bay | 5 | 0.2 | 0 | 0.0 | 2 | 0.1 | 7 | 0.3 |
| Taranaki | 2 | 0.2 | 0 | 0.0 | 0 | 0.0 | 2 | 0.2 |
| MidCentral | 8 | 0.5 | 6 | 0.4 | 4 | 0.2 | 18 | 1.1 |
| Whanganui | 19 | 2.6 | 2 | 0.3 | 5 | 0.7 | 26 | 3.5 |
| Capital and Coast | 24 | 3.3 | 4 | 0.5 | 8 | 1.1 | 36 | 4.9 |
| Hutt | 10 | 0.6 | 0 | 0.0 | 0 | 0.0 | 10 | 0.6 |
| Wairarapa | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Nelson Marlborough | 32 | 2.5 | 3 | 0.2 | 70 | 5.4 | 105 | 8.1 |
| West Coast | 3 | 8.6 | 0 | 0.0 | 5 | 14.3 | 8 | 22.9 |
| Canterbury | 1082 | 30.7 | 53 | 1.5 | 34 | 1.0 | 1169 | 33.2 |
| South Canterbury | 119 | 22.8 | 6 | 1.1 | 132 | 25.2 | 257 | 49.1 |
| Otago | 35 | 8.4 | 2 | 0.5 | 6 | 1.4 | 43 | 10.3 |
| Southland | 9 | 1.3 | 1 | 0.1 | 0 | 0.0 | 10 | 1.4 |
| Total | 2644 | 6.6 | 724 | 1.8 | 1196 | 3.0 | 4564 | 11.3 |

Data source: MNIS

Specialist paediatricians can claim in their private capacity for consultations under the Maternity Notice. The Notice that was in place in 2000 and 2001 allowed paediatricians to claim for four different fee types: a first consultation, a subsequent consultation (being further services for the same medical condition), attendance at birth (where a specific request has been made by the LMC because of a medical condition), and urgent paediatrician attendance (being a response to an urgent request received outside normal working hours). The paediatrician could not claim where the service formed part of the duties for which they were employed.

It is reasonable to consider regional variances, given that all DHB are contracted to provide secondary maternity services. A secondary maternity service includes consultations with paediatricians in both an inpatient and an outpatient setting.

6. Maternity facility

All information on maternity in this section is analysed by individual hospital facility, with the exception of two graphs on type of birth, which are analysed by DHB provider. This data allows individual facilities to compare their outcomes with similar facilities. This is the second step in audit of practice. The information enables facilities with outcomes divergent from similar facilities to explore the reasons for these differences.

Facilities are first ordered by type of facility: tertiary, secondary, or primary. Data is obtained from the NMDS for these analyses.

Data integrity

Any hospital with no designated maternity contract and which reported data in 2000 or 2001 has been reported in the 'other facilities' grouping.

Table 6.1: Total live and stillbirths, by facility (hospital data), 2000 and 2001

| Facility | 2000 | | | 2001 | | |
|--|---------------|-------------|---------------|---------------|-------------|---------------|
| | Live births | Stillbirths | | Live births | Stillbirths | |
| | No | No | Rate per 1000 | No | No | Rate per 1000 |
| Greenlane/National Women's | 7892 | 77 | 9.7 | 7505 | 58 | 7.7 |
| Middlemore | 3711 | 55 | 14.6 | 3840 | 47 | 12.1 |
| Waikato | 2996 | 29 | 9.6 | 3070 | 24 | 7.8 |
| Wellington | 3346 | 54 | 15.9 | 3272 | 32 | 9.7 |
| Christchurch Women's | 4165 | 37 | 8.8 | 4311 | 27 | 6.2 |
| Dunedin | 1770 | 11 | 6.2 | 1674 | 17 | 10.1 |
| Tertiary total | 23,880 | 263 | 10.9 | 23,672 | 205 | 8.6 |
| Whangarei | 1340 | 18 | 13.3 | 1227 | 22 | 17.6 |
| North Shore | 2979 | 14 | 4.7 | 2990 | 30 | 9.9 |
| Waitakere | 2521 | 5 | 2.0 | 2336 | 7 | 3.0 |
| Rotorua | 1368 | 10 | 7.3 | 1350 | 8 | 5.9 |
| Tauranga | 1851 | 6 | 3.2 | 1754 | 6 | 3.4 |
| Whakatane (including Opotiki and Murupara) | 716 | 7 | 9.7 | 708 | 7 | 9.8 |
| Gisborne | 723 | 3 | 4.1 | 728 | 3 | 4.1 |
| Taranaki Base | 1191 | 7 | 5.8 | 1149 | 12 | 10.3 |
| Wanganui | 737 | 4 | 5.4 | 698 | 4 | 5.7 |
| Hastings | 2090 | 16 | 7.6 | 1849 | 17 | 9.1 |
| Masterton | 461 | 0 | 0.0 | 438 | 3 | 6.8 |
| Palmerston North | 1838 | 12 | 6.5 | 1782 | 21 | 11.6 |
| Hutt | 1994 | 12 | 6.0 | 2068 | 9 | 4.3 |
| Wairau (Blenheim) | 467 | 0 | 0.0 | 437 | 3 | 6.8 |
| Nelson | 889 | 7 | 7.8 | 870 | 6 | 6.8 |
| Grey (Greymouth) | 283 | 2 | 7.0 | 288 | 3 | 10.3 |
| Timaru | 585 | 6 | 10.2 | 587 | 1 | 1.7 |
| Southland (Invercargill) | 1153 | 9 | 7.7 | 1097 | 7 | 6.3 |
| Secondary total | 23,186 | 138 | 5.9 | 22,356 | 169 | 7.5 |

Table 6.1 (continued): Total live and stillbirths, by facility (hospital data), 2000 and 2001

| Facility | 2000 | | | 2001 | | |
|--|-------------|-------------|---------------|-------------|-------------|---------------|
| | Live births | Stillbirths | | Live births | Stillbirths | |
| | No | No | Rate per 1000 | No | No | Rate per 1000 |
| Bay of Islands (Kawakawa) | 219 | 0 | 0.0 | 218 | 0 | 0.0 |
| Dargaville | 98 | 0 | 0.0 | 89 | 0 | 0.0 |
| Kaitaia | 263 | 0 | 0.0 | 239 | 1 | 4.2 |
| Hokianga | 60 | 0 | 0.0 | 13 | 0 | 0.0 |
| Wellsford | 37 | 0 | 0.0 | 30 | 0 | 0.0 |
| Warkworth | 94 | 0 | 0.0 | 94 | 0 | 0.0 |
| Helensville | 44 | 0 | 0.0 | 30 | 0 | 0.0 |
| Birthcare Auckland | 66 | 0 | 0.0 | 155 | 0 | 0.0 |
| Pukekohe | 640 | 0 | 0.0 | 601 | 0 | 0.0 |
| Papakura Obstetric | 941 | 0 | 0.0 | 834 | 1 | 1.2 |
| Botany Downs Maternity (South Auckland) | 1132 | 0 | 0.0 | 1120 | 1 | 0.9 |
| Waihi Hospital | 53 | 0 | 0.0 | 75 | 0 | 0.0 |
| Birthcare Huntly | 181 | 0 | 0.0 | 171 | 0 | 0.0 |
| Thames | 118 | 0 | 0.0 | 137 | 1 | 7.2 |
| Rhoda Read (Morrinsville) | 163 | 0 | 0.0 | 136 | 0 | 0.0 |
| Matariki (Te Awamutu) | 162 | 0 | 0.0 | 121 | 0 | 0.0 |
| Te Kuiti | 88 | 0 | 0.0 | 83 | 0 | 0.0 |
| Taumarunui | 100 | 1 | 9.9 | 82 | 0 | 0.0 |
| Tokoroa | 123 | 0 | 0.0 | 134 | 0 | 0.0 |
| Pohlen Trust (Matamata) | 107 | 0 | 0.0 | 123 | 0 | 0.0 |
| River Ridge (Hamilton) | 421 | 0 | 0.0 | 457 | 0 | 0.0 |
| Taupo General | 218 | 0 | 0.0 | 164 | 0 | 0.0 |
| Te Puia Springs | 27 | 0 | 0.0 | 38 | 0 | 0.0 |
| Hawera | 99 | 1 | 10.0 | 99 | 0 | 0.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 78 | 0 | 0.0 | 54 | 0 | 0.0 |
| Waimarino Rural Health Centre (Raetihi) | 16 | 0 | 0.0 | 12 | 0 | 0.0 |
| Marton | 8 | 0 | 0.0 | 2 | 0 | 0.0 |
| Taihape | 39 | 0 | 0.0 | 32 | 0 | 0.0 |
| Wairoa | 87 | 0 | 0.0 | 87 | 1 | 11.4 |
| Chatham Islands | 3 | 0 | 0.0 | 1 | 0 | 0.0 |
| Napier | 0 | 0 | 0.0 | 143 | 0 | 0.0 |
| Waipukurau | 50 | 0 | 0.0 | 43 | 0 | 0.0 |
| Dannevirke Community Hospital | 64 | 0 | 0.0 | 49 | 0 | 0.0 |
| Horowhenua (Levin) | 172 | 0 | 0.0 | 139 | 0 | 0.0 |
| Feilding Maternity | 99 | 0 | 0.0 | 85 | 0 | 0.0 |
| Paraparaumu | 115 | 0 | 0.0 | 137 | 0 | 0.0 |
| Kenepuru (Porirua) | 368 | 1 | 2.7 | 365 | 0 | 0.0 |
| Motueka Maternity | 71 | 0 | 0.0 | 82 | 0 | 0.0 |
| Golden Bay Community Hospital | 33 | 0 | 0.0 | 27 | 0 | 0.0 |
| Kaikoura | 12 | 0 | 0.0 | 15 | 0 | 0.0 |
| St George's (Christchurch) | 677 | 0 | 0.0 | 693 | 0 | 0.0 |
| Avonlea (Christchurch) | 66 | 0 | 0.0 | 60 | 0 | 0.0 |
| Burwood | 224 | 0 | 0.0 | 174 | 0 | 0.0 |

Table 6.1 (continued): Total live and stillbirths, by facility (hospital data), 2000 and 2001

| Facility | 2000 | | | 2001 | | |
|--|---------------|-------------|---------------|---------------|-------------|---------------|
| | Live births | Stillbirths | | Live births | Stillbirths | |
| | No | No | Rate per 1000 | No | No | Rate per 1000 |
| Darfield | 8 | 0 | 0.0 | 7 | 0 | 0.0 |
| Akaroa Community | 8 | 0 | 0.0 | 5 | 0 | 0.0 |
| Waikari | 1 | 0 | 0.0 | 0 | 0 | 0.0 |
| Lincoln | 82 | 0 | 0.0 | 69 | 0 | 0.0 |
| Rangiora | 80 | 0 | 0.0 | 82 | 0 | 0.0 |
| Ashburton | 157 | 1 | 6.3 | 165 | 0 | 0.0 |
| Buller (Westport) | 25 | 1 | 38.5 | 22 | 0 | 0.0 |
| Oamaru | 95 | 0 | 0.0 | 88 | 0 | 0.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 37 | 0 | 0.0 | 28 | 0 | 0.0 |
| Dunstan | 21 | 0 | 0.0 | 35 | 0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 8 | 0 | 0.0 | 5 | 0 | 0.0 |
| Gore | 0 | 0 | 0.0 | 0 | 0 | 0.0 |
| Clutha Health First (Balclutha) | 29 | 0 | 0.0 | 38 | 0 | 0.0 |
| Lakes District (Queenstown) | 81 | 0 | 0.0 | 59 | 0 | 0.0 |
| Tuatapere Maternity Hospital | 16 | 0 | 0.0 | 16 | 0 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 26 | 0 | 0.0 | 21 | 0 | 0.0 |
| Winton Birthing Centre | 30 | 0 | 0.0 | 39 | 0 | 0.0 |
| Primary total | 8340 | 5 | 0.6 | 8122 | 5 | 0.6 |
| Other facilities | 71 | 0 | 0.0 | 138 | 0 | 0.0 |
| Total | 55,477 | 406 | 7.3 | 54,288 | 379 | 6.9 |

Data source: NMDS

Forty-three percent of all live births in 2000 and 2001 occurred in one of the six large tertiary units (43.0 percent in 2000 and 43.6 percent in 2001). The largest maternity unit is National Women's Hospital, where almost twice the number of women gave birth than in any other unit. Just over 41 percent of live births occurred in the 18 secondary maternity units (41.8 percent in 2000 and 41.2 percent in 2001). In 2000, 64.8 percent (263/406) of stillbirths occurred in the larger tertiary units, while in 2001, 54.1 percent (205/379) of stillbirths occurred at tertiary hospitals.

Table 6.2: Stillbirths for tertiary and secondary facilities, rate per 1000 (hospital data), 1999–2001

| Facility | Rate per 1000 live births | | |
|--|---------------------------|-------------|------------|
| | 1999 | 2000 | 2001 |
| Greenlane/National Women's | 8.9 | 9.7 | 7.7 |
| Middlemore | 13.7 | 14.6 | 12.1 |
| Waikato | 12.1 | 9.6 | 7.8 |
| Wellington | 16.5 | 15.9 | 9.7 |
| Christchurch Women's | 9.8 | 8.8 | 6.2 |
| Dunedin | 8.8 | 6.2 | 10.1 |
| Tertiary total | 11.3 | 10.9 | 8.6 |
| Whangarei | 18.9 | 13.3 | 17.6 |
| North Shore | 5.9 | 4.7 | 9.9 |
| Waitakere | 1.7 | 2.0 | 3.0 |
| Rotorua | 9.3 | 7.3 | 5.9 |
| Whakatane (including Opotiki and Murupara) | 14.2 | 9.7 | 9.8 |
| Tauranga | 4.2 | 3.2 | 3.4 |
| Gisborne | 13.2 | 4.1 | 4.1 |
| Taranaki Base | 10.1 | 5.8 | 10.3 |
| Hastings | 15.1 | 7.6 | 9.1 |
| Palmerston North | 5.7 | 6.5 | 11.6 |
| Wanganui | 4.1 | 5.4 | 5.7 |
| Hutt | 5.6 | 6.0 | 4.3 |
| Masterton | 3.9 | 0.0 | 6.8 |
| Wairau (Blenheim) | 6.5 | 0.0 | 6.8 |
| Nelson | 10.4 | 7.8 | 6.8 |
| Grey (Greymouth) | 6.6 | 7.0 | 10.3 |
| Timaru | 6.4 | 10.2 | 1.7 |
| Southland (Invercargill) | 1.8 | 7.7 | 6.3 |
| Secondary total | 7.7 | 5.9 | 7.5 |
| Total stillbirths for NZ | 8.2 | 7.3 | 6.9 |

Data source: NMDS

Table 6.3a: Ethnic group of mothers, by facility (hospital data), 2000

| Facility | Total numbers | Percentage | | | | | | Total % |
|--|---------------|-------------|-----------------|-------------|-------------|------------|--------------|--------------|
| | | Māori | Pacific peoples | Asian | European | Other | Not reported | |
| Greenlane/National Women's | 7751 | 8.9 | 18.9 | 19.0 | 48.9 | 3.9 | 0.3 | 100.0 |
| Middlemore | 3689 | 25.7 | 48.1 | 9.3 | 12.1 | 3.6 | 1.1 | 100.0 |
| Waikato | 2951 | 24.4 | 2.8 | 4.1 | 58.1 | 5.6 | 5.1 | 100.0 |
| Wellington | 3316 | 11.2 | 9.7 | 9.1 | 67.5 | 2.0 | 0.6 | 100.0 |
| Christchurch Women's | 4106 | 5.6 | 3.0 | 4.9 | 82.5 | 2.3 | 1.7 | 100.0 |
| Dunedin | 1735 | 4.5 | 2.1 | 2.5 | 81.7 | 7.5 | 1.7 | 100.0 |
| Tertiary total | 23,548 | 12.9 | 16.2 | 10.6 | 55.2 | 3.8 | 1.4 | 100.0 |
| Whangarei | 1326 | 40.4 | 1.5 | 2.1 | 52.0 | 3.4 | 0.6 | 100.0 |
| North Shore | 2966 | 8.6 | 5.5 | 10.2 | 68.8 | 5.2 | 1.6 | 100.0 |
| Waitakere | 2506 | 18.1 | 18.1 | 5.6 | 50.9 | 5.2 | 2.1 | 100.0 |
| Rotorua | 1358 | 46.1 | 2.1 | 1.4 | 47.0 | 1.7 | 1.7 | 100.0 |
| Tauranga | 1837 | 24.5 | 1.9 | 3.3 | 60.7 | 7.3 | 2.3 | 100.0 |
| Whakatane (including Opotiki and Murupara) | 716 | 57.1 | 0.6 | 1.1 | 27.9 | 11.9 | 1.4 | 100.0 |
| Gisborne | 717 | 47.8 | 2.2 | 0.4 | 41.7 | 5.7 | 2.1 | 100.0 |
| Taranaki Base | 1182 | 16.1 | 1.4 | 1.2 | 66.9 | 12.5 | 1.9 | 100.0 |
| Wanganui | 737 | 37.2 | 1.9 | 2.0 | 58.5 | 0.3 | 0.1 | 100.0 |
| Hastings | 2076 | 34.7 | 5.5 | 1.7 | 56.3 | 1.5 | 0.2 | 100.0 |
| Masterton | 457 | 24.7 | 2.6 | 0.9 | 71.6 | 0.2 | 0.0 | 100.0 |
| Palmerston North | 1818 | 12.5 | 2.8 | 3.0 | 67.1 | 7.9 | 6.7 | 100.0 |
| Hutt | 1978 | 19.9 | 9.2 | 6.1 | 64.3 | 0.6 | 0.0 | 100.0 |
| Wairau (Blenheim) | 463 | 10.4 | 1.3 | 2.2 | 85.5 | 0.2 | 0.4 | 100.0 |
| Nelson | 885 | 7.3 | 1.1 | 1.6 | 89.4 | 0.5 | 0.1 | 100.0 |
| Grey (Greymouth) | 281 | 9.6 | 0.7 | 0.4 | 82.6 | 6.0 | 0.7 | 100.0 |
| Timaru | 576 | 6.8 | 0.9 | 2.1 | 82.3 | 0.9 | 7.1 | 100.0 |
| Southland (Invercargill) | 1138 | 11.4 | 1.4 | 0.4 | 83.0 | 1.2 | 2.5 | 100.0 |
| Secondary total | 23,017 | 23.0 | 5.0 | 3.7 | 62.1 | 4.3 | 1.8 | 100.0 |
| Bay of Islands (Kawakawa) | 218 | 67.9 | 3.7 | 0.9 | 26.1 | 1.4 | 0.0 | 100.0 |
| Dargaville | 98 | 41.8 | 1.0 | 0.0 | 57.1 | 0.0 | 0.0 | 100.0 |
| Kaitaia | 262 | 60.3 | 1.1 | 0.4 | 35.5 | 2.3 | 0.4 | 100.0 |
| Hokianga | 60 | 75.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 100.0 |
| Wellsford | 37 | 37.8 | 0.0 | 0.0 | 62.2 | 0.0 | 0.0 | 100.0 |
| Warkworth | 94 | 9.6 | 0.0 | 1.1 | 83.0 | 0.0 | 6.4 | 100.0 |
| Helensville | 44 | 40.9 | 6.8 | 2.3 | 50.0 | 0.0 | 0.0 | 100.0 |
| Birthcare Auckland | 66 | 10.6 | 4.5 | 3.0 | 77.3 | 1.5 | 3.0 | 100.0 |
| Pukekohe | 629 | 24.8 | 5.1 | 3.5 | 62.0 | 4.0 | 0.6 | 100.0 |
| Papakura Obstetric | 937 | 38.1 | 7.7 | 2.9 | 46.5 | 4.4 | 0.4 | 100.0 |
| Botany Downs Maternity (South Auckland) | 1122 | 17.8 | 21.7 | 9.4 | 44.6 | 5.7 | 0.7 | 100.0 |
| Waihi Hospital | 53 | 32.1 | 0.0 | 1.9 | 62.3 | 0.0 | 3.8 | 100.0 |
| Birthcare Huntly | 181 | 61.9 | 1.1 | 1.1 | 35.9 | 0.0 | 0.0 | 100.0 |
| Thames | 118 | 34.7 | 2.5 | 0.8 | 56.8 | 4.2 | 0.8 | 100.0 |
| Rhoda Read (Morrinsville) | 163 | 14.1 | 0.0 | 2.5 | 61.3 | 7.4 | 14.7 | 100.0 |
| Matariki (Te Awamutu) | 162 | 25.9 | 0.0 | 0.0 | 58.6 | 3.7 | 11.7 | 100.0 |
| Te Kuiti | 88 | 46.6 | 0.0 | 0.0 | 39.8 | 6.8 | 6.8 | 100.0 |
| Taumarunui | 101 | 54.5 | 0.0 | 0.0 | 36.6 | 3.0 | 5.9 | 100.0 |
| Tokoroa | 123 | 50.4 | 11.4 | 2.4 | 26.8 | 4.1 | 4.9 | 100.0 |
| Pohlen Trust (Matamata) | 107 | 31.8 | 0.9 | 0.0 | 67.3 | 0.0 | 0.0 | 100.0 |
| River Ridge (Hamilton) | 421 | 24.5 | 3.8 | 4.8 | 63.4 | 3.1 | 0.5 | 100.0 |

Table 6.3a (continued): Ethnic group of mothers, by facility (hospital data), 2000

| Facility | Total numbers | Percentage | | | | | | Total % |
|--|---------------|-------------|-----------------|------------|-------------|------------|--------------|--------------|
| | | Māori | Pacific peoples | Asian | European | Other | Not reported | |
| Taupo General | 218 | 41.7 | 2.3 | 0.5 | 46.8 | 6.9 | 1.8 | 100.0 |
| Te Puia Springs | 27 | 70.4 | 0.0 | 0.0 | 14.8 | 11.1 | 3.7 | 100.0 |
| Hawera | 100 | 32.0 | 0.0 | 0.0 | 53.0 | 13.0 | 2.0 | 100.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 78 | 21.8 | 0.0 | 1.3 | 75.6 | 1.3 | 0.0 | 100.0 |
| Waimarino Rural Health Centre (Raetihi) | 16 | 68.8 | 6.3 | 0.0 | 25.0 | 0.0 | 0.0 | 100.0 |
| Marton | 8 | 50.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 100.0 |
| Taihape | 39 | 38.5 | 2.6 | 0.0 | 59.0 | 0.0 | 0.0 | 100.0 |
| Wairoa | 87 | 83.9 | 0.0 | 0.0 | 13.8 | 2.3 | 0.0 | 100.0 |
| Chatham Islands | 3 | 33.3 | 0.0 | 0.0 | 66.7 | 0.0 | 0.0 | 100.0 |
| Napier | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| Waipukurau | 50 | 34.0 | 0.0 | 0.0 | 60.0 | 4.0 | 2.0 | 100.0 |
| Dannevirke Community Hospital | 64 | 34.4 | 0.0 | 3.1 | 62.5 | 0.0 | 0.0 | 100.0 |
| Horowhenua (Levin) | 172 | 29.1 | 5.2 | 7.0 | 43.0 | 10.5 | 5.2 | 100.0 |
| Feilding Maternity | 99 | 23.2 | 0.0 | 0.0 | 66.7 | 7.1 | 3.0 | 100.0 |
| Paraparaumu | 115 | 17.4 | 1.7 | 4.3 | 75.7 | 0.0 | 0.9 | 100.0 |
| Kenepuru (Porirua) | 367 | 23.4 | 42.5 | 3.0 | 30.0 | 0.5 | 0.5 | 100.0 |
| Motueka Maternity | 70 | 12.9 | 0.0 | 0.0 | 85.7 | 1.4 | 0.0 | 100.0 |
| Golden Bay Community Hospital | 33 | 3.0 | 0.0 | 0.0 | 93.9 | 3.0 | 0.0 | 100.0 |
| Kaikoura | 12 | 16.7 | 0.0 | 0.0 | 75.0 | 8.3 | 0.0 | 100.0 |
| St George's (Christchurch) | 673 | 4.5 | 1.2 | 4.0 | 84.7 | 3.3 | 2.4 | 100.0 |
| Avonlea (Christchurch) | 66 | 18.2 | 1.5 | 1.5 | 78.8 | 0.0 | 0.0 | 100.0 |
| Burwood | 223 | 16.1 | 2.2 | 0.4 | 61.9 | 12.6 | 6.7 | 100.0 |
| Darfield | 8 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| Akaroa Community | 8 | 0.0 | 0.0 | 12.5 | 87.5 | 0.0 | 0.0 | 100.0 |
| Waikari | 1 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| Lincoln | 82 | 12.2 | 1.2 | 1.2 | 73.2 | 3.7 | 8.5 | 100.0 |
| Rangiora | 80 | 5.0 | 0.0 | 0.0 | 86.3 | 3.8 | 5.0 | 100.0 |
| Ashburton | 158 | 7.0 | 0.6 | 0.0 | 85.4 | 5.7 | 1.3 | 100.0 |
| Buller (Westport) | 26 | 15.4 | 0.0 | 3.8 | 73.1 | 7.7 | 0.0 | 100.0 |
| Oamaru | 95 | 6.3 | 0.0 | 3.2 | 88.4 | 2.1 | 0.0 | 100.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 37 | 5.4 | 0.0 | 0.0 | 94.6 | 0.0 | 0.0 | 100.0 |
| Dunstan | 21 | 4.8 | 0.0 | 4.8 | 85.7 | 4.8 | 0.0 | 100.0 |
| Maniototo Health Services Ltd (Ranfurly) | 8 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| Clutha Health First (Balclutha) | 29 | 6.9 | 0.0 | 0.0 | 89.7 | 3.4 | 0.0 | 100.0 |
| Lakes District (Queenstown) | 81 | 3.7 | 3.7 | 9.9 | 74.1 | 4.9 | 3.7 | 100.0 |
| Tuatapere Maternity Hospital | 16 | 18.8 | 0.0 | 0.0 | 81.3 | 0.0 | 0.0 | 100.0 |
| Northern Southland Birthing Centre (Lumsden) | 26 | 7.7 | 0.0 | 0.0 | 92.3 | 0.0 | 0.0 | 100.0 |
| Winton Birthing Centre | 30 | 0.0 | 0.0 | 0.0 | 93.3 | 0.0 | 6.7 | 100.0 |
| Primary total | 8310 | 27.7 | 7.2 | 3.2 | 56.0 | 4.0 | 2.0 | 100.0 |
| Other facilities | 71 | 8.5 | 2.8 | 1.4 | 87.3 | 0.0 | 0.0 | 100.0 |
| Total | 54,946 | 19.4 | 10.1 | 6.6 | 58.3 | 4.0 | 1.7 | 100.0 |

Data source: NMDS

Table 6.3b: Ethnic group of mothers, by facility (hospital data), 2001

| Facility | Total numbers | Percentage | | | | | | Total % |
|--|---------------|-------------|-----------------|------------|-------------|------------|--------------|--------------|
| | | Māori | Pacific peoples | Asian | European | Other | Not reported | |
| Greenlane/National Women's | 7381 | 8.6 | 18.4 | 18.5 | 50.1 | 4.1 | 0.4 | 100.0 |
| Middlemore | 3831 | 27.0 | 49.5 | 8.0 | 11.0 | 3.5 | 0.9 | 100.0 |
| Waikato | 3011 | 25.5 | 2.8 | 4.1 | 62.3 | 3.2 | 2.1 | 100.0 |
| Wellington | 3228 | 11.9 | 10.8 | 8.2 | 67.4 | 1.7 | 0.0 | 100.0 |
| Christchurch Women's | 4248 | 6.5 | 2.6 | 4.3 | 83.1 | 1.7 | 1.8 | 100.0 |
| Dunedin | 1655 | 4.8 | 2.8 | 2.1 | 80.2 | 8.3 | 1.8 | 100.0 |
| Tertiary total | 23,354 | 13.6 | 16.5 | 9.7 | 55.8 | 3.4 | 1.0 | 100.0 |
| Whangarei | 1225 | 41.6 | 1.6 | 1.5 | 50.5 | 4.6 | 0.2 | 100.0 |
| North Shore | 2970 | 9.3 | 5.6 | 11.3 | 66.6 | 4.2 | 3.0 | 100.0 |
| Waitakere | 2338 | 17.5 | 20.7 | 7.9 | 47.8 | 4.6 | 1.6 | 100.0 |
| Rotorua | 1338 | 47.6 | 2.2 | 1.7 | 45.7 | 1.6 | 1.2 | 100.0 |
| Tauranga | 1744 | 23.1 | 1.7 | 2.8 | 59.9 | 9.2 | 3.3 | 100.0 |
| Whakatane (including Opotiki and Murupara) | 710 | 57.7 | 0.7 | 1.0 | 31.3 | 8.9 | 0.4 | 100.0 |
| Gisborne | 725 | 53.1 | 1.7 | 0.6 | 36.8 | 6.3 | 1.5 | 100.0 |
| Taranaki Base | 1133 | 16.8 | 0.8 | 1.3 | 66.0 | 12.4 | 2.7 | 100.0 |
| Wanganui | 695 | 39.0 | 1.7 | 0.7 | 58.0 | 0.6 | 0.0 | 100.0 |
| Hastings | 1832 | 35.9 | 5.5 | 2.3 | 55.0 | 1.1 | 0.3 | 100.0 |
| Masterton | 430 | 24.4 | 1.6 | 0.7 | 73.3 | 0.0 | 0.0 | 100.0 |
| Palmerston North | 1764 | 12.8 | 2.2 | 2.4 | 67.2 | 9.1 | 6.2 | 100.0 |
| Hutt | 2051 | 19.9 | 10.5 | 6.2 | 62.0 | 1.3 | 0.0 | 100.0 |
| Wairau (Blenheim) | 434 | 9.9 | 0.5 | 0.9 | 86.9 | 1.6 | 0.2 | 100.0 |
| Nelson | 864 | 7.5 | 1.0 | 2.3 | 88.5 | 0.5 | 0.1 | 100.0 |
| Grey (Greymouth) | 289 | 10.7 | 0.0 | 0.0 | 84.8 | 3.1 | 1.4 | 100.0 |
| Timaru | 575 | 4.9 | 1.2 | 1.7 | 84.5 | 0.7 | 7.0 | 100.0 |
| Southland (Invercargill) | 1094 | 11.4 | 1.4 | 2.1 | 80.9 | 0.8 | 3.4 | 100.0 |
| Secondary total | 22,211 | 23.3 | 5.2 | 4.1 | 61.0 | 4.3 | 2.0 | 100.0 |
| Bay of Islands (Kawakawa) | 218 | 62.8 | 3.7 | 1.8 | 25.7 | 5.5 | 0.5 | 100.0 |
| Dargaville | 89 | 40.4 | 1.1 | 1.1 | 55.1 | 2.2 | 0.0 | 100.0 |
| Kaitaia | 239 | 53.1 | 0.8 | 0.0 | 38.9 | 5.9 | 1.3 | 100.0 |
| Hokianga | 13 | 84.6 | 7.7 | 0.0 | 7.7 | 0.0 | 0.0 | 100.0 |
| Wellsford | 30 | 30.0 | 0.0 | 0.0 | 70.0 | 0.0 | 0.0 | 100.0 |
| Warkworth | 94 | 9.6 | 3.2 | 1.1 | 71.3 | 0.0 | 14.9 | 100.0 |
| Helensville | 30 | 40.0 | 3.3 | 0.0 | 43.3 | 0.0 | 13.3 | 100.0 |
| Birthcare Auckland | 155 | 9.0 | 5.8 | 3.9 | 76.8 | 1.3 | 3.2 | 100.0 |
| Pukekohe | 594 | 25.9 | 6.4 | 3.7 | 60.1 | 3.2 | 0.7 | 100.0 |
| Papakura Obstetric | 829 | 37.8 | 9.0 | 3.6 | 44.5 | 4.7 | 0.4 | 100.0 |
| Botany Downs Maternity (South Auckland) | 1117 | 17.5 | 18.5 | 10.2 | 47.3 | 5.4 | 1.2 | 100.0 |
| Waihi Hospital | 75 | 36.0 | 0.0 | 0.0 | 56.0 | 0.0 | 8.0 | 100.0 |
| Birthcare Huntly | 171 | 59.6 | 2.3 | 1.8 | 31.0 | 0.0 | 5.3 | 100.0 |
| Thames | 138 | 35.5 | 0.7 | 1.4 | 61.6 | 0.0 | 0.7 | 100.0 |
| Rhoda Read (Morrinsville) | 136 | 13.2 | 0.0 | 2.9 | 66.9 | 5.1 | 11.8 | 100.0 |
| Matariki (Te Awamutu) | 121 | 28.1 | 0.0 | 0.0 | 62.0 | 2.5 | 7.4 | 100.0 |
| Te Kuiti | 83 | 41.0 | 2.4 | 0.0 | 49.4 | 3.6 | 3.6 | 100.0 |
| Taumarunui | 82 | 59.8 | 0.0 | 0.0 | 29.3 | 3.7 | 7.3 | 100.0 |
| Tokoroa | 134 | 48.5 | 16.4 | 2.2 | 20.9 | 3.7 | 8.2 | 100.0 |
| Pohlen Trust (Matamata) | 123 | 26.8 | 0.0 | 3.3 | 68.3 | 0.0 | 1.6 | 100.0 |
| River Ridge (Hamilton) | 457 | 24.5 | 4.2 | 3.3 | 65.6 | 0.7 | 1.8 | 100.0 |

Table 6.3b (continued): Ethnic group of mothers, by facility (hospital data), 2001

| Facility | Total numbers | Percentage | | | | | | Total % |
|--|---------------|-------------|-----------------|------------|-------------|------------|--------------|--------------|
| | | Māori | Pacific peoples | Asian | European | Other | Not reported | |
| Taupo General | 164 | 39.6 | 4.3 | 0.0 | 50.6 | 3.7 | 1.8 | 100.0 |
| Te Puia Springs | 38 | 97.4 | 0.0 | 0.0 | 2.6 | 0.0 | 0.0 | 100.0 |
| Hawera | 99 | 16.2 | 0.0 | 1.0 | 68.7 | 11.1 | 3.0 | 100.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 54 | 20.4 | 0.0 | 0.0 | 75.9 | 0.0 | 3.7 | 100.0 |
| Waimarino Rural Health Centre (Raetihi) | 12 | 75.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 | 100.0 |
| Marton | 2 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Taihape | 32 | 46.9 | 0.0 | 6.3 | 46.9 | 0.0 | 0.0 | 100.0 |
| Wairoa | 88 | 79.5 | 2.3 | 0.0 | 15.9 | 2.3 | 0.0 | 100.0 |
| Chatham Islands | 1 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Napier | 143 | 22.4 | 3.5 | 0.0 | 72.7 | 1.4 | 0.0 | 100.0 |
| Waipukurau | 43 | 39.5 | 0.0 | 4.7 | 55.8 | 0.0 | 0.0 | 100.0 |
| Dannevirke Community Hospital | 49 | 36.7 | 0.0 | 4.1 | 59.2 | 0.0 | 0.0 | 100.0 |
| Horowhenua (Levin) | 139 | 30.2 | 8.6 | 3.6 | 43.2 | 7.9 | 6.5 | 100.0 |
| Feilding Maternity | 85 | 14.1 | 3.5 | 0.0 | 69.4 | 9.4 | 3.5 | 100.0 |
| Paraparaumu | 137 | 19.0 | 2.9 | 1.5 | 76.6 | 0.0 | 0.0 | 100.0 |
| Kenepuru (Porirua) | 365 | 30.4 | 37.0 | 2.7 | 29.6 | 0.3 | 0.0 | 100.0 |
| Motueka Maternity | 81 | 17.3 | 0.0 | 2.5 | 76.5 | 1.2 | 2.5 | 100.0 |
| Golden Bay Community Hospital | 27 | 7.4 | 0.0 | 0.0 | 92.6 | 0.0 | 0.0 | 100.0 |
| Kaikoura | 15 | 33.3 | 0.0 | 0.0 | 60.0 | 6.7 | 0.0 | 100.0 |
| St George's (Christchurch) | 687 | 3.6 | 2.0 | 4.1 | 86.8 | 2.9 | 0.6 | 100.0 |
| Avonlea (Christchurch) | 60 | 8.3 | 1.7 | 3.3 | 85.0 | 0.0 | 1.7 | 100.0 |
| Burwood | 174 | 17.2 | 2.9 | 1.7 | 67.8 | 8.0 | 2.3 | 100.0 |
| Darfield | 7 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| Akaroa Community | 5 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 100.0 |
| Waikari | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| Lincoln | 69 | 8.7 | 1.4 | 2.9 | 81.2 | 1.4 | 4.3 | 100.0 |
| Rangiora | 82 | 11.0 | 2.4 | 0.0 | 86.6 | 0.0 | 0.0 | 100.0 |
| Ashburton | 165 | 5.5 | 0.6 | 3.6 | 84.8 | 4.8 | 0.6 | 100.0 |
| Buller (Westport) | 22 | 4.5 | 0.0 | 0.0 | 95.5 | 0.0 | 0.0 | 100.0 |
| Oamaru | 88 | 5.7 | 2.3 | 1.1 | 88.6 | 1.1 | 1.1 | 100.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 28 | 10.7 | 0.0 | 0.0 | 85.7 | 0.0 | 3.6 | 100.0 |
| Dunstan | 35 | 8.6 | 0.0 | 0.0 | 91.4 | 0.0 | 0.0 | 100.0 |
| Maniototo Health Services Ltd (Ranfurly) | 5 | 20.0 | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 100.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 |
| Clutha Health First (Balclutha) | 38 | 10.5 | 0.0 | 2.6 | 84.2 | 0.0 | 2.6 | 100.0 |
| Lakes District (Queenstown) | 59 | 3.4 | 0.0 | 10.2 | 78.0 | 5.1 | 3.4 | 100.0 |
| Tuatapere Maternity Hospital | 16 | 12.5 | 0.0 | 0.0 | 87.5 | 0.0 | 0.0 | 100.0 |
| Northern Southland Birthing Centre (Lumsden) | 21 | 19.0 | 0.0 | 0.0 | 81.0 | 0.0 | 0.0 | 100.0 |
| Winton Birthing Centre | 39 | 7.7 | 0.0 | 0.0 | 92.3 | 0.0 | 0.0 | 100.0 |
| Primary total | 8102 | 26.6 | 7.2 | 3.5 | 57.4 | 3.2 | 2.0 | 100.0 |
| Other facilities | 138 | 37.0 | 0.0 | 0.7 | 60.9 | 0.7 | 0.7 | 100.0 |
| Total | 53,805 | 19.6 | 10.4 | 6.5 | 58.2 | 3.8 | 1.6 | 100.0 |

Data source: NMDS

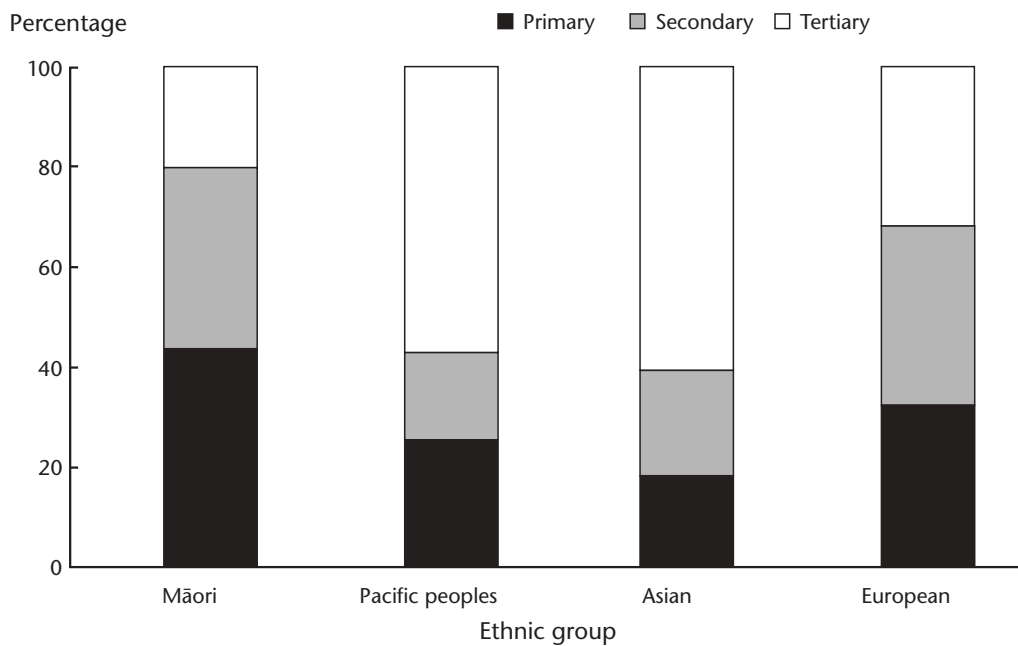


Figure 6.1a: Use of primary, secondary and tertiary facilities , by ethnicity, 2000
 (Note that the 'Other facilities' grouping and the 'Other' and 'Not reported' ethnic groups have been removed from this graph.)

Data source: NMDS

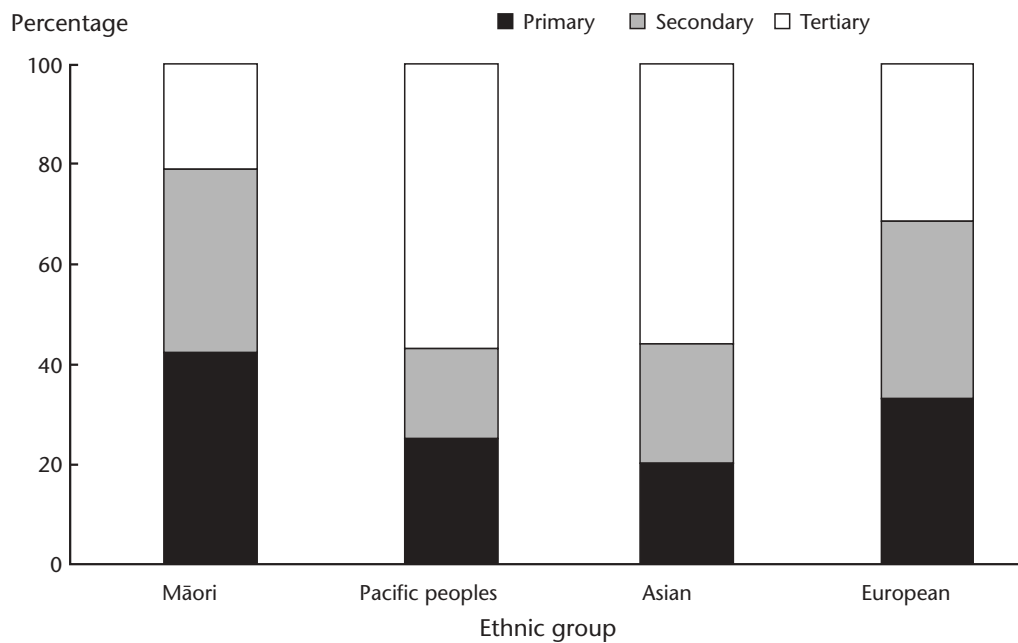


Figure 6.1b: Use of primary, secondary and tertiary facilities , by ethnicity, 2001
 (Note that the 'Other facilities' grouping and the 'Other' and 'Not reported' ethnic groups have been removed from this graph.)

Data source: NMDS

Table 6.4a: NZDep level of mothers (percentage), by rural/urban status and facility (hospital data), 2000

| Facility | Least deprived | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Most deprived | |
|--|----------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|-------------|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Greenlane/National Women's | 1.4 | 19.6 | 1.5 | 20.4 | 0.5 | 15.8 | 0.5 | 20.5 | 1.1 | 18.7 |
| Middlemore | 0.6 | 3.9 | 0.7 | 2.3 | 0.6 | 5.1 | 0.8 | 23.3 | 0.8 | 62.0 |
| Waikato | 4.8 | 13.3 | 9.8 | 4.9 | 12.9 | 9.6 | 6.3 | 8.7 | 13.7 | 15.7 |
| Wellington | 4.1 | 38.1 | 3.5 | 10.6 | 2.3 | 11.6 | 3.3 | 6.5 | 1.0 | 18.9 |
| Christchurch Women's | 6.1 | 16.0 | 9.9 | 16.5 | 6.8 | 12.3 | 2.8 | 15.6 | 0.1 | 14.0 |
| Dunedin | 7.2 | 10.4 | 11.8 | 5.2 | 17.5 | 10.2 | 5.9 | 25.0 | 1.5 | 5.4 |
| Tertiary total | 3.3 | 17.7 | 4.9 | 12.5 | 4.7 | 11.8 | 2.5 | 16.9 | 2.5 | 23.3 |
| Whangarei | 0.1 | 1.1 | 7.8 | 3.5 | 14.0 | 4.0 | 18.2 | 15.7 | 19.9 | 15.7 |
| North Shore | 4.3 | 35.8 | 9.9 | 27.5 | 3.6 | 10.5 | 1.4 | 5.5 | 0.3 | 1.1 |
| Waitakere | 5.9 | 10.5 | 4.7 | 6.9 | 0.3 | 34.9 | 1.7 | 28.3 | 0.1 | 6.6 |
| Rotorua | 7.5 | 3.8 | 5.0 | 4.6 | 5.1 | 5.7 | 8.8 | 1.8 | 12.9 | 44.9 |
| Tauranga | 1.1 | 2.4 | 11.0 | 7.3 | 6.3 | 25.9 | 18.6 | 19.7 | 3.0 | 4.7 |
| Whakatane (including Opotiki and Murupara) | 0.0 | 0.4 | 3.9 | 9.5 | 12.6 | 5.2 | 10.8 | 3.8 | 45.1 | 8.8 |
| Gisborne | 3.8 | 0.1 | 1.5 | 4.6 | 4.9 | 2.5 | 6.1 | 8.8 | 8.8 | 58.8 |
| Taranaki Base | 5.7 | 5.3 | 12.6 | 1.7 | 6.9 | 26.8 | 11.5 | 10.2 | 10.3 | 9.1 |
| Wanganui | 7.2 | 4.3 | 5.7 | 5.4 | 4.7 | 4.1 | 10.3 | 19.9 | 15.2 | 23.1 |
| Hastings | 4.2 | 1.6 | 6.5 | 1.6 | 15.7 | 4.3 | 12.8 | 8.4 | 14.9 | 29.8 |
| Masterton | 7.4 | 0.0 | 16.4 | 0.2 | 4.8 | 14.7 | 12.7 | 21.7 | 5.9 | 16.2 |
| Palmerston North | 2.5 | 4.1 | 8.3 | 17.3 | 13.4 | 9.5 | 10.1 | 10.3 | 11.2 | 13.2 |
| Hutt | 16.1 | 11.4 | 2.6 | 11.6 | 3.5 | 11.6 | 5.7 | 16.0 | 5.6 | 15.8 |
| Wairau (Blenheim) | 2.4 | 0.0 | 40.8 | 6.0 | 6.3 | 22.9 | 5.8 | 9.9 | 0.0 | 5.8 |
| Nelson | 6.1 | 13.1 | 8.3 | 24.2 | 4.2 | 9.2 | 8.7 | 23.1 | 0.0 | 3.2 |
| Grey (Greymouth) | 3.2 | 2.8 | 7.1 | 0.0 | 14.2 | 11.0 | 35.9 | 2.8 | 11.0 | 11.7 |
| Timaru | 6.3 | 3.8 | 15.0 | 6.3 | 19.3 | 14.4 | 9.7 | 24.9 | 0.0 | 0.3 |
| Southland (Invercargill) | 13.5 | 7.2 | 11.8 | 6.2 | 6.4 | 17.8 | 3.5 | 22.1 | 2.9 | 8.7 |
| Secondary total | 5.6 | 9.1 | 8.4 | 10.1 | 7.3 | 14.1 | 8.9 | 14.1 | 8.0 | 14.3 |
| Bay of Islands (Kawakawa) | 0.0 | 0.0 | 0.0 | 0.9 | 20.6 | 0.0 | 11.0 | 0.0 | 67.0 | 0.5 |
| Dargaville | 0.0 | 0.0 | 6.1 | 0.0 | 0.0 | 0.0 | 39.8 | 0.0 | 54.1 | 0.0 |
| Kaitaia | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 | 0.0 | 3.4 | 1.1 | 92.0 | 2.7 |
| Hokianga | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 98.3 | 1.7 |
| Wellsford | 2.7 | 0.0 | 37.8 | 0.0 | 0.0 | 0.0 | 51.4 | 2.7 | 5.4 | 0.0 |
| Warkworth | 2.1 | 3.2 | 50.0 | 0.0 | 40.4 | 0.0 | 4.3 | 0.0 | 0.0 | 0.0 |
| Helensville | 6.8 | 2.3 | 20.5 | 6.8 | 22.7 | 4.5 | 36.4 | 0.0 | 0.0 | 0.0 |
| Birthcare Auckland | 1.5 | 15.4 | 6.2 | 26.2 | 0.0 | 18.5 | 0.0 | 15.4 | 1.5 | 15.4 |
| Pukekohe | 9.0 | 1.5 | 21.7 | 1.1 | 24.0 | 1.1 | 14.1 | 1.1 | 22.8 | 3.4 |
| Papakura Obstetric | 5.0 | 5.8 | 1.2 | 3.8 | 1.7 | 10.4 | 0.6 | 16.5 | 1.1 | 53.9 |
| Botany Downs Maternity (South Auckland) | 1.3 | 20.5 | 3.9 | 16.0 | 0.6 | 7.5 | 1.0 | 17.9 | 0.9 | 30.4 |
| Waihi Hospital | 0.0 | 0.0 | 1.9 | 0.0 | 28.3 | 0.0 | 28.3 | 7.5 | 34.0 | 0.0 |
| Birthcare Huntly | 0.0 | 3.3 | 9.4 | 1.1 | 14.4 | 3.3 | 6.1 | 2.2 | 58.6 | 1.7 |
| Thames | 0.8 | 0.0 | 5.1 | 0.0 | 20.3 | 0.0 | 49.2 | 0.0 | 24.6 | 0.0 |
| Rhoda Read (Morrinsville) | 1.2 | 0.6 | 39.9 | 0.6 | 37.4 | 0.6 | 9.2 | 0.0 | 6.7 | 3.7 |
| Matariki (Te Awamutu) | 10.5 | 0.0 | 17.9 | 0.0 | 29.6 | 0.0 | 30.2 | 0.0 | 10.5 | 1.2 |
| Te Kuiti | 0.0 | 0.0 | 23.9 | 1.1 | 8.0 | 0.0 | 9.1 | 0.0 | 58.0 | 0.0 |
| Taumarunui | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 0.0 | 11.0 | 0.0 | 78.0 | 1.0 |
| Tokoroa | 1.6 | 0.0 | 4.1 | 0.0 | 12.2 | 0.0 | 0.8 | 0.8 | 80.5 | 0.0 |
| Pohlen Trust (Matamata) | 4.7 | 0.0 | 16.8 | 0.0 | 63.6 | 0.9 | 0.0 | 0.0 | 14.0 | 0.0 |
| River Ridge (Hamilton) | 4.5 | 17.1 | 5.5 | 7.4 | 6.9 | 15.2 | 0.5 | 11.9 | 4.0 | 27.1 |

Table 6.4a (continued): NZDep level of mothers (percentage), by rural/urban status and facility (hospital data), 2000

| Facility | Least deprived | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Most deprived | |
|--|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Taupo General | 7.3 | 0.0 | 12.4 | 0.0 | 22.0 | 0.0 | 44.0 | 0.5 | 12.4 | 1.4 |
| Te Puia Springs | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 | 3.8 | 3.8 | 80.8 | 3.8 |
| Hawera | 2.0 | 0.0 | 17.0 | 0.0 | 12.0 | 0.0 | 48.0 | 1.0 | 19.0 | 1.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 3.8 | 0.0 | 32.1 | 0.0 | 15.4 | 1.3 | 41.0 | 1.3 | 2.6 | 2.6 |
| Waimarino Rural Health Centre (Raetihi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 62.5 | 0.0 | 31.3 | 6.3 |
| Marton | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| Taihape | 0.0 | 0.0 | 25.6 | 0.0 | 23.1 | 0.0 | 41.0 | 2.6 | 7.7 | 0.0 |
| Wairoa | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 | 2.3 | 6.9 | 0.0 | 86.2 | 3.4 |
| Chatham Islands | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Napier | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waipukurau | 0.0 | 0.0 | 6.0 | 2.0 | 26.0 | 2.0 | 54.0 | 0.0 | 4.0 | 6.0 |
| Dannevirke Community Hospital | 0.0 | 0.0 | 18.8 | 0.0 | 7.8 | 0.0 | 39.1 | 0.0 | 34.4 | 0.0 |
| Horowhenua (Levin) | 0.6 | 0.0 | 4.7 | 0.0 | 27.3 | 0.0 | 12.8 | 0.0 | 52.9 | 1.7 |
| Feilding Maternity | 5.1 | 2.0 | 9.2 | 10.2 | 30.6 | 3.1 | 31.6 | 4.1 | 1.0 | 3.1 |
| Paraparaumu | 3.5 | 0.0 | 41.7 | 0.9 | 18.3 | 0.0 | 33.9 | 0.0 | 1.7 | 0.0 |
| Kenepuru (Porirua) | 4.6 | 14.2 | 0.3 | 1.4 | 0.3 | 4.4 | 0.3 | 7.6 | 0.0 | 67.0 |
| Motueka Maternity | 1.4 | 0.0 | 4.3 | 0.0 | 32.9 | 0.0 | 58.6 | 1.4 | 0.0 | 1.4 |
| Golden Bay Community Hospital | 0.0 | 0.0 | 0.0 | 0.0 | 27.3 | 0.0 | 72.7 | 0.0 | 0.0 | 0.0 |
| Kaikoura | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| St George's (Christchurch) | 5.3 | 17.5 | 10.4 | 18.0 | 6.2 | 12.0 | 3.7 | 13.1 | 0.1 | 13.5 |
| Avonlea (Christchurch) | 1.5 | 7.6 | 7.6 | 22.7 | 4.5 | 9.1 | 3.0 | 18.2 | 0.0 | 25.8 |
| Burwood | 0.9 | 10.3 | 2.2 | 15.2 | 6.7 | 11.7 | 5.4 | 24.7 | 0.4 | 22.4 |
| Darfield | 42.9 | 0.0 | 42.9 | 14.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Akaroa Community | 0.0 | 0.0 | 12.5 | 0.0 | 75.0 | 12.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waikari | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 23.2 | 15.9 | 19.5 | 3.7 | 1.2 | 9.8 | 4.9 | 20.7 | 0.0 | 1.2 |
| Rangiora | 16.3 | 0.0 | 42.5 | 0.0 | 37.5 | 0.0 | 1.3 | 2.5 | 0.0 | 0.0 |
| Ashburton | 20.5 | 0.0 | 39.1 | 0.0 | 35.9 | 0.0 | 3.2 | 0.6 | 0.0 | 0.6 |
| Buller (Westport) | 0.0 | 0.0 | 0.0 | 0.0 | 7.7 | 0.0 | 84.6 | 0.0 | 7.7 | 0.0 |
| Oamaru | 4.2 | 0.0 | 18.9 | 0.0 | 24.2 | 0.0 | 52.6 | 0.0 | 0.0 | 0.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 16.2 | 0.0 | 59.5 | 0.0 | 16.2 | 0.0 | 5.4 | 0.0 | 0.0 | 2.7 |
| Dunstan | 0.0 | 4.8 | 38.1 | 0.0 | 57.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 0.0 | 0.0 | 25.0 | 0.0 | 50.0 | 0.0 | 25.0 | 0.0 | 0.0 | 0.0 |
| Gore | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 0.0 | 0.0 | 24.1 | 0.0 | 55.2 | 0.0 | 20.7 | 0.0 | 0.0 | 0.0 |
| Lakes District (Queenstown) | 22.2 | 0.0 | 67.9 | 0.0 | 6.2 | 0.0 | 2.5 | 1.2 | 0.0 | 0.0 |
| Tuatapere Maternity Hospital | 6.3 | 0.0 | 6.3 | 0.0 | 56.3 | 0.0 | 0.0 | 0.0 | 31.3 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 11.5 | 0.0 | 53.8 | 0.0 | 3.8 | 0.0 | 30.8 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 40.0 | 0.0 | 3.3 | 0.0 | 50.0 | 0.0 | 0.0 | 3.3 | 0.0 | 3.3 |
| Primary total | 4.5 | 7.2 | 11.4 | 5.6 | 12.8 | 5.1 | 11.5 | 7.8 | 16.7 | 17.3 |
| Other facilities | 18.3 | 0.0 | 39.4 | 0.0 | 19.7 | 0.0 | 21.1 | 1.4 | 0.0 | 0.0 |
| Total | 4.5 | 12.5 | 7.4 | 10.4 | 7.0 | 11.7 | 6.5 | 14.4 | 6.9 | 18.6 |

Data source: NMDS

Table 6.4b: NZDep level of mothers (percentage), by rural/urban status and facility (hospital data), 2001

| Facility | Least deprived | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Most deprived | |
|--|----------------|-------------|------------|-------------|------------|-------------|------------|-------------|---------------|-------------|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Greenlane/National Women's | 1.4 | 20.8 | 1.5 | 19.6 | 0.6 | 16.1 | 0.3 | 19.9 | 1.2 | 18.5 |
| Middlemore | 0.4 | 4.4 | 0.8 | 2.2 | 0.6 | 4.9 | 0.5 | 23.6 | 1.1 | 61.5 |
| Waikato | 4.5 | 13.1 | 10.7 | 5.0 | 12.7 | 9.4 | 6.0 | 8.6 | 13.8 | 16.2 |
| Wellington | 3.6 | 37.9 | 3.2 | 12.6 | 2.5 | 10.7 | 2.6 | 6.7 | 1.0 | 19.1 |
| Christchurch Women's | 5.8 | 15.7 | 10.1 | 16.3 | 7.3 | 11.2 | 4.1 | 16.1 | 0.2 | 13.3 |
| Dunedin | 7.7 | 11.2 | 11.9 | 6.5 | 14.0 | 12.3 | 6.3 | 24.2 | 1.2 | 4.5 |
| Tertiary total | 3.2 | 18.0 | 5.1 | 12.5 | 4.6 | 11.6 | 2.5 | 16.7 | 2.6 | 23.0 |
| Whangarei | 0.2 | 0.7 | 9.2 | 2.8 | 12.8 | 3.0 | 20.7 | 16.0 | 19.4 | 15.1 |
| North Shore | 4.1 | 36.3 | 9.7 | 25.6 | 3.2 | 12.4 | 1.3 | 6.3 | 0.2 | 0.7 |
| Waitakere | 5.8 | 10.7 | 4.6 | 5.7 | 0.3 | 36.2 | 1.0 | 28.8 | 0.2 | 6.8 |
| Rotorua | 7.0 | 4.6 | 4.9 | 4.6 | 4.3 | 4.0 | 9.7 | 0.8 | 12.0 | 48.1 |
| Tauranga | 1.2 | 2.4 | 9.5 | 8.1 | 6.3 | 26.7 | 18.3 | 20.4 | 1.6 | 5.5 |
| Whakatane (including Opotiki and Murupara) | 0.1 | 0.1 | 3.1 | 12.0 | 9.9 | 3.8 | 11.3 | 4.6 | 47.0 | 8.0 |
| Gisborne | 4.8 | 0.1 | 1.5 | 6.1 | 4.6 | 3.6 | 5.1 | 7.7 | 8.0 | 58.5 |
| Taranaki Base | 5.6 | 4.1 | 13.5 | 1.4 | 7.2 | 24.8 | 13.2 | 11.2 | 10.7 | 8.4 |
| Wanganui | 8.9 | 3.6 | 5.9 | 4.0 | 4.5 | 3.7 | 6.9 | 23.6 | 14.0 | 24.9 |
| Hastings | 4.0 | 1.4 | 7.4 | 2.5 | 13.7 | 3.8 | 12.1 | 8.7 | 15.0 | 31.6 |
| Masterton | 7.9 | 0.0 | 17.7 | 0.0 | 3.5 | 14.0 | 12.6 | 20.7 | 6.5 | 17.0 |
| Palmerston North | 3.2 | 3.7 | 8.4 | 17.6 | 13.8 | 8.6 | 10.5 | 11.5 | 10.4 | 12.3 |
| Hutt | 15.0 | 11.5 | 2.5 | 12.2 | 3.9 | 10.8 | 5.5 | 14.7 | 6.3 | 17.6 |
| Wairau (Blenheim) | 3.0 | 0.2 | 30.0 | 6.7 | 6.2 | 30.9 | 6.9 | 8.5 | 0.0 | 7.6 |
| Nelson | 6.9 | 11.9 | 9.3 | 24.1 | 4.7 | 10.3 | 8.9 | 20.7 | 0.0 | 3.1 |
| Grey (Greymouth) | 2.8 | 4.5 | 8.3 | 0.3 | 10.7 | 9.3 | 37.0 | 3.1 | 10.4 | 13.5 |
| Timaru | 7.3 | 3.0 | 15.7 | 8.5 | 21.4 | 12.9 | 7.3 | 23.2 | 0.0 | 0.7 |
| Southland (Invercargill) | 13.0 | 7.1 | 14.1 | 6.8 | 6.4 | 17.4 | 3.9 | 19.7 | 2.7 | 8.9 |
| Secondary total | 5.7 | 9.2 | 8.4 | 10.2 | 6.9 | 14.1 | 8.8 | 14.1 | 7.8 | 14.8 |
| Bay of Islands (Kawakawa) | 0.5 | 0.0 | 0.5 | 0.0 | 28.4 | 1.4 | 11.0 | 0.0 | 58.3 | 0.0 |
| Dargaville | 0.0 | 0.0 | 12.4 | 0.0 | 0.0 | 0.0 | 27.0 | 0.0 | 59.6 | 1.1 |
| Kaitaia | 0.0 | 0.0 | 0.4 | 0.4 | 0.0 | 0.0 | 5.0 | 0.4 | 92.5 | 1.3 |
| Hokianga | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 |
| Wellsford | 0.0 | 0.0 | 20.0 | 0.0 | 6.7 | 0.0 | 73.3 | 0.0 | 0.0 | 0.0 |
| Warkworth | 6.4 | 1.1 | 48.9 | 0.0 | 27.7 | 0.0 | 12.8 | 0.0 | 3.2 | 0.0 |
| Helensville | 3.3 | 3.3 | 23.3 | 0.0 | 16.7 | 0.0 | 53.3 | 0.0 | 0.0 | 0.0 |
| Birthcare Auckland | 1.3 | 17.4 | 1.9 | 24.5 | 1.3 | 25.8 | 0.0 | 13.5 | 1.3 | 12.9 |
| Pukekohe | 6.5 | 1.5 | 18.5 | 0.7 | 26.8 | 1.7 | 12.2 | 2.8 | 26.1 | 3.3 |
| Papakura Obstetric | 6.1 | 4.1 | 0.5 | 3.1 | 1.2 | 10.3 | 0.8 | 18.9 | 1.3 | 53.7 |
| Botany Downs Maternity (South Auckland) | 1.4 | 22.8 | 2.6 | 17.8 | 0.2 | 6.0 | 0.0 | 19.1 | 0.1 | 30.0 |
| Waihi Hospital | 1.3 | 0.0 | 1.3 | 0.0 | 20.0 | 0.0 | 28.0 | 0.0 | 49.3 | 0.0 |
| Birthcare Huntly | 0.0 | 2.3 | 5.8 | 0.6 | 12.9 | 2.9 | 4.1 | 0.0 | 67.3 | 4.1 |
| Thames | 0.7 | 0.0 | 5.1 | 0.0 | 15.9 | 0.0 | 52.9 | 0.0 | 25.4 | 0.0 |
| Rhoda Read (Morrinsville) | 2.2 | 0.0 | 50.0 | 0.0 | 37.5 | 0.0 | 5.9 | 0.0 | 3.7 | 0.7 |
| Matariki (Te Awamutu) | 12.4 | 0.0 | 14.0 | 0.8 | 27.3 | 0.0 | 31.4 | 0.0 | 11.6 | 2.5 |
| Te Kuiti | 0.0 | 0.0 | 22.9 | 0.0 | 12.0 | 0.0 | 18.1 | 0.0 | 47.0 | 0.0 |
| Taumarunui | 1.2 | 0.0 | 0.0 | 0.0 | 12.2 | 0.0 | 2.4 | 0.0 | 84.1 | 0.0 |
| Tokoroa | 0.7 | 0.0 | 15.7 | 0.0 | 10.4 | 0.0 | 0.0 | 0.0 | 73.1 | 0.0 |
| Pohlen Trust (Matamata) | 3.3 | 0.0 | 23.6 | 0.0 | 52.0 | 0.0 | 2.4 | 0.0 | 18.7 | 0.0 |
| River Ridge (Hamilton) | 4.6 | 19.7 | 4.8 | 7.0 | 6.6 | 14.9 | 1.1 | 14.9 | 3.5 | 23.0 |

Table 6.4b (continued): NZDep level of mothers (percentage), by rural/urban status and facility (hospital data), 2001

| Facility | Least deprived | | Quintile 2 | | Quintile 3 | | Quintile 4 | | Most deprived | |
|--|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|
| | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban | Rural | Urban |
| Taupo General | 9.1 | 0.0 | 10.4 | 0.0 | 25.6 | 0.0 | 35.4 | 0.0 | 19.5 | 0.0 |
| Te Puia Springs | 0.0 | 0.0 | 0.0 | 0.0 | 5.3 | 0.0 | 0.0 | 0.0 | 92.1 | 2.6 |
| Hawera | 3.0 | 0.0 | 22.2 | 0.0 | 20.2 | 0.0 | 38.4 | 0.0 | 16.2 | 0.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 5.6 | 0.0 | 33.3 | 0.0 | 18.5 | 1.9 | 38.9 | 0.0 | 1.9 | 0.0 |
| Waimarino Rural Health Centre (Raetihi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16.7 | 0.0 | 83.3 | 0.0 |
| Marton | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 |
| Taihape | 0.0 | 0.0 | 34.4 | 0.0 | 28.1 | 0.0 | 31.3 | 0.0 | 6.3 | 0.0 |
| Wairoa | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 0.0 | 94.3 | 1.1 |
| Chatham Islands | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Napier | 0.0 | 0.0 | 18.2 | 0.7 | 28.0 | 0.0 | 21.7 | 0.7 | 28.0 | 0.7 |
| Waipukurau | 0.0 | 0.0 | 11.6 | 0.0 | 16.3 | 2.3 | 67.4 | 0.0 | 2.3 | 0.0 |
| Dannevirke Community Hospital | 0.0 | 0.0 | 30.6 | 0.0 | 0.0 | 0.0 | 18.4 | 0.0 | 51.0 | 0.0 |
| Horowhenua (Levin) | 0.7 | 0.0 | 2.9 | 0.0 | 27.3 | 0.0 | 15.1 | 0.0 | 53.2 | 0.7 |
| Feilding Maternity | 1.2 | 1.2 | 11.8 | 9.4 | 34.1 | 3.5 | 32.9 | 2.4 | 1.2 | 2.4 |
| Paraparaumu | 2.9 | 0.0 | 38.0 | 0.0 | 21.2 | 0.0 | 34.3 | 0.0 | 3.6 | 0.0 |
| Kenepuru (Porirua) | 5.8 | 12.3 | 0.3 | 2.7 | 0.0 | 4.4 | 0.3 | 7.4 | 0.0 | 66.8 |
| Motueka Maternity | 1.2 | 1.2 | 11.1 | 1.2 | 29.6 | 0.0 | 55.6 | 0.0 | 0.0 | 0.0 |
| Golden Bay Community Hospital | 0.0 | 0.0 | 0.0 | 0.0 | 25.9 | 0.0 | 74.1 | 0.0 | 0.0 | 0.0 |
| Kaikoura | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| St George's (Christchurch) | 4.8 | 16.9 | 10.0 | 20.7 | 5.7 | 11.4 | 4.2 | 14.8 | 0.1 | 11.4 |
| Avonlea (Christchurch) | 0.0 | 6.7 | 3.3 | 16.7 | 6.7 | 6.7 | 3.3 | 25.0 | 0.0 | 31.7 |
| Burwood | 1.2 | 4.6 | 4.6 | 19.7 | 4.0 | 15.0 | 8.7 | 20.2 | 0.0 | 22.0 |
| Darfield | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Akaroa Community | 0.0 | 0.0 | 25.0 | 0.0 | 75.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waikari | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 24.6 | 14.5 | 24.6 | 5.8 | 1.4 | 5.8 | 4.3 | 13.0 | 0.0 | 5.8 |
| Rangiora | 8.5 | 0.0 | 52.4 | 1.2 | 32.9 | 1.2 | 2.4 | 0.0 | 1.2 | 0.0 |
| Ashburton | 28.5 | 0.0 | 32.1 | 0.0 | 29.7 | 0.6 | 8.5 | 0.0 | 0.0 | 0.6 |
| Buller (Westport) | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 0.0 | 90.9 | 0.0 | 4.5 | 0.0 |
| Oamaru | 8.0 | 1.1 | 8.0 | 0.0 | 39.8 | 0.0 | 43.2 | 0.0 | 0.0 | 0.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 7.1 | 0.0 | 64.3 | 0.0 | 28.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dunstan | 17.1 | 0.0 | 51.4 | 0.0 | 25.7 | 0.0 | 2.9 | 2.9 | 0.0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 0.0 | 0.0 | 80.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 0.0 |
| Gore | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 1.1 | 0.0 | 36.8 | 0.0 | 50.0 | 0.0 | 10.5 | 0.0 | 0.0 | 0.0 |
| Lakes District (Queenstown) | 28.8 | 1.7 | 64.4 | 0.0 | 3.4 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| Tuatapere Maternity Hospital | 12.5 | 0.0 | 0.0 | 0.0 | 68.8 | 0.0 | 0.0 | 0.0 | 18.8 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 33.3 | 0.0 | 52.4 | 0.0 | 4.8 | 0.0 | 9.5 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 20.5 | 0.0 | 12.8 | 2.6 | 61.5 | 0.0 | 0.0 | 0.0 | 2.6 | 0.0 |
| Primary total | 4.6 | 7.4 | 11.4 | 6.3 | 13.1 | 5.1 | 10.8 | 8.1 | 17.1 | 16.1 |
| Other facilities | 20.3 | 0.7 | 17.4 | 0.7 | 17.4 | 0.0 | 17.4 | 0.7 | 24.6 | 0.7 |
| Total | 4.5 | 12.7 | 7.4 | 10.6 | 6.8 | 11.6 | 6.4 | 14.3 | 7.0 | 18.5 |

Data source: NMDS

Table 6.5: Total antenatal hospital admissions and average length of stay, by facility (hospital data), 2000 and 2001

| Facility | 2000 | | 2001 | |
|--|----------------------|-------------------------------|----------------------|-------------------------------|
| | Number of admissions | Average length of stay (days) | Number of admissions | Average length of stay (days) |
| Greenlane/National Women's | 2704 | 1.6 | 2758 | 1.5 |
| Middlemore | 2525 | 1.6 | 3099 | 1.3 |
| Waikato | 1550 | 2.4 | 1535 | 2.2 |
| Wellington | 793 | 2.6 | 750 | 2.5 |
| Christchurch Women's | 1466 | 1.4 | 1579 | 1.6 |
| Dunedin | 563 | 2.2 | 540 | 2.1 |
| Tertiary total | 9601 | 1.8 | 10,261 | 1.6 |
| Whangarei | 469 | 2.0 | 427 | 1.7 |
| North Shore | 1142 | 0.9 | 1214 | 1.0 |
| Waitakere | 343 | 0.9 | 445 | 0.8 |
| Rotorua | 391 | 1.3 | 399 | 1.3 |
| Tauranga | 393 | 1.5 | 451 | 1.4 |
| Whakatane (including Opotiki and Murupara) | 210 | 1.5 | 278 | 1.4 |
| Gisborne | 283 | 1.2 | 248 | 1.2 |
| Taranaki Base | 523 | 1.8 | 473 | 1.7 |
| Wanganui | 273 | 2.1 | 286 | 1.4 |
| Hastings | 593 | 1.8 | 656 | 2.0 |
| Masterton | 174 | 1.4 | 214 | 1.5 |
| Palmerston North | 513 | 1.8 | 573 | 2.8 |
| Hutt | 770 | 1.1 | 766 | 1.0 |
| Wairau (Blenheim) | 137 | 1.6 | 146 | 1.2 |
| Nelson | 164 | 1.3 | 167 | 1.7 |
| Grey (Greymouth) | 150 | 1.5 | 122 | 1.1 |
| Timaru | 286 | 1.9 | 323 | 1.9 |
| Southland (Invercargill) | 482 | 1.8 | 436 | 2.1 |
| Secondary total | 7296 | 1.5 | 7624 | 1.5 |
| Bay of Islands (Kawakawa) | 156 | 0.5 | 139 | 0.6 |
| Dargaville | 51 | 0.8 | 52 | 1.7 |
| Kaitaia | 146 | 1.1 | 104 | 1.0 |
| Hokianga | 32 | 1.7 | 8 | 0.9 |
| Wellsford | 10 | 0.3 | 5 | 0.4 |
| Warkworth | 0 | 0.0 | 0 | 0.0 |
| Helensville | 0 | 0.0 | 0 | 0.0 |
| Birthcare Auckland | 4 | 0.3 | 8 | 0.3 |
| Pukekohe | 8 | 0.4 | 14 | 0.9 |
| Papakura Obstetric | 24 | 1.1 | 22 | 0.9 |
| Botany Downs Maternity (South Auckland) | 12 | 0.3 | 8 | 0.4 |
| Waihi Hospital | 2 | 1.0 | 0 | 0.0 |
| Birthcare Huntly | 13 | 0.6 | 14 | 0.5 |
| Thames | 89 | 0.2 | 95 | 0.4 |
| Rhoda Read (Morrinsville) | 49 | 0.3 | 39 | 0.2 |
| Matariki (Te Awamutu) | 46 | 0.3 | 47 | 0.3 |
| Te Kuiti | 20 | 1.1 | 19 | 1.6 |
| Taumarunui | 21 | 0.7 | 28 | 0.8 |
| Tokoroa | 100 | 0.3 | 77 | 0.5 |
| Pohlen Trust (Matamata) | 16 | 4.3 | 26 | 0.2 |

Table 6.5 (continued): Total antenatal hospital admissions and average length of stay, by facility (hospital data), 2000 and 2001

| Facility | 2000 | | 2001 | |
|--|----------------------|-------------------------------|----------------------|-------------------------------|
| | Number of admissions | Average length of stay (days) | Number of admissions | Average length of stay (days) |
| River Ridge (Hamilton) | 6 | 0.0 | 5 | 0.0 |
| Taupo General | 76 | 0.3 | 83 | 0.3 |
| Te Puia Springs | 15 | 0.7 | 12 | 1.5 |
| Hawera | 23 | 0.4 | 24 | 0.4 |
| Elizabeth R Hospital and Rest Home (Stratford) | 1 | 1.0 | 1 | 2.0 |
| Waimarino Rural Health Centre (Raetihi) | 16 | 0.3 | 5 | 0.4 |
| Marton | 0 | 0.0 | 0 | 0.0 |
| Taihape | 41 | 1.7 | 35 | 0.8 |
| Wairoa | 60 | 0.4 | 57 | 0.6 |
| Chatham Islands | 0 | 0.0 | 1 | 0.0 |
| Napier | 0 | 0.0 | 2 | 0.0 |
| Waipukurau | 19 | 0.3 | 14 | 0.5 |
| Dannevirke Community Hospital | 34 | 0.8 | 43 | 0.7 |
| Horowhenua (Levin) | 29 | 0.3 | 19 | 0.3 |
| Feilding Maternity | 22 | 0.5 | 9 | 0.2 |
| Paraparaumu | 19 | 0.1 | 16 | 0.1 |
| Kenepuru (Porirua) | 55 | 0.7 | 61 | 0.4 |
| Motueka Maternity | 14 | 0.5 | 14 | 0.3 |
| Golden Bay Community Hospital | 10 | 0.3 | 13 | 0.1 |
| Kaikoura | 1 | 1.0 | 5 | 0.4 |
| St George's (Christchurch) | 97 | 0.8 | 105 | 4.0 |
| Avonlea (Christchurch) | 9 | 0.3 | 24 | 0.3 |
| Burwood | 74 | 0.3 | 66 | 0.1 |
| Darfield | 3 | 0.3 | 0 | 0.0 |
| Akaroa Community | 1 | 1.0 | 3 | 1.3 |
| Waikari | 0 | 0.0 | 0 | 0.0 |
| Lincoln | 27 | 0.2 | 15 | 0.1 |
| Rangiora | 24 | 0.4 | 24 | 0.4 |
| Ashburton | 67 | 0.9 | 67 | 0.9 |
| Buller (Westport) | 36 | 0.7 | 32 | 0.3 |
| Oamaru | 70 | 0.5 | 61 | 0.4 |
| Charlotte Jean Maternity Unit (Alexandra) | 0 | 0.0 | 2 | 0.0 |
| Dunstan | 24 | 1.0 | 18 | 0.9 |
| Maniototo Health Services Ltd (Ranfurly) | 2 | 0.5 | 0 | 0.0 |
| Gore | 0 | 0.0 | 0 | 0.0 |
| Clutha Health First (Balclutha) | 0 | 0.0 | 0 | 0.0 |
| Lakes District (Queenstown) | 82 | 0.9 | 74 | 0.6 |
| Tuatapere Maternity Hospital | 2 | 1.0 | 4 | 92.3 |
| Northern Southland Birthing Centre (Lumsden) | 1 | 1.0 | 3 | 0.3 |
| Winton Birthing Centre | 8 | 0.4 | 19 | 0.3 |
| Primary total | 1767 | 0.7 | 1641 | 1.0 |
| Other facilities | 276 | 4.6 | 414 | 3.2 |
| Total | 18,940 | 1.6 | 19,940 | 1.6 |

Data source: NMDS

The definition of an admission used for hospital data is 'the documentation process, which may include entry to the NHI, by which a person becomes resident in a healthcare facility. Healthcare users who attend for more than three hours should be admitted.' Events where the admission was a transfer from another facility have been excluded.

The number of antenatal admissions recorded in the NMDS appears to be excessive for some hospitals, particularly primary facilities not contracted to provide antenatal inpatient services. Hospitals may need to review their coding in this area.

Table 6.6a: Type of hospital birth (percentage), by facility (hospital data), 2000

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|--|---------------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|--------------|
| Greenlane/National Women's | 7751 | 58.8 | 26.9 | 18.6 | 8.3 | 14.4 | 1.3 | 6.4 | 6.7 | 100.0 |
| Middlemore | 3689 | 77.6 | 15.9 | 11.2 | 4.7 | 6.6 | 1.2 | 1.4 | 4.0 | 100.0 |
| Waikato | 2951 | 56.6 | 30.5 | 19.6 | 11.0 | 12.9 | 1.5 | 3.8 | 7.6 | 100.0 |
| Wellington | 3316 | 61.7 | 29.9 | 21.6 | 8.3 | 8.4 | 0.5 | 5.7 | 2.2 | 100.0 |
| Christchurch Women's | 4106 | 56.9 | 21.3 | 15.6 | 5.7 | 21.8 | 1.0 | 9.4 | 11.4 | 100.0 |
| Dunedin | 1735 | 62.4 | 23.8 | 15.2 | 8.6 | 13.8 | 0.7 | 6.9 | 6.2 | 100.0 |
| Tertiary total | 23,548 | 61.8 | 24.8 | 17.2 | 7.6 | 13.4 | 1.1 | 5.7 | 6.5 | 100.0 |
| Whangarei | 1326 | 70.6 | 21.0 | 14.3 | 6.8 | 8.4 | 1.0 | 2.8 | 4.6 | 100.0 |
| North Shore | 2966 | 61.1 | 28.1 | 17.0 | 11.1 | 10.9 | 0.2 | 4.9 | 5.8 | 100.0 |
| Waitakere | 2506 | 71.1 | 18.6 | 13.3 | 5.3 | 10.2 | 0.5 | 2.6 | 7.1 | 100.0 |
| Rotorua | 1358 | 66.2 | 20.5 | 14.8 | 5.7 | 13.3 | 0.7 | 9.6 | 2.9 | 100.0 |
| Tauranga | 1837 | 69.3 | 19.4 | 12.8 | 6.6 | 11.3 | 1.1 | 6.2 | 4.0 | 100.0 |
| Whakatane (including Opotiki and Murupara) | 716 | 79.2 | 14.4 | 8.5 | 5.9 | 6.4 | 0.7 | 0.1 | 5.6 | 100.0 |
| Gisborne | 717 | 76.7 | 16.6 | 10.2 | 6.4 | 6.7 | 0.6 | 1.0 | 5.2 | 100.0 |
| Taranaki Base | 1182 | 72.9 | 20.5 | 13.9 | 6.6 | 6.6 | 1.4 | 2.0 | 3.1 | 100.0 |
| Wanganui | 737 | 70.3 | 19.5 | 12.2 | 7.3 | 10.2 | 0.7 | 5.7 | 3.8 | 100.0 |
| Hastings | 2076 | 72.6 | 17.8 | 11.8 | 6.1 | 9.6 | 1.0 | 5.0 | 3.6 | 100.0 |
| Masterton | 457 | 62.6 | 18.6 | 10.5 | 8.1 | 18.8 | 0.7 | 9.6 | 8.5 | 100.0 |
| Palmerston North | 1818 | 64.2 | 25.2 | 16.8 | 8.5 | 10.5 | 1.0 | 4.1 | 5.4 | 100.0 |
| Hutt | 1978 | 66.5 | 20.6 | 12.8 | 7.8 | 12.8 | 0.5 | 6.6 | 5.8 | 100.0 |
| Wairau (Blenheim) | 463 | 68.9 | 20.3 | 16.8 | 3.5 | 10.8 | 1.1 | 5.6 | 4.1 | 100.0 |
| Nelson | 885 | 63.5 | 23.5 | 15.6 | 7.9 | 13.0 | 0.1 | 10.5 | 2.4 | 100.0 |
| Grey (Greymouth) | 281 | 77.9 | 18.1 | 10.7 | 7.5 | 3.9 | 0.4 | 2.5 | 1.1 | 100.0 |
| Timaru | 576 | 73.4 | 18.2 | 8.9 | 9.4 | 8.3 | 0.9 | 5.4 | 2.1 | 100.0 |
| Southland (Invercargill) | 1138 | 65.6 | 26.9 | 17.1 | 9.8 | 7.5 | 1.4 | 5.9 | 0.2 | 100.0 |
| Secondary total | 23017 | 68.4 | 21.3 | 13.9 | 7.4 | 10.3 | 0.8 | 5.0 | 4.6 | 100.0 |
| Bay of Islands (Kawakawa) | 218 | 99.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 | 0.5 | 100.0 |

Table 6.6a (continued): Type of hospital birth (percentage), by facility (hospital data), 2000

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|--|----------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|---------|
| Dargaville | 98 | 99.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 100.0 |
| Kaitaia | 262 | 76.0 | 17.9 | 10.3 | 7.6 | 6.1 | 0.8 | 2.3 | 3.1 | 100.0 |
| Hokianga | 60 | 86.7 | 0.0 | 0.0 | 0.0 | 13.3 | 0.0 | 13.3 | 0.0 | 100.0 |
| Wellsford | 37 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Warkworth | 94 | 98.9 | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 0.0 | 0.0 | 100.0 |
| Helensville | 44 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Birthcare Auckland | 66 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Pukekohe | 629 | 78.4 | 11.6 | 6.2 | 5.4 | 10.0 | 1.3 | 2.1 | 6.7 | 100.0 |
| Papakura Obstetric | 937 | 81.3 | 10.5 | 7.0 | 3.4 | 8.2 | 0.5 | 2.1 | 5.5 | 100.0 |
| Botany Downs Maternity (South Auckland) | 1122 | 79.7 | 10.2 | 7.0 | 3.1 | 10.2 | 0.6 | 3.1 | 6.4 | 100.0 |
| Waihi Hospital | 53 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Birthcare Huntly | 181 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Thames | 118 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Rhoda Read (Morrinsville) | 163 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Matariki (Te Awamutu) | 162 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Te Kuiti | 88 | 97.7 | 0.0 | 0.0 | 0.0 | 2.3 | 0.0 | 0.0 | 2.3 | 100.0 |
| Taumarunui | 101 | 97.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 3.0 | 0.0 | 100.0 |
| Tokoroa | 123 | 98.4 | 0.0 | 0.0 | 0.0 | 1.6 | 1.6 | 0.0 | 0.0 | 100.0 |
| Pohlen Trust (Matamata) | 107 | 97.2 | 0.0 | 0.0 | 0.0 | 2.8 | 0.0 | 2.8 | 0.0 | 100.0 |
| River Ridge (Hamilton) | 421 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Taupo General | 218 | 99.1 | 0.0 | 0.0 | 0.0 | 0.9 | 0.0 | 0.9 | 0.0 | 100.0 |
| Te Puia Springs | 27 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Hawera | 100 | 98.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 100.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 78 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Waimarino Rural Health Centre (Raetihi) | 16 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Marton | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Taihape | 39 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Wairoa | 87 | 95.4 | 0.0 | 0.0 | 0.0 | 4.6 | 1.1 | 1.1 | 2.3 | 100.0 |
| Chatham Islands | 3 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Napier | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waipukurau | 50 | 98.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 2.0 | 100.0 |
| Dannevirke Community Hospital | 64 | 98.4 | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | 1.6 | 0.0 | 100.0 |
| Horowhenua (Levin) | 172 | 96.5 | 0.0 | 0.0 | 0.0 | 3.5 | 1.2 | 2.3 | 0.0 | 100.0 |
| Feilding Maternity | 99 | 98.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 100.0 |

Table 6.6a (continued): Type of hospital birth (percentage), by facility (hospital data), 2000

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|---|---------------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|--------------|
| Paraparaumu | 115 | 96.5 | 0.0 | 0.0 | 0.0 | 3.5 | 0.9 | 1.7 | 0.9 | 100.0 |
| Kenepuru (Porirua) | 367 | 95.9 | 2.7 | 2.5 | 0.3 | 1.4 | 0.0 | 1.1 | 0.3 | 100.0 |
| Motueka Maternity | 70 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Golden Bay Community Hospital | 33 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Kaikoura | 12 | 91.7 | 0.0 | 0.0 | 0.0 | 8.3 | 0.0 | 0.0 | 8.3 | 100.0 |
| St George's (Christchurch) | 673 | 49.6 | 47.8 | 0.0 | 47.8 | 2.5 | 0.0 | 2.5 | 0.0 | 100.0 |
| Avonlea (Christchurch) | 66 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Burwood | 223 | 95.5 | 0.4 | 0.0 | 0.4 | 4.0 | 0.4 | 3.6 | 0.0 | 100.0 |
| Darfield | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Akaroa Community | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Waikari | 1 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Lincoln | 82 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Rangiora | 80 | 98.8 | 0.0 | 0.0 | 0.0 | 1.3 | 0.0 | 1.3 | 0.0 | 100.0 |
| Ashburton | 158 | 71.5 | 7.0 | 2.5 | 4.4 | 21.5 | 0.0 | 5.1 | 16.5 | 100.0 |
| Buller (Westport) | 26 | 92.3 | 0.0 | 0.0 | 0.0 | 7.7 | 3.8 | 0.0 | 3.8 | 100.0 |
| Oamaru | 95 | 96.8 | 0.0 | 0.0 | 0.0 | 3.2 | 1.1 | 0.0 | 2.1 | 100.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 37 | 91.9 | 0.0 | 0.0 | 0.0 | 8.1 | 0.0 | 0.0 | 8.1 | 100.0 |
| Dunstan | 21 | 95.2 | 0.0 | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 | 4.8 | 100.0 |
| Maniototo Health Services Ltd (Ranfurly) | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 29 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Lakes District (Queenstown) | 81 | 92.6 | 0.0 | 0.0 | 0.0 | 7.4 | 1.2 | 3.7 | 2.5 | 100.0 |
| Tuatapere Maternity Hospital | 16 | 87.5 | 12.5 | 6.3 | 6.3 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Northern Southland Birthing Centre | 26 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Winton Birthing Centre | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Primary total | 8310 | 87.1 | 8.2 | 2.7 | 5.5 | 4.8 | 0.4 | 1.7 | 2.6 | 100.0 |
| Other facilities | 71 | 95.8 | 0.0 | 0.0 | 0.0 | 4.2 | 0.0 | 2.8 | 1.4 | 100.0 |
| Total | 54,946 | 68.4 | 20.8 | 13.6 | 7.2 | 10.8 | 0.9 | 4.8 | 5.1 | 100.0 |

Data source: NMDS

Table 6.6b: Type of hospital birth (percentage), by facility (hospital data), 2001

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|--|--------------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|--------------|
| Greenlane/National Women's | 7381 | 56.4 | 28.8 | 19.5 | 9.3 | 14.8 | 0.7 | 5.5 | 8.6 | 100.0 |
| Middlemore | 3831 | 76.8 | 16.4 | 12.0 | 4.4 | 6.8 | 0.8 | 1.3 | 4.7 | 100.0 |
| Waikato | 3011 | 57.8 | 31.7 | 20.2 | 11.5 | 10.6 | 1.3 | 1.5 | 7.8 | 100.0 |
| Wellington | 3228 | 59.4 | 27.6 | 19.5 | 8.1 | 13.0 | 0.6 | 7.2 | 5.2 | 100.0 |
| Christchurch Women's | 4248 | 55.8 | 24.4 | 17.7 | 6.7 | 19.8 | 0.7 | 8.5 | 10.5 | 100.0 |
| Dunedin | 1655 | 61.4 | 27.3 | 17.1 | 10.2 | 11.4 | 0.4 | 4.9 | 6.1 | 100.0 |
| Tertiary total | 23354 | 60.6 | 26.1 | 17.9 | 8.2 | 13.3 | 0.8 | 5.0 | 7.5 | 100.0 |
| Whangarei | 1225 | 69.9 | 22.7 | 16.3 | 6.4 | 7.4 | 0.8 | 1.0 | 5.6 | 100.0 |
| North Shore | 2970 | 58.4 | 29.5 | 17.2 | 12.3 | 12.2 | 0.3 | 5.1 | 6.8 | 100.0 |
| Waitakere | 2338 | 71.8 | 20.1 | 14.2 | 5.9 | 8.0 | 0.2 | 2.8 | 5.1 | 100.0 |
| Rotorua | 1338 | 69.7 | 19.7 | 13.2 | 6.5 | 10.7 | 0.8 | 6.7 | 3.1 | 100.0 |
| Tauranga | 1744 | 70.5 | 20.1 | 13.1 | 7.0 | 9.5 | 0.2 | 4.8 | 4.4 | 100.0 |
| Whakatane (including Opotiki and Murupara) | 710 | 77.5 | 16.2 | 10.4 | 5.8 | 6.3 | 0.6 | 0.3 | 5.5 | 100.0 |
| Gisborne | 725 | 74.9 | 18.5 | 10.3 | 8.1 | 6.6 | 0.6 | 1.1 | 5.0 | 100.0 |
| Taranaki Base | 1133 | 72.1 | 21.2 | 14.1 | 7.1 | 6.7 | 1.1 | 3.1 | 2.6 | 100.0 |
| Wanganui | 695 | 75.1 | 16.3 | 10.8 | 5.5 | 8.6 | 0.7 | 3.3 | 4.6 | 100.0 |
| Hastings | 1832 | 71.5 | 19.4 | 12.7 | 6.7 | 9.1 | 1.0 | 5.2 | 2.9 | 100.0 |
| Masterton | 430 | 61.6 | 21.4 | 13.7 | 7.7 | 17.0 | 0.9 | 9.1 | 7.0 | 100.0 |
| Palmerston North | 1764 | 62.8 | 27.2 | 17.4 | 9.8 | 10.0 | 0.5 | 3.3 | 6.1 | 100.0 |
| Hutt | 2051 | 65.9 | 22.1 | 11.9 | 10.2 | 12.0 | 0.5 | 7.4 | 4.1 | 100.0 |
| Wairau (Blenheim) | 434 | 66.6 | 23.0 | 15.4 | 7.6 | 10.4 | 0.2 | 5.3 | 4.8 | 100.0 |
| Nelson | 864 | 67.9 | 22.0 | 12.4 | 9.6 | 10.1 | 0.1 | 7.8 | 2.2 | 100.0 |
| Grey (Greymouth) | 289 | 72.3 | 23.9 | 15.9 | 8.0 | 3.8 | 0.0 | 3.8 | 0.0 | 100.0 |
| Timaru | 575 | 68.3 | 21.0 | 13.4 | 7.7 | 10.6 | 1.0 | 7.3 | 2.3 | 100.0 |
| Southland (Invercargill) | 1094 | 64.5 | 30.4 | 20.7 | 9.7 | 5.0 | 0.7 | 4.3 | 0.0 | 100.0 |
| Secondary total | 22211 | 67.9 | 22.7 | 14.4 | 8.3 | 9.4 | 0.5 | 4.5 | 4.4 | 100.0 |
| Bay of Islands (Kawakawa) | 218 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Dargaville | 89 | 97.8 | 0.0 | 0.0 | 0.0 | 2.2 | 2.2 | 0.0 | 0.0 | 100.0 |
| Kaitia | 239 | 78.2 | 11.7 | 8.4 | 3.3 | 10.0 | 1.3 | 0.8 | 7.9 | 100.0 |
| Hokianga | 13 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Wellsford | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Warkworth | 94 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Helensville | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Birthcare Auckland | 155 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Pukekohe | 594 | 76.6 | 17.0 | 11.3 | 5.7 | 6.4 | 0.5 | 1.2 | 4.7 | 100.0 |
| Papakura Obstetric | 829 | 80.7 | 11.1 | 7.2 | 3.9 | 8.2 | 0.4 | 2.1 | 5.8 | 100.0 |

Table 6.6b (continued): Type of hospital birth (percentage), by facility (hospital data), 2001

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|--|----------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|---------|
| Botany Downs Maternity (South Auckland) | 1117 | 76.5 | 13.5 | 9.2 | 4.3 | 10.0 | 0.4 | 2.5 | 7.1 | 100.0 |
| Waihi Hospital | 75 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Birthcare Huntly | 171 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Thames | 138 | 98.6 | 0.0 | 0.0 | 0.0 | 1.4 | 1.4 | 0.0 | 0.0 | 100.0 |
| Rhoda Read (Morrinsville) | 136 | 99.3 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.0 | 0.0 | 100.0 |
| Matariki (Te Awamutu) | 121 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Te Kuiti | 83 | 96.4 | 0.0 | 0.0 | 0.0 | 3.6 | 0.0 | 0.0 | 3.6 | 100.0 |
| Taumarunui | 82 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Tokoroa | 134 | 99.3 | 0.0 | 0.0 | 0.0 | 0.7 | 0.7 | 0.0 | 0.0 | 100.0 |
| Pohlen Trust (Matamata) | 123 | 97.6 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 2.4 | 0.0 | 100.0 |
| River Ridge (Hamilton) | 457 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Taupo General | 164 | 98.8 | 0.0 | 0.0 | 0.0 | 1.2 | 0.6 | 0.6 | 0.0 | 100.0 |
| Te Puia Springs | 38 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Hawera | 99 | 98.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 2.0 | 0.0 | 100.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 54 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Waimarino Rural Health Centre (Raetihi) | 12 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Marion | 2 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Taihape | 32 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Wairoa | 88 | 94.3 | 0.0 | 0.0 | 0.0 | 5.7 | 2.3 | 2.3 | 1.1 | 100.0 |
| Chatham Islands | 1 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Napier | 143 | 84.6 | 9.8 | 7.7 | 2.1 | 5.6 | 0.0 | 2.1 | 3.5 | 100.0 |
| Waipukurau | 43 | 95.3 | 0.0 | 0.0 | 0.0 | 4.7 | 0.0 | 0.0 | 4.7 | 100.0 |
| Dannevirke Community Hospital | 49 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Horowhenua (Levin) | 139 | 95.0 | 0.0 | 0.0 | 0.0 | 5.0 | 0.0 | 5.0 | 0.0 | 100.0 |
| Feilding Maternity | 85 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Paraparaumu | 137 | 97.8 | 0.7 | 0.7 | 0.0 | 1.5 | 0.0 | 0.0 | 1.5 | 100.0 |
| Kenepuru (Porirua) | 365 | 98.4 | 0.3 | 0.0 | 0.3 | 1.4 | 0.0 | 1.4 | 0.0 | 100.0 |
| Motueka Maternity | 81 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Golden Bay Community Hospital | 27 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Kaikoura | 15 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| St George's (Christchurch) | 687 | 43.7 | 54.9 | 0.0 | 54.9 | 1.5 | 0.0 | 1.5 | 0.0 | 100.0 |
| Avonlea (Christchurch) | 60 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |

Table 6.6b (continued): Type of hospital birth (percentage), by facility (hospital data), 2001

| Facility | Total no | Normal vaginal birth | Total caesarean section | Acute caesarean section | Elective caesarean section | Total operative vaginal birth | Breech birth | Forceps birth | Vacuum extraction | Total % |
|---|--------------|----------------------|-------------------------|-------------------------|----------------------------|-------------------------------|--------------|---------------|-------------------|--------------|
| Burwood | 174 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Darfield | 7 | 85.7 | 0.0 | 0.0 | 0.0 | 14.3 | 14.3 | 0.0 | 0.0 | 100.0 |
| Akaroa Community | 5 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Waikari | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 69 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Rangiora | 82 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Ashburton | 165 | 80.6 | 1.2 | 0.6 | 0.6 | 18.2 | 0.0 | 1.8 | 16.4 | 100.0 |
| Buller (Westport) | 22 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Oamaru | 88 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 28 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Dunstan | 35 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Maniototo Health Services Ltd (Ranfurlly) | 5 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 38 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Lakes District (Queenstown) | 59 | 94.9 | 0.0 | 0.0 | 0.0 | 5.1 | 0.0 | 5.1 | 0.0 | 100.0 |
| Tuatapere Maternity Hospital | 16 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Northern Southland Birthing Centre | 21 | 95.2 | 0.0 | 0.0 | 0.0 | 4.8 | 4.8 | 0.0 | 0.0 | 100.0 |
| Winton Birthing Centre | 39 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 |
| Primary total | 8102 | 86.4 | 9.5 | 3.2 | 6.2 | 4.1 | 0.3 | 1.1 | 2.6 | 100.0 |
| Other facilities | 138 | 94.9 | 0.7 | 0.0 | 0.7 | 4.3 | 0.0 | 4.3 | 0.0 | 100.0 |
| Total | 53805 | 67.6 | 22.1 | 14.2 | 7.9 | 10.3 | 0.6 | 4.2 | 5.5 | 100.0 |

Data source: NMDS

There is inconsistency in the way DHBs record transfers to other facilities. There were no caesarean sections performed at Pukekohe, Papakura or Botany Downs, and so this figure can be assumed to be women who were transferred postnatally from Middlemore.

Caesarean sections were performed at Kaitia and Ashburton, although these facilities do not have a secondary maternity services as described in the national service specification. St George's has a contract to perform elective caesarean sections, but not acute caesarean sections.

The standardised rate of caesarean section is the ratio of observed to expected caesarean section rates multiplied by the national caesarean section rate for all cases. Expected rates are calculated on the numbers of births by age from each facility.

Figures 6.2 to 6.4 all show the rates in the centre of the upper and lower 99 percent confidence limits. If the lower confidence limit is completely above the national rate for all New Zealand, this indicates that the standardised rate is significantly greater than the overall national rate (99 percent confidence interval). If the upper confidence limit is completely below the national rate for all New Zealand, this indicates that the standardised rate is significantly less than the overall national rate (99 percent confidence interval). Otherwise, the rate is no different from the overall national rate.

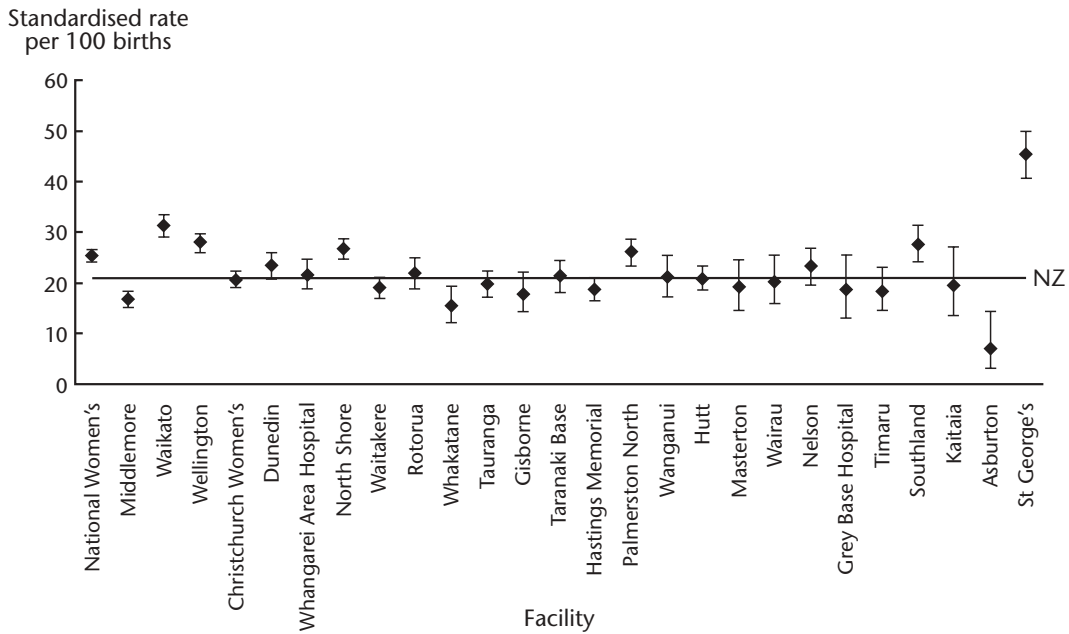


Figure 6.2a: Standardised rates of caesarean section, by facility, 2000

Data source: NMDS

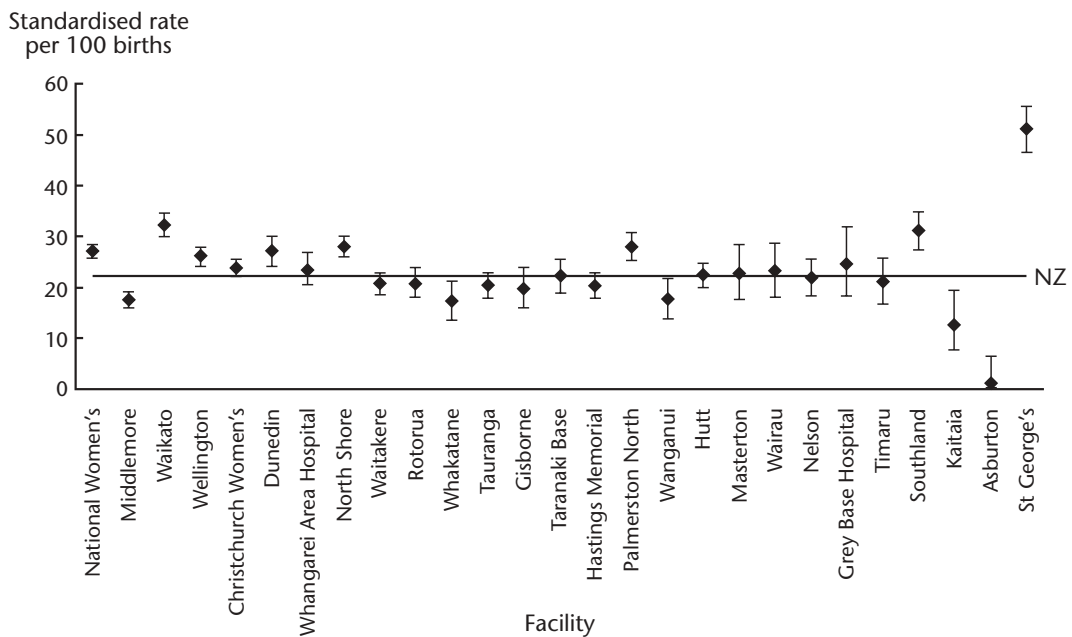


Figure 6.2b: Standardised rates of caesarean section, by facility, 2001

Data source: NMDS

The standardised operative vaginal birth rate is the ratio of observed to expected operative vaginal birth rates multiplied by the New Zealand national operative vaginal birth rate for all cases. Expected rates are calculated on the numbers of births by age from facility.

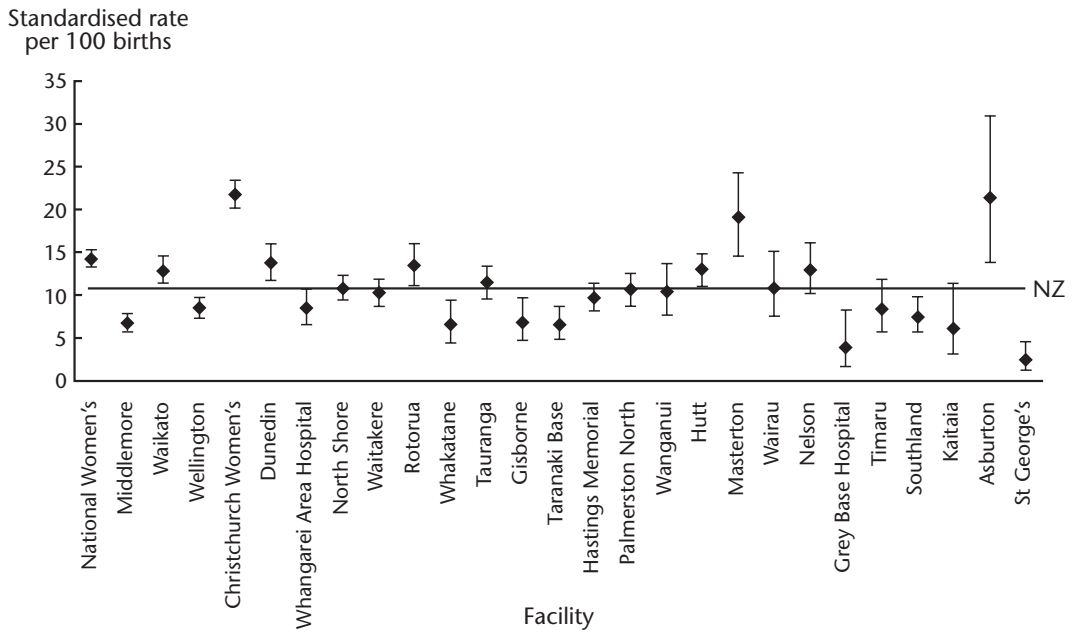


Figure 6.3a: Standardised rates of operative vaginal birth, by facility, 2000
 Data source: NMDS

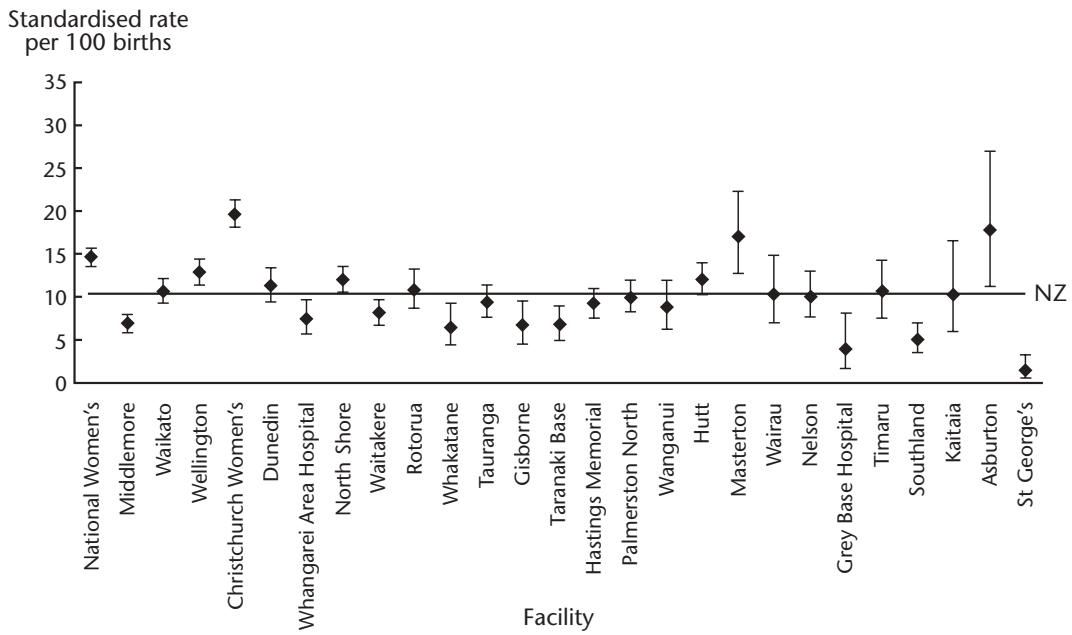


Figure 6.3b: Standardised rates of operative vaginal birth, by facility, 2001
 Data source: NMDS

The standardised normal vaginal birth rate is the ratio of observed to expected normal vaginal birth rates multiplied by the New Zealand national normal vaginal birth rate for all cases. Expected rates are calculated on the numbers of births by age from facility.

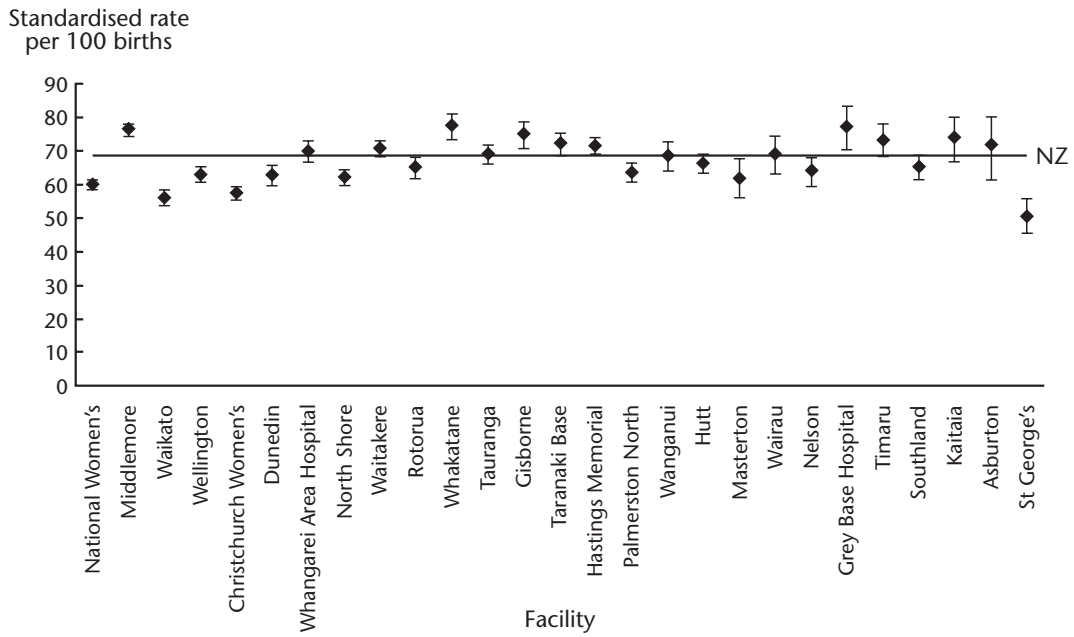


Figure 6.4a: Standardised rates of normal vaginal birth, by facility, 2000
Data source: NMDS

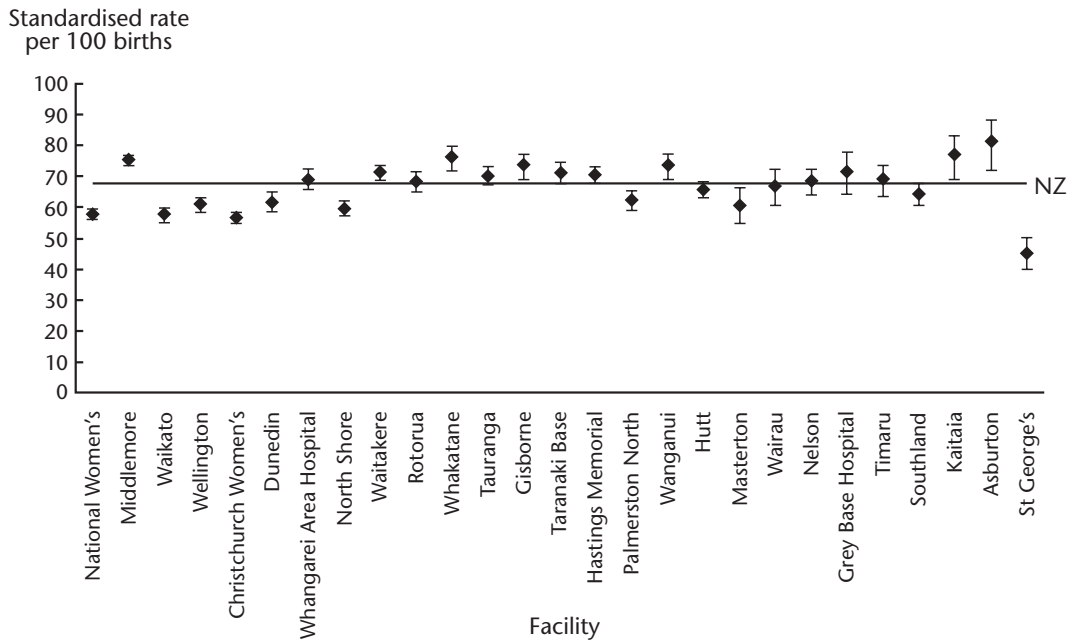


Figure 6.4b: Standardised rates of normal vaginal birth, by facility, 2001
Data source: NMDS

Figures 6.2–6.4 all show significant differences in practice between institutions. A major benefit of the data is that it allows individual institutions to examine their own data and to compare these with similar institutions. In a situation of significant discrepancy, institutions should analyse reasons for the difference.

Table 6.7a: Inductions, epidurals and episiotomies, by facility (hospital data), 2000

| Facility | Numbers | | | Rate per 100 births | | |
|--|-------------|-------------|--------------|---------------------|-------------|--------------|
| | Inductions | Epidurals | Episiotomies | Inductions | Epidurals | Episiotomies |
| Greenlane/National Women's | 1891 | 3200 | 1398 | 23.7 | 40.2 | 17.5 |
| Middlemore | 651 | 478 | 264 | 17.3 | 12.7 | 7.0 |
| Waikato | 748 | 801 | 239 | 24.7 | 26.5 | 7.9 |
| Wellington | 620 | 1369 | 533 | 18.2 | 40.3 | 15.7 |
| Christchurch Women's | 1188 | 1609 | 826 | 28.3 | 38.3 | 19.7 |
| Dunedin | 542 | 569 | 111 | 30.4 | 31.9 | 6.2 |
| Tertiary total | 5640 | 8026 | 3371 | 23.4 | 33.2 | 14.0 |
| Whangarei | 284 | 122 | 102 | 20.9 | 9.0 | 7.5 |
| North Shore | 786 | 1149 | 385 | 26.3 | 38.4 | 12.9 |
| Waitakere | 476 | 751 | 228 | 18.8 | 29.7 | 9.0 |
| Rotorua | 242 | 225 | 99 | 17.6 | 16.3 | 7.2 |
| Tauranga | 292 | 375 | 310 | 15.7 | 20.2 | 16.7 |
| Whakatane (including Opotiki and Murupara) | 143 | 86 | 55 | 19.8 | 11.9 | 7.6 |
| Gisborne | 112 | 91 | 46 | 15.4 | 12.5 | 6.3 |
| Taranaki Base | 261 | 70 | 81 | 21.8 | 5.8 | 6.8 |
| Wanganui | 150 | 112 | 56 | 20.2 | 15.1 | 7.6 |
| Hastings | 426 | 589 | 207 | 20.2 | 28.0 | 9.8 |
| Masterton | 44 | 105 | 87 | 9.5 | 22.8 | 18.9 |
| Palmerston North | 339 | 511 | 200 | 18.3 | 27.6 | 10.8 |
| Hutt | 519 | 660 | 236 | 25.9 | 32.9 | 11.8 |
| Wairau (Blenheim) | 152 | 103 | 49 | 32.5 | 22.1 | 10.5 |
| Nelson | 388 | 222 | 129 | 43.3 | 24.8 | 14.4 |
| Grey (Greymouth) | 59 | 0 | 29 | 20.7 | 0.0 | 10.2 |
| Timaru | 118 | 78 | 47 | 20.0 | 13.2 | 8.0 |
| Southland (Invercargill) | 285 | 151 | 166 | 24.5 | 13.0 | 14.3 |
| Secondary total | 5076 | 5400 | 2512 | 21.8 | 23.2 | 10.8 |
| Bay of Islands (Kawakawa) | 0 | 0 | 5 | 0.0 | 0.0 | 2.3 |
| Dargaville | 0 | 0 | 3 | 0.0 | 0.0 | 3.1 |
| Kaitia | 25 | 11 | 17 | 9.5 | 4.2 | 6.5 |
| Hokianga | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wellsford | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Warkworth | 1 | 0 | 0 | 1.1 | 0.0 | 0.0 |
| Helensville | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Birthcare Auckland | 0 | 0 | 3 | 0.0 | 0.0 | 4.5 |
| Pukekohe | 91 | 78 | 42 | 14.2 | 12.2 | 6.6 |
| Papakura Obstetric | 132 | 138 | 77 | 14.0 | 14.7 | 8.2 |
| Botany Downs Maternity (South Auckland) | 182 | 184 | 109 | 16.1 | 16.3 | 9.6 |
| Waihi Hospital | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Birthcare Huntly | 3 | 0 | 3 | 1.7 | 0.0 | 1.7 |
| Thames | 5 | 0 | 0 | 4.2 | 0.0 | 0.0 |
| Rhoda Read (Morrinsville) | 1 | 0 | 0 | 0.6 | 0.0 | 0.0 |
| Matariki (Te Awamutu) | 1 | 0 | 1 | 0.6 | 0.0 | 0.6 |
| Te Kuiti | 3 | 0 | 7 | 3.4 | 0.0 | 8.0 |
| Taumarunui | 7 | 0 | 3 | 6.9 | 0.0 | 3.0 |
| Tokoroa | 7 | 0 | 10 | 5.7 | 0.0 | 8.1 |
| Pohlen Trust (Matamata) | 14 | 0 | 3 | 13.1 | 0.0 | 2.8 |
| River Ridge (Hamilton) | 14 | 0 | 18 | 3.3 | 0.0 | 4.3 |
| Taupo General | 5 | 0 | 5 | 2.3 | 0.0 | 2.3 |

Table 6.7a (continued): Inductions, epidurals and episiotomies, by facility (hospital data), 2000

| Facility | Numbers | | | Rate per 100 births | | |
|--|---------------|---------------|--------------|---------------------|-------------|--------------|
| | Inductions | Epidurals | Episiotomies | Inductions | Epidurals | Episiotomies |
| Te Puia Springs | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hawera | 0 | 0 | 6 | 0.0 | 0.0 | 6.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Waimarino Rural Health Centre (Raetihi) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Marton | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Taihape | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wairoa | 0 | 0 | 2 | 0.0 | 0.0 | 2.3 |
| Chatham Islands | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Napier | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Waipukurau | 1 | 0 | 2 | 2.0 | 0.0 | 4.0 |
| Dannevirke Community Hospital | 0 | 0 | 14 | 0.0 | 0.0 | 21.9 |
| Horowhenua (Levin) | 0 | 0 | 7 | 0.0 | 0.0 | 4.1 |
| Feilding Maternity | 0 | 0 | 7 | 0.0 | 0.0 | 7.1 |
| Paraparaumu | 1 | 2 | 8 | 0.9 | 1.7 | 7.0 |
| Kenepuru (Porirua) | 10 | 15 | 15 | 2.7 | 4.1 | 4.1 |
| Motueka Maternity | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Golden Bay Community Hospital | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Kaikoura | 0 | 0 | 1 | 0.0 | 0.0 | 8.3 |
| St George's (Christchurch) | 71 | 0 | 38 | 10.5 | 0.0 | 5.6 |
| Avonlea (Christchurch) | 2 | 0 | 0 | 3.0 | 0.0 | 0.0 |
| Burwood | 17 | 0 | 19 | 7.6 | 0.0 | 8.5 |
| Darfield | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Akaroa Community | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Waikari | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 0 | 0 | 4 | 0.0 | 0.0 | 4.9 |
| Rangiora | 0 | 0 | 4 | 0.0 | 0.0 | 5.0 |
| Ashburton | 28 | 35 | 27 | 17.7 | 22.2 | 17.1 |
| Buller (Westport) | 0 | 0 | 2 | 0.0 | 0.0 | 7.7 |
| Oamaru | 8 | 0 | 1 | 8.4 | 0.0 | 1.1 |
| Charlotte Jean Maternity Unit (Alexandra) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Dunstan | 0 | 0 | 2 | 0.0 | 0.0 | 9.5 |
| Maniototo Health Services Ltd (Ranfurly) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Gore | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Lakes District (Queenstown) | 9 | 1 | 12 | 11.1 | 1.2 | 14.8 |
| Tuatapere Maternity Hospital | 2 | 0 | 1 | 12.5 | 0.0 | 6.3 |
| Northern Southland Birthing Centre (Lumsden) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 0 | 0 | 2 | 0.0 | 0.0 | 6.7 |
| Primary total | 640 | 464 | 480 | 7.7 | 5.6 | 5.8 |
| Other facilities | 11 | 0 | 12 | 15.5 | 0.0 | 16.9 |
| Total | 11,367 | 13,890 | 6375 | 20.3 | 24.9 | 11.4 |

Data source: NMDS

Table 6.7b: Inductions, epidurals and episiotomies, by facility (hospital data), 2001

| Facility | Numbers | | | Rate per 100 births | | |
|--|-------------|-------------|--------------|---------------------|-------------|--------------|
| | Inductions | Epidurals | Episiotomies | Inductions | Epidurals | Episiotomies |
| Greenlane/National Women's | 1773 | 3130 | 1329 | 23.4 | 41.4 | 17.6 |
| Middlemore | 625 | 578 | 310 | 16.1 | 14.9 | 8.0 |
| Waikato | 779 | 747 | 202 | 25.2 | 24.1 | 6.5 |
| Wellington | 759 | 1547 | 532 | 23.0 | 46.8 | 16.1 |
| Christchurch Women's | 1202 | 1662 | 829 | 27.7 | 38.3 | 19.1 |
| Dunedin | 489 | 503 | 74 | 28.9 | 29.7 | 4.4 |
| Tertiary total | 5627 | 8167 | 3276 | 23.6 | 34.2 | 13.7 |
| Whangarei | 279 | 126 | 84 | 22.3 | 10.1 | 6.7 |
| North Shore | 784 | 1,094 | 362 | 26.0 | 36.2 | 12.0 |
| Waitakere | 458 | 663 | 206 | 19.5 | 28.3 | 8.8 |
| Rotorua | 223 | 143 | 62 | 16.4 | 10.5 | 4.6 |
| Tauranga | 320 | 302 | 204 | 18.2 | 17.2 | 11.6 |
| Whakatane (including Opotiki and Murupara) | 151 | 87 | 54 | 21.1 | 12.2 | 7.6 |
| Gisborne | 95 | 77 | 42 | 13.0 | 10.5 | 5.7 |
| Taranaki Base | 325 | 100 | 75 | 28.0 | 8.6 | 6.5 |
| Wanganui | 143 | 107 | 44 | 20.4 | 15.2 | 6.3 |
| Hastings | 330 | 485 | 172 | 17.7 | 26.0 | 9.2 |
| Masterton | 65 | 90 | 86 | 14.7 | 20.4 | 19.5 |
| Palmerston North | 361 | 377 | 174 | 20.0 | 20.9 | 9.7 |
| Hutt | 454 | 629 | 245 | 21.9 | 30.3 | 11.8 |
| Wairau (Blenheim) | 144 | 262 | 49 | 32.7 | 59.5 | 11.1 |
| Nelson | 383 | 206 | 121 | 43.7 | 23.5 | 13.8 |
| Grey (Greymouth) | 78 | 11 | 52 | 26.8 | 3.8 | 17.9 |
| Timaru | 147 | 99 | 57 | 25.0 | 16.8 | 9.7 |
| Southland (Invercargill) | 345 | 150 | 125 | 31.3 | 13.6 | 11.3 |
| Secondary total | 5085 | 5008 | 2214 | 22.6 | 22.2 | 9.8 |
| Bay of Islands (Kawakawa) | 0 | 0 | 5 | 0.0 | 0.0 | 2.3 |
| Dargaville | 0 | 0 | 1 | 0.0 | 0.0 | 1.1 |
| Kaitaia | 35 | 13 | 13 | 14.6 | 5.4 | 5.4 |
| Hokianga | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wellsford | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Warkworth | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Helensville | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Birthcare Auckland | 0 | 0 | 2 | 0.0 | 0.0 | 1.3 |
| Pukekohe | 58 | 81 | 44 | 9.7 | 13.5 | 7.3 |
| Papakura Obstetric | 116 | 134 | 62 | 13.9 | 16.0 | 7.4 |
| Botany Downs Maternity (South Auckland) | 159 | 210 | 138 | 14.2 | 18.7 | 12.3 |
| Waihi Hospital | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Birthcare Huntly | 7 | 0 | 1 | 4.1 | 0.0 | 0.6 |
| Thames | 2 | 0 | 0 | 1.4 | 0.0 | 0.0 |
| Rhoda Read (Morrinsville) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Matariki (Te Awamutu) | 1 | 0 | 0 | 0.8 | 0.0 | 0.0 |
| Te Kuiti | 1 | 0 | 4 | 1.2 | 0.0 | 4.8 |
| Taumarunui | 1 | 0 | 4 | 1.2 | 0.0 | 4.9 |
| Tokoroa | 0 | 0 | 5 | 0.0 | 0.0 | 3.7 |
| Pohlen Trust (Matamata) | 4 | 0 | 9 | 3.3 | 0.0 | 7.3 |
| River Ridge (Hamilton) | 15 | 0 | 19 | 3.3 | 0.0 | 4.2 |
| Taupo General | 2 | 0 | 3 | 1.2 | 0.0 | 1.8 |

Table 6.7b (continued): Inductions, epidurals and episiotomies, by facility (hospital data), 2001

| Facility | Numbers | | | Rate per 100 births | | |
|--|---------------|---------------|--------------|---------------------|-------------|--------------|
| | Inductions | Epidurals | Episiotomies | Inductions | Epidurals | Episiotomies |
| Te Puia Springs | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Hawera | 0 | 0 | 5 | 0.0 | 0.0 | 5.1 |
| Elizabeth R Hospital and Rest Home (Stratford) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Waimarino Rural Health Centre (Raetihi) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Marton | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Taihape | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Wairoa | 0 | 0 | 3 | 0.0 | 0.0 | 3.4 |
| Chatham Islands | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Napier | 16 | 30 | 10 | 11.2 | 21.0 | 7.0 |
| Waipukurau | 0 | 0 | 6 | 0.0 | 0.0 | 14.0 |
| Dannevirke Community Hospital | 0 | 0 | 3 | 0.0 | 0.0 | 6.1 |
| Horowhenua (Levin) | 2 | 0 | 3 | 1.4 | 0.0 | 2.2 |
| Feilding Maternity | 0 | 0 | 2 | 0.0 | 0.0 | 2.4 |
| Paraparaumu | 2 | 4 | 7 | 1.5 | 2.9 | 5.1 |
| Kenepuru (Porirua) | 4 | 7 | 12 | 1.1 | 1.9 | 3.3 |
| Motueka Maternity | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Golden Bay Community Hospital | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Kaikoura | 1 | 0 | 1 | 6.7 | 0.0 | 6.7 |
| St George's (Christchurch) | 52 | 0 | 28 | 7.5 | 0.0 | 4.0 |
| Avonlea (Christchurch) | 4 | 0 | 0 | 6.7 | 0.0 | 0.0 |
| Burwood | 3 | 0 | 3 | 1.7 | 0.0 | 1.7 |
| Darfield | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Akaroa Community | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Waikari | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 0 | 0 | 2 | 0.0 | 0.0 | 2.9 |
| Rangiora | 1 | 0 | 2 | 1.2 | 0.0 | 2.4 |
| Ashburton | 31 | 36 | 20 | 18.8 | 21.8 | 12.1 |
| Buller (Westport) | 0 | 0 | 1 | 0.0 | 0.0 | 4.5 |
| Oamaru | 4 | 0 | 1 | 4.5 | 0.0 | 1.1 |
| Charlotte Jean Maternity Unit (Alexandra) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Dunstan | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Gore | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Lakes District (Queenstown) | 7 | 1 | 14 | 11.9 | 1.7 | 23.7 |
| Tuatapere Maternity Hospital | 1 | 0 | 1 | 6.3 | 0.0 | 6.3 |
| Northern Southland Birthing Centre (Lumsden) | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 0 | 0 | 2 | 0.0 | 0.0 | 5.1 |
| Primary total | 529 | 516 | 436 | 6.5 | 6.3 | 5.4 |
| Other facilities | 20 | 0 | 9 | 14.5 | 0.0 | 6.5 |
| Total | 11,261 | 13,691 | 5935 | 20.6 | 25.0 | 10.9 |

Data source: NMDS

Table 6.8: Mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|---------------|-------------|------------|-------------|------------|-------------|---------------|-------------|------------|------------|------------|-------------|
| | Total number | Percentage | | | | | Total number | Percentage | | | | |
| | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe |
| Greenlane/National Women's | 7751 | 78.5 | 0.0 | 13.8 | 6.3 | 1.3 | 7381 | 81.1 | 0.0 | 11.3 | 6.0 | 1.5 |
| Middlemore | 3689 | 91.8 | 0.0 | 5.5 | 2.0 | 0.6 | 3831 | 91.6 | 0.0 | 5.6 | 2.1 | 0.7 |
| Waikato | 2951 | 84.8 | 0.0 | 8.4 | 5.9 | 0.9 | 3011 | 85.0 | 0.0 | 7.9 | 6.3 | 0.8 |
| Wellington | 3316 | 91.3 | 0.0 | 7.1 | 1.5 | 0.1 | 3228 | 92.4 | 0.0 | 5.7 | 1.5 | 0.3 |
| Christchurch Women's | 4106 | 86.0 | 0.0 | 11.6 | 2.0 | 0.3 | 4248 | 86.5 | 0.0 | 10.8 | 2.4 | 0.4 |
| Dunedin | 1735 | 90.3 | 0.1 | 7.1 | 1.7 | 0.9 | 1655 | 90.3 | 0.1 | 6.6 | 2.5 | 0.5 |
| Tertiary total | 23,548 | 85.4 | 0.0 | 10.0 | 3.8 | 0.8 | 23,354 | 86.5 | 0.0 | 8.7 | 3.9 | 0.8 |
| Whangarei | 1326 | 87.0 | 0.1 | 7.6 | 4.6 | 0.7 | 1225 | 89.0 | 0.1 | 6.5 | 3.4 | 1.0 |
| North Shore | 2966 | 92.9 | 0.0 | 5.0 | 1.9 | 0.2 | 2970 | 93.9 | 0.0 | 4.1 | 1.6 | 0.3 |
| Waitakere | 2506 | 95.2 | 0.0 | 3.3 | 1.3 | 0.2 | 2338 | 96.0 | 0.0 | 2.6 | 1.3 | 0.1 |
| Rotorua | 1358 | 87.7 | 0.0 | 5.4 | 5.8 | 1.1 | 1338 | 86.1 | 0.0 | 7.1 | 5.7 | 1.1 |
| Tauranga | 1837 | 93.6 | 0.0 | 5.5 | 0.8 | 0.1 | 1744 | 91.5 | 0.0 | 6.8 | 1.6 | 0.2 |
| Whakatane (including Opotiki and Murupara) | 716 | 87.0 | 0.0 | 7.5 | 4.3 | 1.1 | 710 | 88.9 | 0.0 | 6.6 | 3.8 | 0.7 |
| Gisborne | 717 | 92.1 | 0.0 | 5.6 | 2.1 | 0.3 | 725 | 93.0 | 0.0 | 5.0 | 1.9 | 0.1 |
| Taranaki Base | 1182 | 92.4 | 0.0 | 4.7 | 2.2 | 0.7 | 1133 | 93.0 | 0.1 | 4.5 | 1.9 | 0.4 |
| Wanganui | 737 | 80.7 | 0.0 | 9.9 | 8.1 | 1.2 | 695 | 87.3 | 0.0 | 6.9 | 5.3 | 0.4 |
| Hastings | 2076 | 96.0 | 0.0 | 3.5 | 0.4 | 0.1 | 1832 | 96.0 | 0.0 | 3.5 | 0.4 | 0.1 |
| Masterton | 457 | 92.6 | 0.0 | 4.8 | 1.3 | 1.3 | 430 | 91.2 | 0.0 | 4.9 | 3.5 | 0.5 |
| Palmerston North | 1818 | 94.1 | 0.1 | 4.3 | 1.4 | 0.2 | 1764 | 92.6 | 0.1 | 4.9 | 1.8 | 0.6 |
| Hutt | 1978 | 92.5 | 0.0 | 6.5 | 1.0 | 0.1 | 2051 | 93.5 | 0.0 | 5.7 | 0.6 | 0.1 |
| Wairau (Blenheim) | 463 | 87.7 | 0.0 | 11.2 | 1.1 | 0.0 | 434 | 93.3 | 0.0 | 5.5 | 0.9 | 0.2 |
| Nelson | 885 | 97.2 | 0.0 | 2.3 | 0.6 | 0.0 | 864 | 98.0 | 0.0 | 1.5 | 0.3 | 0.1 |
| Grey (Greymouth) | 281 | 89.7 | 0.0 | 4.6 | 3.9 | 1.8 | 289 | 93.8 | 0.0 | 4.2 | 1.7 | 0.3 |
| Timaru | 576 | 95.3 | 0.0 | 3.8 | 0.7 | 0.2 | 575 | 92.9 | 0.0 | 5.7 | 1.4 | 0.0 |
| Southland (Invercargill) | 1138 | 81.5 | 0.1 | 8.3 | 9.1 | 1.0 | 1094 | 82.1 | 0.0 | 9.9 | 7.5 | 0.5 |
| Secondary total | 23,017 | 91.8 | 0.0 | 5.3 | 2.5 | 0.4 | 22,211 | 92.3 | 0.0 | 5.1 | 2.2 | 0.4 |
| Bay of Islands (Kawakawa) | 218 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 218 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dargaville | 98 | 99.0 | 0.0 | 1.0 | 0.0 | 0.0 | 89 | 97.8 | 0.0 | 2.2 | 0.0 | 0.0 |
| Kaitia | 262 | 97.7 | 0.0 | 1.5 | 0.8 | 0.0 | 239 | 97.5 | 0.0 | 2.1 | 0.4 | 0.0 |
| Hokianga | 60 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 13 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wellsford | 37 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Warkworth | 94 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 94 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Helensville | 44 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Birthcare Auckland | 66 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 155 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pukekohe | 629 | 93.5 | 0.0 | 5.2 | 1.1 | 0.2 | 594 | 93.1 | 0.0 | 4.9 | 2.0 | 0.0 |
| Papakura Obstetric | 937 | 96.4 | 0.0 | 2.7 | 0.9 | 0.1 | 829 | 94.8 | 0.0 | 3.6 | 1.3 | 0.2 |
| Botany Downs Maternity (South Auckland) | 1122 | 95.5 | 0.0 | 3.4 | 1.0 | 0.2 | 1117 | 94.9 | 0.1 | 4.3 | 0.7 | 0.0 |

Table 6.8 (continued): Mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|--------------|------------|--------|--------|--------|-------------|--------------|------------|--------|--------|--------|-------------|
| | Total number | Percentage | | | | | Total number | Percentage | | | | |
| | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe |
| Waihi Hospital | 53 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 75 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Birthcare Huntly | 181 | 96.7 | 0.0 | 3.3 | 0.0 | 0.0 | 171 | 99.4 | 0.0 | 0.6 | 0.0 | 0.0 |
| Thames | 118 | 99.2 | 0.0 | 0.8 | 0.0 | 0.0 | 138 | 99.3 | 0.0 | 0.7 | 0.0 | 0.0 |
| Rhoda Read (Morrinsville) | 163 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 136 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Matariki (Te Awamutu) | 162 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 121 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Te Kuiti | 88 | 98.9 | 0.0 | 0.0 | 1.1 | 0.0 | 83 | 97.6 | 0.0 | 0.0 | 2.4 | 0.0 |
| Taumarunui | 101 | 96.0 | 0.0 | 3.0 | 1.0 | 0.0 | 82 | 98.8 | 0.0 | 1.2 | 0.0 | 0.0 |
| Tokoroa | 123 | 96.7 | 0.0 | 1.6 | 1.6 | 0.0 | 134 | 96.3 | 0.0 | 2.2 | 1.5 | 0.0 |
| Pohlen Trust (Matamata) | 107 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 123 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| River Ridge (Hamilton) | 421 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 457 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Taupo General | 218 | 98.2 | 0.0 | 1.8 | 0.0 | 0.0 | 164 | 98.8 | 0.0 | 1.2 | 0.0 | 0.0 |
| Te Puia Springs | 27 | 92.6 | 0.0 | 7.4 | 0.0 | 0.0 | 38 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Hawera | 100 | 98.0 | 0.0 | 2.0 | 0.0 | 0.0 | 99 | 98.0 | 0.0 | 2.0 | 0.0 | 0.0 |
| Elizabeth R Hospital and Rest Home (Stratford) | 78 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waimarino Rural Health Centre (Raetihi) | 16 | 93.8 | 0.0 | 6.3 | 0.0 | 0.0 | 12 | 91.7 | 0.0 | 8.3 | 0.0 | 0.0 |
| Marton | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Taihape | 39 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 32 | 96.9 | 0.0 | 3.1 | 0.0 | 0.0 |
| Wairoa | 87 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 88 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Chatham Islands | 3 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Napier | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 143 | 99.3 | 0.0 | 0.0 | 0.7 | 0.0 |
| Waipukurau | 50 | 98.0 | 0.0 | 2.0 | 0.0 | 0.0 | 43 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dannevirke Community Hospital | 64 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49 | 95.9 | 0.0 | 4.1 | 0.0 | 0.0 |
| Horowhenua (Levin) | 172 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 139 | 98.6 | 0.0 | 0.7 | 0.7 | 0.0 |
| Feilding Maternity | 99 | 99.0 | 0.0 | 1.0 | 0.0 | 0.0 | 85 | 98.8 | 0.0 | 1.2 | 0.0 | 0.0 |
| Paraparaumu | 115 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 137 | 99.3 | 0.0 | 0.7 | 0.0 | 0.0 |
| Kenepuru (Porirua) | 367 | 98.9 | 0.0 | 0.8 | 0.3 | 0.0 | 365 | 99.2 | 0.0 | 0.8 | 0.0 | 0.0 |
| Motueka Maternity | 70 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 81 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Golden Bay Community Hospital | 33 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 27 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kaikoura | 12 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| St George's (Christchurch) | 673 | 88.7 | 0.1 | 8.6 | 2.1 | 0.4 | 687 | 86.8 | 0.1 | 9.8 | 2.6 | 0.7 |
| Avonlea (Christchurch) | 66 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Burwood | 223 | 98.2 | 0.0 | 1.3 | 0.4 | 0.0 | 174 | 97.1 | 0.0 | 2.3 | 0.6 | 0.0 |
| Darfield | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7 | 85.7 | 0.0 | 14.3 | 0.0 | 0.0 |
| Akaroa Community | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waikari | 1 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 82 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 69 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rangiora | 80 | 98.8 | 0.0 | 1.3 | 0.0 | 0.0 | 82 | 98.8 | 0.0 | 1.2 | 0.0 | 0.0 |

Table 6.8 (continued): Mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|---------------|-------------|------------|------------|------------|-------------|---------------|-------------|------------|------------|------------|-------------|
| | Total number | Percentage | | | | | Total number | Percentage | | | | |
| | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe |
| Buller (Westport) | 26 | 96.2 | 0.0 | 3.8 | 0.0 | 0.0 | 22 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Oamaru | 95 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 88 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Charlotte Jean Maternity Unit (Alexandra) | 37 | 94.6 | 0.0 | 5.4 | 0.0 | 0.0 | 28 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Dunstan | 21 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 35 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 8 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 29 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 38 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lakes District (Queenstown) | 81 | 98.8 | 0.0 | 0.0 | 1.2 | 0.0 | 59 | 94.9 | 0.0 | 0.0 | 5.1 | 0.0 |
| Tuatapere Maternity Hospital | 16 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 16 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 26 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 21 | 95.2 | 0.0 | 4.8 | 0.0 | 0.0 |
| Winton Birthing Centre | 30 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 39 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Primary total | 8310 | 96.9 | 0.0 | 2.4 | 0.6 | 0.1 | 8102 | 96.5 | 0.0 | 2.6 | 0.7 | 0.1 |
| Other facilities | 71 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 138 | 95.7 | 0.0 | 4.3 | 0.0 | 0.0 |
| Total | 54,946 | 89.8 | 0.0 | 6.9 | 2.8 | 0.5 | 53,805 | 90.4 | 0.0 | 6.3 | 2.7 | 0.5 |

Data source: NMDS

The Patient Clinical Complexity Level score (PCCL) measures the complexity of the co-morbid and complicating conditions for each woman relative to all other women of the same condition. A classification of PCCL zero indicates that there were no complicating diagnosis or co-morbidities.

The majority of women have little or no co-morbid or complicating conditions at the time of birth. The majority of women with complex conditions are in tertiary hospitals.

Table 6.9: Average length of stay (days) for mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|------------|-------------|------------|------------|-------------|------------|------------|------------|------------|------------|-------------|------------|
| | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total |
| Greenlane/National Women's | 2.8 | 14.0 | 5.9 | 6.7 | 9.6 | 3.6 | 2.7 | 5.0 | 5.0 | 6.4 | 10.3 | 3.3 |
| Middlemore | 2.3 | 2.0 | 4.8 | 5.3 | 9.8 | 2.6 | 2.3 | 2.0 | 4.5 | 5.4 | 7.7 | 2.5 |
| Waikato | 2.2 | 0.0 | 3.8 | 4.4 | 8.4 | 2.5 | 2.2 | 0.0 | 4.1 | 4.5 | 7.4 | 2.5 |
| Wellington | 2.8 | 0.0 | 5.5 | 6.8 | 10.8 | 3.0 | 2.8 | 0.0 | 5.4 | 6.4 | 11.0 | 3.0 |
| Christchurch Women's | 1.9 | 4.0 | 4.3 | 4.8 | 9.1 | 2.3 | 1.9 | 0.0 | 4.3 | 6.9 | 17.4 | 2.3 |
| Dunedin | 3.5 | 18.0 | 5.6 | 6.5 | 7.9 | 3.8 | 3.6 | 9.0 | 6.9 | 7.2 | 6.9 | 3.9 |
| Tertiary total | 2.5 | 11.0 | 5.2 | 6.0 | 9.3 | 3.0 | 2.5 | 5.8 | 4.8 | 6.0 | 10.1 | 2.9 |
| Whangarei | 2.8 | 13.0 | 4.5 | 4.8 | 9.1 | 3.1 | 3.4 | 2.0 | 5.2 | 4.5 | 8.1 | 3.6 |
| North Shore | 2.3 | 6.0 | 3.7 | 3.9 | 4.4 | 2.4 | 1.8 | 0.0 | 3.1 | 3.9 | 8.7 | 1.9 |
| Waitakere | 2.5 | 0.0 | 3.5 | 4.4 | 4.8 | 2.6 | 2.5 | 0.0 | 4.2 | 3.5 | 6.5 | 2.5 |
| Rotorua | 2.4 | 0.0 | 4.3 | 4.9 | 8.1 | 2.7 | 2.2 | 0.0 | 3.9 | 4.3 | 8.0 | 2.5 |
| Tauranga | 2.8 | 0.0 | 5.2 | 4.5 | 3.0 | 3.0 | 2.8 | 0.0 | 5.2 | 7.6 | 21.0 | 3.0 |
| Whakatane (including Opotiki and Murupara) | 2.1 | 0.0 | 3.7 | 4.3 | 8.3 | 2.4 | 2.2 | 0.0 | 4.6 | 4.9 | 3.4 | 2.5 |
| Gisborne | 2.3 | 0.0 | 3.8 | 5.0 | 25.5 | 2.5 | 2.2 | 0.0 | 3.5 | 4.4 | 11.0 | 2.3 |
| Taranaki Base | 3.4 | 0.0 | 4.8 | 6.1 | 7.9 | 3.6 | 4.4 | 4.0 | 6.5 | 5.7 | 17.2 | 4.5 |
| Wanganui | 2.7 | 0.0 | 4.6 | 5.8 | 6.0 | 3.1 | 2.5 | 0.0 | 4.1 | 3.7 | 11.0 | 2.8 |
| Hastings | 2.6 | 0.0 | 7.1 | 6.3 | 16.7 | 2.8 | 3.0 | 0.0 | 6.2 | 7.1 | 11.0 | 3.1 |
| Masterton | 2.7 | 0.0 | 5.0 | 3.8 | 5.3 | 2.8 | 2.9 | 0.0 | 4.8 | 6.3 | 14.5 | 3.1 |
| Palmerston North | 2.5 | 4.0 | 5.9 | 8.6 | 9.5 | 2.7 | 2.8 | 2.0 | 4.7 | 6.1 | 9.1 | 2.9 |
| Hutt | 2.2 | 0.0 | 3.6 | 4.0 | 4.0 | 2.3 | 2.1 | 0.0 | 3.3 | 5.0 | 3.7 | 2.2 |
| Wairau (Blenheim) | 2.8 | 0.0 | 4.0 | 8.4 | 0.0 | 3.0 | 3.1 | 0.0 | 4.4 | 5.0 | 5.0 | 3.2 |
| Nelson | 2.9 | 0.0 | 4.1 | 8.4 | 0.0 | 3.0 | 3.0 | 0.0 | 8.2 | 4.7 | 13.0 | 3.0 |
| Grey (Greymouth) | 3.4 | 0.0 | 4.6 | 5.2 | 9.0 | 3.6 | 5.1 | 0.0 | 4.8 | 7.2 | 2.0 | 5.1 |
| Timaru | 3.5 | 0.0 | 4.8 | 4.5 | 6.0 | 3.6 | 3.6 | 0.0 | 8.6 | 7.0 | 0.0 | 3.9 |
| Southland (Invercargill) | 2.5 | 2.0 | 3.1 | 3.9 | 4.6 | 2.7 | 2.5 | 0.0 | 3.5 | 4.1 | 7.2 | 2.8 |
| Secondary total | 2.6 | 6.3 | 4.4 | 4.9 | 7.6 | 2.8 | 2.7 | 2.7 | 4.5 | 4.8 | 9.0 | 2.8 |
| Bay of Islands (Kawakawa) | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 |
| Dargaville | 2.8 | 0.0 | 2.0 | 0.0 | 0.0 | 2.8 | 3.0 | 0.0 | 7.0 | 0.0 | 0.0 | 3.1 |
| Kaitia | 2.8 | 0.0 | 2.8 | 2.5 | 0.0 | 2.8 | 2.8 | 0.0 | 5.8 | 11.0 | 0.0 | 2.9 |
| Hokianga | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 |
| Wellsford | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 1.3 | 0.0 | 0.0 | 0.0 | 0.0 | 1.3 |
| Warkworth | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 |
| Helensville | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| Birthcare Auckland | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 |
| Pukekohe | 3.7 | 0.0 | 4.0 | 4.9 | 9.0 | 3.7 | 3.6 | 0.0 | 4.8 | 11.3 | 0.0 | 3.8 |
| Papakura Obstetric | 3.1 | 0.0 | 3.6 | 5.4 | 1.0 | 3.1 | 3.4 | 0.0 | 4.8 | 5.6 | 4.5 | 3.5 |
| Botany Downs Maternity (South Auckland) | 3.4 | 0.0 | 4.9 | 6.3 | 10.0 | 3.5 | 3.0 | 4.0 | 4.6 | 4.1 | 0.0 | 3.1 |

Table 6.9 (continued): Average length of stay (days) for mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|--------|--------|--------|--------|-------------|-------|--------|--------|--------|--------|-------------|-------|
| | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total |
| Waihi Hospital | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 |
| Birthcare Huntly | 2.4 | 0.0 | 2.8 | 0.0 | 0.0 | 2.5 | 2.3 | 0.0 | 8.0 | 0.0 | 0.0 | 2.3 |
| Thames | 2.1 | 0.0 | 3.0 | 0.0 | 0.0 | 2.1 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| Rhoda Read (Morrinsville) | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 |
| Matariki (Te Awamutu) | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 |
| Te Kuiti | 1.4 | 0.0 | 0.0 | 7.0 | 0.0 | 1.5 | 1.4 | 0.0 | 0.0 | 2.0 | 0.0 | 1.4 |
| Taumarunui | 1.6 | 0.0 | 3.3 | 3.0 | 0.0 | 1.7 | 1.3 | 0.0 | 1.0 | 0.0 | 0.0 | 1.3 |
| Tokoroa | 1.5 | 0.0 | 2.5 | 4.0 | 0.0 | 1.5 | 1.3 | 0.0 | 1.3 | 2.5 | 0.0 | 1.3 |
| Pohlen Trust (Matamata) | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 |
| River Ridge (Hamilton) | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 |
| Taupo General | 1.6 | 0.0 | 1.3 | 0.0 | 0.0 | 1.6 | 1.7 | 0.0 | 3.0 | 0.0 | 0.0 | 1.7 |
| Te Puia Springs | 2.6 | 0.0 | 2.0 | 0.0 | 0.0 | 2.5 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| Hawera | 2.5 | 0.0 | 1.5 | 0.0 | 0.0 | 2.5 | 3.1 | 0.0 | 3.5 | 0.0 | 0.0 | 3.1 |
| Elizabeth R Hospital and Rest Home (Stratford) | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 3.1 | 0.0 | 0.0 | 0.0 | 0.0 | 3.1 |
| Waimarino Rural Health Centre (Raetihi) | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 |
| Marton | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Taihape | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 |
| Wairoa | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 1.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 1.5 |
| Chatham Islands | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 4.3 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 |
| Napier | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 | 20.0 | 0.0 | 2.9 |
| Waipukurau | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 |
| Dannevirke Community Hospital | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 | 2.8 | 0.0 | 2.5 | 0.0 | 0.0 | 2.8 |
| Horowhenua (Levin) | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 1.9 | 1.6 | 0.0 | 4.0 | 0.0 | 0.0 | 1.6 |
| Feilding Maternity | 2.9 | 0.0 | 3.0 | 0.0 | 0.0 | 2.9 | 2.5 | 0.0 | 5.0 | 0.0 | 0.0 | 2.5 |
| Paraparaumu | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 1.1 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 |
| Kenepuru (Porirua) | 1.3 | 0.0 | 5.3 | 2.0 | 0.0 | 1.3 | 1.5 | 0.0 | 1.0 | 0.0 | 0.0 | 1.5 |
| Motueka Maternity | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 |
| Golden Bay Community Hospital | 1.6 | 0.0 | 0.0 | 0.0 | 0.0 | 1.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 |
| Kaikoura | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 3.7 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 3.3 |
| St George's (Christchurch) | 3.6 | 6.0 | 4.5 | 4.7 | 5.3 | 3.7 | 4.1 | 4.0 | 4.2 | 4.6 | 4.6 | 4.1 |
| Avonlea (Christchurch) | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 |
| Burwood | 2.6 | 0.0 | 6.7 | 5.0 | 0.0 | 2.7 | 2.5 | 0.0 | 1.8 | 1.0 | 0.0 | 2.5 |
| Darfield | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 | 2.8 | 0.0 | 3.0 | 0.0 | 0.0 | 2.9 |
| Akaroa Community | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 3.8 | 0.0 | 0.0 | 0.0 | 0.0 | 3.8 |
| Waikari | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 |

Table 6.9 (continued): Average length of stay (days) for mothers, by patient clinical complexity level (PCCL) and facility (hospital data), 2000 and 2001

| Facility | 2000 | | | | | | 2001 | | | | | |
|--|-----------|-----------|-----------|-----------|----------------|-------|-----------|-----------|-----------|-----------|----------------|-------|
| | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total | PCCL 0 | PCCL 1 | PCCL 2 | PCCL 3 | Most severe | Total |
| Rangiora | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 3.5 | 3.3 | 0.0 | 2.0 | 0.0 | 0.0 | 3.3 |
| Ashburton | 3.5 | 0.0 | 3.6 | 5.0 | 0.0 | 3.5 | 3.3 | 0.0 | 5.0 | 0.0 | 0.0 | 3.4 |
| Buller (Westport) | 1.8 | 0.0 | 4.0 | 0.0 | 0.0 | 1.8 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| Oamaru | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 | 3.2 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 | 2.9 |
| Charlotte Jean Maternity Unit (Alexandra) | 2.7 | 0.0 | 2.0 | 0.0 | 0.0 | 2.6 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 |
| Dunstan | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 1.8 | 2.1 | 0.0 | 0.0 | 0.0 | 0.0 | 2.1 |
| Maniototo Health Services Ltd (Ranfurly) | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 2.3 | 2.6 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 |
| Gore | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.4 |
| Lakes District (Queenstown) | 1.9 | 0.0 | 0.0 | 3.0 | 0.0 | 1.9 | 2.0 | 0.0 | 0.0 | 3.7 | 0.0 | 2.1 |
| Tuatapere Maternity Hospital | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 2.8 |
| Northern Southland Birthing Centre (Lumsden) | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 2.5 | 2.8 | 0.0 | 4.0 | 0.0 | 0.0 | 2.8 |
| Winton Birthing Centre | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 3.9 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 4.4 |
| Primary total | 2.7 | 6.0 | 4.0 | 5.0 | 6.6 | 2.7 | 2.7 | 4.0 | 4.3 | 6.1 | 4.6 | 2.8 |
| Other facilities | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 2.3 | 0.0 | 3.2 | 0.0 | 0.0 | 2.3 |
| Total | 2.6 | 8.8 | 4.9 | 5.5 | 8.7 | 2.9 | 2.6 | 4.6 | 4.7 | 5.6 | 9.7 | 2.9 |

Data source: NMDS

The average length of stay increases with the level of complexity.

Table 6.10a: Gestational age at birth (percentage), by facility (hospital data), 2000

| Facility | Total numbers | Gestational age (weeks) | | | | | | Not reported | Total % |
|--|---------------|-------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|
| | | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | | |
| Greenlane/National Women's | 7963 | 24.3 | 33.0 | 29.2 | 22.2 | 14.1 | 10.5 | 1.6 | 14.3 |
| Middlemore | 3666 | 17.1 | 9.4 | 6.3 | 7.2 | 6.5 | 10.9 | 2.8 | 6.6 |
| Waikato | 2998 | 12.9 | 17.9 | 12.7 | 8.0 | 5.0 | 11.2 | 0.7 | 5.4 |
| Wellington | 3419 | 7.1 | 15.1 | 13.8 | 8.0 | 6.0 | 6.4 | 2.1 | 6.1 |
| Christchurch Women's | 4191 | 10.0 | 10.8 | 12.2 | 10.6 | 7.7 | 2.1 | 1.2 | 7.5 |
| Dunedin | 1784 | 5.7 | 6.1 | 7.0 | 4.1 | 3.2 | 1.6 | 2.2 | 3.2 |
| Tertiary total | 24,021 | 77.1 | 92.5 | 81.2 | 60.2 | 42.5 | 42.7 | 10.6 | 43.1 |
| Whangarei | 1361 | 5.7 | 0.9 | 1.1 | 2.7 | 2.5 | 3.7 | 0.4 | 2.4 |
| North Shore | 2987 | 0.0 | 0.0 | 0.9 | 2.9 | 5.8 | 2.8 | 1.3 | 5.4 |
| Waitakere | 2571 | 0.0 | 0.0 | 0.7 | 1.5 | 5.1 | 4.2 | 0.9 | 4.6 |
| Rotorua | 1365 | 1.4 | 0.5 | 0.2 | 2.9 | 2.5 | 2.8 | 0.9 | 2.4 |
| Tauranga | 1847 | 0.0 | 0.0 | 0.2 | 2.7 | 3.5 | 4.1 | 1.5 | 3.3 |
| Whakatane (including Opotiki and Murupara) | 725 | 0.0 | 0.0 | 0.2 | 0.8 | 1.3 | 1.4 | 1.4 | 1.3 |
| Gisborne | 734 | 0.0 | 0.0 | 0.5 | 1.3 | 1.4 | 1.2 | 0.4 | 1.3 |
| Taranaki Base | 1192 | 4.3 | 0.5 | 1.8 | 2.9 | 2.2 | 1.1 | 0.8 | 2.1 |
| Wanganui | 741 | 0.0 | 0.0 | 0.5 | 1.0 | 1.4 | 2.1 | 0.3 | 1.3 |
| Hastings | 2046 | 1.4 | 0.5 | 1.4 | 3.4 | 3.8 | 5.1 | 1.3 | 3.7 |
| Masterton | 465 | 0.0 | 0.0 | 0.0 | 0.7 | 0.9 | 0.4 | 0.2 | 0.8 |
| Palmerston North | 1846 | 4.3 | 1.9 | 3.6 | 4.1 | 3.4 | 4.2 | 0.1 | 3.3 |
| Hutt | 2005 | 0.0 | 0.9 | 1.1 | 3.7 | 3.7 | 4.5 | 0.1 | 3.6 |
| Wairau (Blenheim) | 462 | 0.0 | 0.0 | 0.2 | 0.6 | 0.9 | 0.4 | 0.0 | 0.8 |
| Nelson | 900 | 1.4 | 0.5 | 0.5 | 1.6 | 1.7 | 1.8 | 0.2 | 1.6 |
| Grey (Greymouth) | 280 | 0.0 | 0.0 | 0.2 | 0.2 | 0.5 | 0.5 | 0.7 | 0.5 |
| Timaru | 588 | 0.0 | 0.0 | 0.9 | 1.0 | 1.1 | 0.8 | 1.1 | 1.1 |
| Southland (Invercargill) | 1155 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 60.0 | 2.1 |
| Secondary total | 23,270 | 18.6 | 5.7 | 14.0 | 34.1 | 41.5 | 41.1 | 71.5 | 41.7 |
| Bay of Islands (Kawakawa) | 222 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.1 | 2.2 | 0.4 |
| Dargaville | 98 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.1 | 0.2 |
| Kaitaia | 269 | 0.0 | 0.0 | 0.5 | 0.3 | 0.5 | 0.9 | 0.3 | 0.5 |
| Hokianga | 60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.2 | 0.1 |
| Wellsford | 37 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Warkworth | 91 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.1 | 0.2 |
| Helensville | 44 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Birthcare Auckland | 71 | 0.0 | 0.0 | 0.9 | 0.0 | 0.1 | 0.7 | 0.7 | 0.1 |
| Pukekohe | 660 | 0.0 | 0.5 | 0.0 | 1.4 | 1.2 | 1.7 | 0.9 | 1.2 |
| Papakura Obstetric | 974 | 0.0 | 0.9 | 1.1 | 1.1 | 1.8 | 2.3 | 1.3 | 1.7 |
| Botany Downs Maternity (South Auckland) | 1140 | 0.0 | 0.0 | 0.7 | 0.9 | 2.2 | 2.9 | 0.8 | 2.0 |
| Waihi Hospital | 54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.1 | 0.1 |
| Birthcare Huntly | 193 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.7 | 0.4 | 0.3 |
| Thames | 120 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.0 | 0.2 |
| Rhoda Read (Morrinsville) | 160 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.1 | 0.3 |
| Matariki (Te Awamutu) | 165 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.4 | 0.1 | 0.3 |
| Te Kuiti | 89 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Taumarunui | 101 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.4 | 0.1 | 0.2 |
| Tokoroa | 125 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 |
| Pohlen Trust (Matamata) | 113 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | 0.0 | 0.2 |
| River Ridge (Hamilton) | 426 | 0.0 | 0.0 | 0.0 | 0.1 | 0.8 | 1.4 | 0.6 | 0.8 |

Table 6.10a (continued): Gestational age at birth (percentage), by facility (hospital data), 2000

| Facility | Total numbers | Gestational age (weeks) | | | | | | Not reported | Total % |
|--|---------------|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | | |
| Taupo General | 220 | 4.3 | 0.5 | 0.5 | 0.0 | 0.4 | 0.4 | 0.1 | 0.4 |
| Te Puia Springs | 27 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Hawera | 97 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 |
| Elizabeth R Hospital and Rest Home (Stratford) | 77 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | 0.1 |
| Waimarino Rural Health Centre (Raetihi) | 18 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Marton | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Taihape | 39 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Wairoa | 86 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.3 | 0.2 |
| Chatham Islands | 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Napier | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Waipukurau | 44 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| Dannevirke Community Hospital | 67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| Horowhenua (Levin) | 180 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.1 | 0.3 | 0.3 |
| Feilding Maternity | 99 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.0 | 0.2 |
| Paraparaumu | 112 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 |
| Kenepuru (Porirua) | 340 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | 0.2 | 2.8 | 0.6 |
| Motueka Maternity | 67 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Golden Bay Community Hospital | 33 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Kaikoura | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| St George's (Christchurch) | 687 | 0.0 | 0.0 | 0.5 | 0.2 | 1.4 | 0.2 | 0.3 | 1.2 |
| Avonlea (Christchurch) | 66 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Burwood | 219 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.1 | 0.1 | 0.4 |
| Darfield | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Akaroa Community | 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 |
| Waikari | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.1 |
| Rangiora | 83 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.1 |
| Ashburton | 155 | 0.0 | 0.0 | 0.2 | 0.0 | 0.3 | 0.3 | 0.1 | 0.3 |
| Buller (Westport) | 25 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 0.0 |
| Oamaru | 96 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 |
| Charlotte Jean Maternity Unit (Alexandra) | 38 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| Dunstan | 20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Maniototo Health Services Ltd (Ranfurly) | 4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 31 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Lakes District (Queenstown) | 82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.3 | 0.1 |
| Tuatapere Maternity Hospital | 12 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 26 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 32 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Primary total | 8415 | 4.3 | 1.9 | 4.8 | 5.7 | 15.8 | 16.2 | 17.9 | 15.1 |
| Other facilities | 74 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Total | 55,780 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Data source: NMDS

Table 6.10b: Gestational age at birth (percentage), by facility (hospital data), 2001

| Facility | Total numbers | Gestational age (weeks) | | | | | | Not reported | Total % |
|--|---------------|-------------------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|
| | | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | | |
| Greenlane/National Women's | 7576 | 26.7 | 25.3 | 26.8 | 22.1 | 13.5 | 8.5 | 2.6 | 13.9 |
| Middlemore | 3794 | 13.3 | 8.4 | 8.5 | 7.3 | 6.8 | 12.1 | 3.3 | 7.0 |
| Waikato | 3080 | 8.3 | 17.9 | 13.4 | 8.0 | 5.2 | 12.1 | 2.0 | 5.6 |
| Wellington | 3305 | 11.7 | 16.3 | 13.8 | 7.6 | 5.9 | 4.0 | 4.4 | 6.1 |
| Christchurch Women's | 4332 | 5.0 | 12.6 | 11.4 | 10.7 | 7.9 | 3.4 | 3.2 | 7.9 |
| Dunedin | 1683 | 8.3 | 5.8 | 6.1 | 4.6 | 3.0 | 2.3 | 1.5 | 3.1 |
| Tertiary total | 23,770 | 73.3 | 86.3 | 80.1 | 60.3 | 42.4 | 42.4 | 16.9 | 43.6 |
| Whangarei | 1237 | 0.0 | 0.5 | 0.4 | 2.3 | 2.3 | 1.9 | 0.7 | 2.3 |
| North Shore | 2999 | 0.0 | 0.0 | 0.6 | 3.3 | 5.9 | 2.3 | 2.5 | 5.5 |
| Waitakere | 2374 | 0.0 | 0.0 | 0.4 | 1.0 | 4.7 | 4.5 | 2.8 | 4.4 |
| Rotorua | 1321 | 5.0 | 2.1 | 1.6 | 2.1 | 2.5 | 2.9 | 1.3 | 2.4 |
| Tauranga | 1763 | 0.0 | 0.0 | 0.6 | 2.7 | 3.3 | 3.5 | 3.2 | 3.2 |
| Whakatane (including Opotiki and Murupara) | 712 | 0.0 | 0.0 | 0.6 | 0.8 | 1.3 | 1.0 | 2.6 | 1.3 |
| Gisborne | 735 | 0.0 | 1.6 | 0.2 | 1.4 | 1.4 | 2.2 | 0.4 | 1.3 |
| Taranaki Base | 1161 | 0.0 | 2.1 | 0.8 | 3.4 | 2.1 | 1.6 | 2.2 | 2.1 |
| Wanganui | 702 | 3.3 | 0.0 | 0.4 | 1.4 | 1.3 | 2.3 | 0.5 | 1.3 |
| Hastings | 1847 | 1.7 | 0.5 | 4.3 | 3.0 | 3.4 | 6.3 | 2.0 | 3.4 |
| Masterton | 438 | 5.0 | 0.5 | 0.0 | 0.8 | 0.8 | 0.3 | 0.1 | 0.8 |
| Palmerston North | 1790 | 1.7 | 0.5 | 3.3 | 4.5 | 3.3 | 3.4 | 0.3 | 3.3 |
| Hutt | 2077 | 5.0 | 1.6 | 1.2 | 3.8 | 3.9 | 3.8 | 0.7 | 3.8 |
| Wairau (Blenheim) | 433 | 0.0 | 0.5 | 0.2 | 0.7 | 0.8 | 0.3 | 0.0 | 0.8 |
| Nelson | 874 | 1.7 | 1.6 | 0.2 | 1.4 | 1.6 | 2.6 | 0.3 | 1.6 |
| Grey (Greymouth) | 285 | 0.0 | 0.5 | 0.2 | 0.4 | 0.5 | 0.1 | 0.5 | 0.5 |
| Timaru | 596 | 0.0 | 0.0 | 0.4 | 0.8 | 1.1 | 2.0 | 0.7 | 1.1 |
| Southland (Invercargill) | 1095 | 0.0 | 0.5 | 1.0 | 1.5 | 1.6 | 0.5 | 27.0 | 2.0 |
| Secondary total | 22,439 | 23.3 | 12.6 | 16.5 | 35.4 | 41.8 | 41.7 | 48.1 | 41.1 |
| Bay of Islands (Kawakawa) | 220 | 1.7 | 0.0 | 0.0 | 0.1 | 0.4 | 0.0 | 1.4 | 0.4 |
| Dargaville | 89 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | 0.0 | 0.2 |
| Kaitaia | 241 | 0.0 | 0.0 | 0.2 | 0.1 | 0.5 | 0.3 | 0.1 | 0.4 |
| Hokianga | 14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Wellsford | 29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Warkworth | 91 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.2 |
| Helensville | 29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Birthcare Auckland | 154 | 1.7 | 0.0 | 0.0 | 0.0 | 0.2 | 0.5 | 3.3 | 0.3 |
| Pukekohe | 608 | 0.0 | 0.0 | 0.6 | 1.1 | 1.1 | 1.9 | 1.3 | 1.1 |
| Papakura Obstetric | 854 | 0.0 | 0.5 | 0.6 | 0.7 | 1.6 | 2.2 | 2.7 | 1.6 |
| Botany Downs Maternity (South Auckland) | 1142 | 0.0 | 0.0 | 1.0 | 0.8 | 2.2 | 2.8 | 2.8 | 2.1 |
| Waihi Hospital | 74 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 |
| Birthcare Huntly | 174 | 0.0 | 0.0 | 0.4 | 0.2 | 0.3 | 0.7 | 0.9 | 0.3 |
| Thames | 139 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.3 | 0.5 | 0.3 |
| Rhoda Read (Morrinsville) | 139 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.3 | 0.4 | 0.3 |
| Matariki (Te Awamutu) | 124 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.3 | 0.2 |
| Te Kuiti | 82 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.3 | 0.2 |
| Taumarunui | 81 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.3 | 0.0 | 0.1 |
| Tokoroa | 130 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.3 | 0.1 | 0.2 |
| Pohlen Trust (Matamata) | 126 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 0.0 | 0.2 |
| River Ridge (Hamilton) | 462 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 1.6 | 0.9 | 0.8 |

Table 6.10b (continued): Gestational age at birth (percentage), by facility (hospital data), 2001

| Facility | Total numbers | Gestational age (weeks) | | | | | | Not reported | Total % |
|--|---------------|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | 20–23 | 24–27 | 28–31 | 32–36 | 37–41 | 42+ | | |
| Taupo General | 167 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.0 | 0.3 |
| Te Puia Springs | 41 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.5 | 0.1 |
| Hawera | 99 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.2 |
| Elizabeth R Hospital and Rest Home (Stratford) | 54 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Waimarino Rural Health Centre (Raetihi) | 11 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Marton | 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Taihape | 33 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Wairoa | 90 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.2 |
| Chatham Islands | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Napier | 142 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.8 | 0.2 | 0.3 |
| Waipukurau | 43 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Dannevirke Community Hospital | 46 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Horowhenua (Levin) | 140 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.1 | 0.0 | 0.3 |
| Feilding Maternity | 85 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.0 | 0.2 |
| Paraparaumu | 134 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.1 | 0.6 | 0.2 |
| Kenepuru (Porirua) | 361 | 0.0 | 0.0 | 0.0 | 0.2 | 0.6 | 0.2 | 6.9 | 0.7 |
| Motueka Maternity | 82 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 |
| Golden Bay Community Hospital | 26 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| Kaikoura | 15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| St George's (Christchurch) | 697 | 0.0 | 0.5 | 0.4 | 0.1 | 1.4 | 0.1 | 0.7 | 1.3 |
| Avonlea (Christchurch) | 62 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.0 | 0.1 |
| Burwood | 176 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 0.2 | 0.1 | 0.3 |
| Darfield | 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Akaroa Community | 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Waikari | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Lincoln | 71 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 |
| Rangiora | 88 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.6 | 0.2 |
| Ashburton | 163 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.5 | 0.0 | 0.3 |
| Buller (Westport) | 20 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.0 |
| Oamaru | 91 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.1 | 0.2 | 0.2 |
| Charlotte Jean Maternity Unit (Alexandra) | 29 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 |
| Dunstan | 31 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | 0.1 |
| Maniototo Health Services Ltd (Ranfurly) | 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Gore | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Clutha Health First (Balclutha) | 42 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| Lakes District (Queenstown) | 57 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 0.1 |
| Tuatapere Maternity Hospital | 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Northern Southland Birthing Centre (Lumsden) | 24 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Winton Birthing Centre | 39 | 0.0 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 |
| Primary total | 8192 | 3.3 | 1.1 | 3.5 | 4.2 | 15.6 | 15.9 | 33.5 | 15.0 |
| Other facilities | 141 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 1.5 | 0.3 |
| Total | 54,542 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Data source: NMDS

7. Lead maternity carer

This section looks at lead maternity carers (LMCs). All women are expected to choose a practitioner as their LMC during their pregnancy: a midwife, general practitioner, or a specialist obstetrician. The LMC takes ‘responsibility for the care provided to the woman throughout her pregnancy and postpartum period, including the management of labour and birth.’ (Health Funding Authority 1998)

Working arrangements of LMCs vary somewhat around the country according to differences in contracts and local practices. In particular, practitioners have various arrangements about teamwork which may mean that, although there is a named LMC, care is shared between several practitioners. This is frequently the case where women choose to receive care from a hospital provider. Also, obstetricians and midwives may work either in a hospital or as self-employed practitioners. Private obstetricians are more likely to deal with medium-risk women, whereas hospital obstetricians usually deal with higher-risk women. This analysis groups all obstetricians together and all midwives together, posing a problem due to differences in work practices and client characteristics. These practice variations mean that at present caution must be used when comparing outcomes by LMC type.

Table 7.1 shows that most women have only one LMC per pregnancy.

Data integrity

All information in this section is obtained from the MNIS database, and so 30 percent of the data is missing from each of the tables in this section. Data on the LMC is obtained from claims submitted to Health Benefits (HB) under the Section 51 maternity notice. This analysis from MNIS needs to be interpreted with caution because of uncertainty around the quality of the data. A problem identified has been that in some cases there is a slight variation in the total number of women obtained. Some of the difference can be explained by the fact that when LMC data is linked to NMDS events (for example, birth type), home births are excluded. However, the differences in numbers are likely to be caused mainly by duplicate gravida numbers and duplicate claim events. Also, a proportion of the data is missing (for example, the LMC occupation is not stated for all claims, particularly hospital claims). Note also that all LMC analysis can exclude some HHS practitioners, as only a small proportion of HHS practitioners can be identified.

Table 7.1: Number of LMC registrations per mother, 2000 and 2001

| Number of registrations per mother | 2000 | | 2001 | |
|------------------------------------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| 0 | 1326 | 3.3 | 2249 | 5.8 |
| 1 | 32,307 | 80.2 | 30,084 | 77.8 |
| 2 | 5168 | 12.8 | 4571 | 11.8 |
| 3 | 1257 | 3.1 | 1312 | 3.4 |
| >3 | 229 | 0.6 | 477 | 1.2 |
| Total | 40,287 | 100.0 | 38,693 | 100.0 |

Data source: MNIS

Information on the number of LMC registrations is available for all mothers who gave birth in 2000 and 2001 and were recorded in MNIS (40,287 mothers in 2000 and 38,693 mothers in 2001).

Table 7.2 records the LMC type whom the mother registers with for her first registration. The LMC type each mother registers with is recorded in the registration claim form.

The data shows that midwives are more likely to be the LMC that women first register with (69.9 percent in 2000 and 73.5 percent in 2001).

Table 7.2: Original LMC type at registration, 2000 and 2001

| LMC type | 2000 | | 2001 | |
|----------------------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| Midwife | 24,140 | 69.9 | 24,062 | 73.5 |
| General practitioner | 5699 | 16.5 | 3851 | 11.8 |
| Obstetrician | 4694 | 13.6 | 4846 | 14.8 |
| Total | 34,533 | 100.0 | 32,759 | 100.0 |

Data source: MNIS

Information on the LMC type was not provided or was an organisation for 5754 (14.3 percent) women in 2000 and 5934 (15.3 percent) women in 2001 who registered with an LMC. Therefore, the total numbers in Table 7.2 differ from those in Table 7.1.

Table 7.3: LMC type at birth, 2000 and 2001

| LMC type | 2000 | | 2001 | |
|----------------------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| Midwife | 23,941 | 70.8 | 23,467 | 73.1 |
| General practitioner | 4519 | 13.4 | 3095 | 9.6 |
| Obstetrician | 5347 | 15.8 | 5544 | 17.3 |
| Total | 33,807 | 100.0 | 32,106 | 100.0 |

Data source: MNIS

Information on the LMC type at birth was not provided or was an organisation for 6480 (16.1 percent) women in 2000 and 6587 (17.0 percent) women in 2001 who registered with an LMC. Table 7.3 shows the registered LMC type at birth.

Table 7.4: Original LMC by mother's age, 2000 and 2001

| Age of mother | Midwife | | GP | | Obstetrician | | Total | |
|---------------|---------|------|-------|------|--------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Under 16 | 44 | 78.6 | 6 | 10.7 | 6 | 10.7 | 56 | 100.0 |
| 16–19 | 1452 | 76.9 | 247 | 13.1 | 188 | 10.0 | 1887 | 100.0 |
| 20–14 | 4514 | 76.5 | 887 | 15.0 | 499 | 8.5 | 5900 | 100.0 |
| 25–29 | 6290 | 72.0 | 1442 | 16.5 | 1007 | 11.5 | 8739 | 100.0 |
| 30–34 | 6732 | 68.2 | 1716 | 17.4 | 1428 | 14.5 | 9876 | 100.0 |
| 35–39 | 3162 | 62.8 | 896 | 17.8 | 981 | 19.5 | 5039 | 100.0 |
| 40+ | 665 | 60.8 | 179 | 16.4 | 249 | 22.8 | 1093 | 100.0 |
| Total | 22,859 | 70.1 | 5373 | 16.5 | 4358 | 13.4 | 32,590 | 100.0 |
| 2001 | | | | | | | | |
| Under 16 | 43 | 75.4 | 6 | 10.5 | 8 | 14.0 | 57 | 100.0 |
| 16–19 | 1444 | 81.3 | 172 | 9.7 | 160 | 9.0 | 1776 | 100.0 |
| 20–24 | 4368 | 79.0 | 606 | 11.0 | 554 | 10.0 | 5528 | 100.0 |
| 25–29 | 6117 | 76.4 | 957 | 12.0 | 929 | 11.6 | 8003 | 100.0 |
| 30–34 | 6874 | 72.3 | 1124 | 11.8 | 1507 | 15.9 | 9505 | 100.0 |
| 35–39 | 3300 | 66.5 | 612 | 12.3 | 1047 | 21.1 | 4959 | 100.0 |
| 40+ | 699 | 62.3 | 129 | 11.5 | 294 | 26.2 | 1,122 | 100.0 |
| Total | 22,845 | 73.8 | 3,606 | 11.7 | 4,499 | 14.5 | 30,950 | 100.0 |

Data source: MNIS

In 2000, information on LMC type was not provided or was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and information on the age of mother was not provided for a further 1943 women (4.8 percent).

In 2001, information on LMC type was not provided or was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and information on the age of mother was not provided for a further 1809 women (4.7 percent).

Table 7.4 shows that younger women are more likely to have a midwife LMC.

Table 7.5: Original LMC by ethnicity of mother, 2000 and 2001

| Ethnic origin of mother | Midwife | | GP | | Obstetrician | | Total | |
|-------------------------|---------|------|------|------|--------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| European | 12,219 | 71.1 | 2657 | 15.5 | 2308 | 13.4 | 17,184 | 100.0 |
| Maori | 4797 | 76.1 | 959 | 15.2 | 547 | 8.7 | 6303 | 100.0 |
| Pacific peoples | 1221 | 58.5 | 403 | 19.3 | 462 | 22.1 | 2086 | 100.0 |
| Asian | 719 | 56.3 | 287 | 22.5 | 270 | 21.2 | 1276 | 100.0 |
| Other | 3573 | 67.5 | 930 | 17.6 | 789 | 14.9 | 5292 | 100.0 |
| Not reported | 1560 | 67.0 | 456 | 19.6 | 311 | 13.4 | 2327 | 100.0 |
| Total | 24,089 | 69.9 | 5692 | 16.5 | 4687 | 13.6 | 34,468 | 100.0 |
| 2001 | | | | | | | | |
| European | 12,895 | 74.3 | 1878 | 10.8 | 2575 | 14.8 | 17,348 | 100.0 |
| Maori | 5029 | 80.0 | 637 | 10.1 | 617 | 9.8 | 6283 | 100.0 |
| Pacific peoples | 1425 | 62.0 | 362 | 15.8 | 511 | 22.2 | 2298 | 100.0 |
| Asian | 890 | 59.5 | 289 | 19.3 | 318 | 21.2 | 1497 | 100.0 |
| Other | 2545 | 71.4 | 445 | 12.5 | 573 | 16.1 | 3563 | 100.0 |
| Not reported | 1157 | 71.2 | 224 | 13.8 | 244 | 15.0 | 1625 | 100.0 |
| Total | 23,941 | 73.4 | 3835 | 11.8 | 4838 | 14.8 | 32,614 | 100.0 |

Data source: MNIS

In 2000, information on LMC type (Table 7.5, above) was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and information on ethnicity was not provided for a further 65 women. If ethnicity information is not given by HB, it is obtained from the NMDS.

In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and information on ethnicity was not provided for a further 145 women. If ethnicity information is not given by HB, it is obtained from the NMDS.

During 2000 and 2001, many hospitals were claiming under the Section 51 Maternity Notice for LMC services provided to women who had transferred to the secondary maternity service (eg, the labour and birth module for elective caesarean sections).

In 2000, information on LMC type (Table 7.6, opposite) was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and information on the DHB of residence was not provided for 644 women (1.6 percent).

In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and information on the DHB of residence was not provided for 363 women (0.9 percent).

Table 7.6: Original LMC at registration, by DHB of mother's place of residence, 2000 and 2001

| DHB region | Midwife | | GP | | Obstetrician | | Total | |
|--------------------|---------|------|------|------|--------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Northland | 1432 | 85.4 | 180 | 10.7 | 65 | 3.9 | 1677 | 100.0 |
| Waitemata | 1779 | 58.6 | 936 | 30.8 | 320 | 10.5 | 3035 | 100.0 |
| Auckland | 1657 | 53.4 | 709 | 22.8 | 739 | 23.8 | 3105 | 100.0 |
| Counties Manukau | 2455 | 59.0 | 629 | 15.1 | 1074 | 25.8 | 4158 | 100.0 |
| Waikato | 2655 | 85.9 | 401 | 13.0 | 34 | 1.1 | 3090 | 100.0 |
| Lakes | 1273 | 89.2 | 142 | 10.0 | 12 | 0.8 | 1427 | 100.0 |
| Bay of Plenty | 2276 | 95.5 | 88 | 3.7 | 20 | 0.8 | 2384 | 100.0 |
| Tairāwhiti | 479 | 73.6 | 158 | 24.3 | 14 | 2.2 | 651 | 100.0 |
| Hawke's Bay | 1096 | 55.7 | 713 | 36.2 | 160 | 8.1 | 1969 | 100.0 |
| Taranaki | 768 | 63.9 | 102 | 8.5 | 332 | 27.6 | 1202 | 100.0 |
| MidCentral | 813 | 50.4 | 434 | 26.9 | 365 | 22.6 | 1612 | 100.0 |
| Whanganui | 667 | 81.6 | 81 | 9.9 | 69 | 8.4 | 817 | 100.0 |
| Capital and Coast | 211 | 57.5 | 52 | 14.2 | 104 | 28.3 | 367 | 100.0 |
| Hutt | 731 | 46.5 | 392 | 24.9 | 450 | 28.6 | 1573 | 100.0 |
| Wairarapa | 386 | 93.7 | 10 | 2.4 | 16 | 3.9 | 412 | 100.0 |
| Nelson Marlborough | 972 | 71.9 | 212 | 15.7 | 168 | 12.4 | 1352 | 100.0 |
| West Coast | 42 | 93.3 | 3 | 6.7 | 0 | 0.0 | 45 | 100.0 |
| Canterbury | 3191 | 92.3 | 107 | 3.1 | 159 | 4.6 | 3457 | 100.0 |
| South Canterbury | 118 | 25.3 | 11 | 2.4 | 338 | 72.4 | 467 | 100.0 |
| Otago | 352 | 67.6 | 123 | 23.6 | 46 | 8.8 | 521 | 100.0 |
| Southland | 325 | 57.2 | 121 | 21.3 | 122 | 21.5 | 568 | 100.0 |
| Total | 23,678 | 69.9 | 5604 | 16.5 | 4607 | 13.6 | 33,889 | 100.0 |
| 2001 | | | | | | | | |
| Northland | 1451 | 90.9 | 77 | 4.8 | 68 | 4.3 | 1596 | 100.0 |
| Waitemata | 2032 | 73.9 | 361 | 13.1 | 356 | 13.0 | 2749 | 100.0 |
| Auckland | 1703 | 55.7 | 494 | 16.2 | 859 | 28.1 | 3056 | 100.0 |
| Counties Manukau | 2406 | 59.1 | 527 | 13.0 | 1135 | 27.9 | 4068 | 100.0 |
| Waikato | 2647 | 88.8 | 307 | 10.3 | 28 | 0.9 | 2982 | 100.0 |
| Lakes | 1138 | 91.5 | 74 | 5.9 | 32 | 2.6 | 1244 | 100.0 |
| Bay of Plenty | 2175 | 97.1 | 50 | 2.2 | 15 | 0.7 | 2240 | 100.0 |
| Tairāwhiti | 499 | 77.0 | 127 | 19.6 | 22 | 3.4 | 648 | 100.0 |
| Hawke's Bay | 1176 | 61.5 | 553 | 28.9 | 184 | 9.6 | 1913 | 100.0 |
| Taranaki | 807 | 70.4 | 60 | 5.2 | 279 | 24.3 | 1146 | 100.0 |
| MidCentral | 873 | 56.4 | 346 | 22.3 | 330 | 21.3 | 1549 | 100.0 |
| Whanganui | 591 | 83.7 | 34 | 4.8 | 81 | 11.5 | 706 | 100.0 |
| Capital and Coast | 154 | 59.0 | 26 | 10.0 | 81 | 31.0 | 261 | 100.0 |
| Hutt | 832 | 50.0 | 388 | 23.3 | 445 | 26.7 | 1665 | 100.0 |
| Wairarapa | 423 | 97.7 | 2 | 0.5 | 8 | 1.8 | 433 | 100.0 |
| Nelson Marlborough | 989 | 79.6 | 104 | 8.4 | 150 | 12.1 | 1243 | 100.0 |
| West Coast | 27 | 77.1 | 2 | 5.7 | 6 | 17.1 | 35 | 100.0 |
| Canterbury | 3076 | 93.2 | 143 | 4.3 | 82 | 2.5 | 3301 | 100.0 |
| South Canterbury | 96 | 18.9 | 4 | 0.8 | 408 | 80.3 | 508 | 100.0 |
| Otago | 300 | 77.5 | 47 | 12.1 | 40 | 10.3 | 387 | 100.0 |
| Southland | 421 | 63.2 | 92 | 13.8 | 153 | 23.0 | 666 | 100.0 |
| Total | 23,816 | 73.5 | 3818 | 11.8 | 4762 | 14.7 | 32,396 | 100.0 |

Data source: MNIS

Table 7.7: Original LMC, by mother's parity, 2000 and 2001

| Parity | Midwife | | GP | | Obstetrician | | Total | |
|-------------|---------|-------|------|------|--------------|------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| 0 | 8842 | 69.2 | 2183 | 16.7 | 1789 | 14.0 | 12,769 | 100.0 |
| 1 | 7616 | 69.9 | 1811 | 16.6 | 1466 | 13.5 | 10,893 | 100.0 |
| 2 | 4070 | 70.8 | 905 | 15.8 | 770 | 13.4 | 5745 | 100.0 |
| 3 | 1863 | 71.2 | 423 | 16.2 | 330 | 12.6 | 2616 | 100.0 |
| 4 | 857 | 70.5 | 210 | 17.3 | 148 | 12.2 | 1215 | 100.0 |
| 5 | 404 | 71.4 | 80 | 14.1 | 82 | 14.5 | 566 | 100.0 |
| 6 | 194 | 71.9 | 32 | 11.9 | 44 | 16.3 | 270 | 100.0 |
| 7 | 79 | 62.2 | 18 | 14.2 | 30 | 23.6 | 127 | 100.0 |
| 8 | 39 | 65.0 | 13 | 21.7 | 8 | 13.3 | 60 | 100.0 |
| 9 | 11 | 78.6 | 1 | 7.1 | 2 | 14.3 | 14 | 100.0 |
| 10 | 8 | 61.5 | 3 | 23.1 | 2 | 15.4 | 13 | 100.0 |
| 11 | 5 | 83.3 | 1 | 16.7 | 0 | 0.0 | 6 | 100.0 |
| 12 | 1 | 50.0 | 0 | 0.0 | 1 | 50.0 | 2 | 100.0 |
| Total | 23,989 | 69.9 | 5635 | 16.4 | 4672 | 13.6 | 34,296 | 100.0 |
| 2001 | | | | | | | | |
| 0 | 8600 | 73.2 | 1375 | 11.7 | 1768 | 15.1 | 11,743 | 100.0 |
| 1 | 7525 | 72.6 | 1216 | 11.7 | 1626 | 15.7 | 10,367 | 100.0 |
| 2 | 4043 | 74.6 | 631 | 11.6 | 743 | 13.7 | 5417 | 100.0 |
| 3 | 1784 | 74.0 | 280 | 11.6 | 348 | 14.4 | 2412 | 100.0 |
| 4 | 854 | 75.1 | 143 | 12.6 | 140 | 12.3 | 1137 | 100.0 |
| 5 | 391 | 71.2 | 59 | 10.7 | 99 | 18.0 | 549 | 100.0 |
| 6 | 186 | 75.0 | 28 | 11.3 | 34 | 13.7 | 248 | 100.0 |
| 7 | 98 | 75.4 | 15 | 11.5 | 17 | 13.1 | 130 | 100.0 |
| 8 | 37 | 68.5 | 7 | 13.0 | 10 | 18.5 | 54 | 100.0 |
| 9 | 24 | 77.4 | 0 | 0.0 | 7 | 22.6 | 31 | 100.0 |
| 10 | 6 | 50.0 | 1 | 8.3 | 5 | 41.7 | 12 | 100.0 |
| 11 | 2 | 33.3 | 4 | 66.7 | 0 | 0.0 | 6 | 100.0 |
| 12 | 3 | 100.0 | 0 | 0.0 | 0 | 0.0 | 3 | 100.0 |
| Total | 23,553 | 73.4 | 3759 | 11.7 | 4797 | 14.9 | 32,109 | 100.0 |

Data source: MNIS

In 2000, information on LMC type was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and there was no information given on the parity of a further 237 women.

In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and there was no information given on the parity of a further 650 women.

Table 7.8: First registration at time of birth, 2000 and 2001

| LMC type | 2000 | | 2001 | |
|----------------------|--------|------------|--------|------------|
| | Number | Percentage | Number | Percentage |
| Midwife | 362 | 55.8 | 445 | 52.7 |
| General practitioner | 57 | 8.8 | 43 | 5.1 |
| Obstetrician | 230 | 35.4 | 356 | 42.2 |
| Total | 649 | 100.0 | 844 | 100.0 |

Data source: MNIS

Table 7.8 shows the number of women who had their first registration with a LMC at the time they gave birth.

Midwives had the highest rate of first registrations at the time of birth.

Table 7.9: Outcome of birth, by original LMC, 2000 and 2001

| Outcome of birth | Midwife | | GP | | Obstetrician | | Total | |
|--------------------------|---------|-------|------|-------|--------------|-------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Single live birth | 23,356 | 96.8 | 5568 | 97.7 | 4222 | 89.9 | 33,146 | 96.0 |
| Single stillbirth | 122 | 0.5 | 30 | 0.5 | 33 | 0.7 | 185 | 0.5 |
| Twin live birth | 335 | 1.4 | 82 | 1.4 | 138 | 2.9 | 555 | 1.6 |
| Twin stillbirth | 3 | 0.0 | 1 | 0.0 | 1 | 0.0 | 5 | 0.0 |
| Twin live and stillbirth | 8 | 0.0 | 1 | 0.0 | 3 | 0.1 | 12 | 0.0 |
| Not reported | 316 | 1.3 | 17 | 0.3 | 297 | 6.3 | 630 | 1.8 |
| Total | 24,140 | 100.0 | 5699 | 100.0 | 4694 | 100.0 | 34,533 | 100.0 |
| 2001 | | | | | | | | |
| Single live birth | 23,459 | 97.5 | 3781 | 98.2 | 4665 | 96.3 | 31,905 | 97.4 |
| Single stillbirth | 140 | 0.6 | 23 | 0.6 | 30 | 0.6 | 193 | 0.6 |
| Twin live birth | 312 | 1.3 | 41 | 1.1 | 146 | 3.0 | 499 | 1.5 |
| Twin stillbirth | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Twin live and stillbirth | 4 | 0.0 | 0 | 0.0 | 4 | 0.1 | 8 | 0.0 |
| Not reported | 147 | 0.6 | 6 | 0.2 | 1 | 0.0 | 154 | 0.5 |
| Total | 24,062 | 100.0 | 3851 | 100.0 | 4846 | 100.0 | 32,759 | 100.0 |

Data source: MNIS

This information was obtained from the Section 51 Maternity Notice claim forms. In 2000, information on LMC type was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC. In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC.

Table 7.10: Type of birth, by original LMC, 2000 and 2001

| Type of birth | Midwife | | GP | | Obstetrician | | Total | |
|----------------------------|---------|-------|------|-------|--------------|-------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| Acute caesarean section | 2701 | 11.9 | 754 | 13.6 | 815 | 17.3 | 4270 | 13.0 |
| Elective caesarean section | 1066 | 4.7 | 307 | 5.5 | 569 | 12.1 | 1942 | 5.9 |
| Vaginal breech birth | 192 | 0.8 | 37 | 0.7 | 57 | 1.2 | 286 | 0.9 |
| Forceps birth | 1139 | 5.0 | 279 | 5.0 | 285 | 6.0 | 1703 | 5.2 |
| Vacuum extraction | 1301 | 5.7 | 317 | 5.7 | 263 | 5.6 | 1881 | 5.7 |
| Normal birth | 16,285 | 71.8 | 3845 | 69.4 | 2723 | 57.8 | 22,853 | 69.4 |
| Total | 22,684 | 100.0 | 5539 | 100.0 | 4712 | 100.0 | 32,935 | 100.0 |
| 2001 | | | | | | | | |
| Acute caesarean section | 2775 | 12.5 | 512 | 13.9 | 847 | 18.1 | 4134 | 13.5 |
| Elective caesarean section | 1190 | 5.4 | 248 | 6.7 | 762 | 16.3 | 2200 | 7.2 |
| Vaginal breech birth | 150 | 0.7 | 16 | 0.4 | 42 | 0.9 | 208 | 0.7 |
| Forceps birth | 899 | 4.0 | 164 | 4.5 | 239 | 5.1 | 1302 | 4.3 |
| Vacuum extraction | 1237 | 5.6 | 227 | 6.2 | 254 | 5.4 | 1718 | 5.6 |
| Normal birth | 15,950 | 71.8 | 2518 | 68.3 | 2544 | 54.3 | 21,012 | 68.7 |
| Total | 22,201 | 100.0 | 3685 | 100.0 | 4688 | 100.0 | 30,574 | 100.0 |

Data source: MNIS

In 2000, information on LMC type was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and a further 1598 (4.0 percent) did not have their birth type stated (these are likely to be home births where birth-type information is not provided, as this is obtained from NMDS clinical codes obtained at discharge from hospital).

In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and a further 2185 (5.6 percent) did not have their birth type stated (these are likely to be home births where birth-type information is not provided, as this is obtained from NMDS clinical codes obtained at discharge from hospital).

Table 7.11: Interventions by original LMC, 2000 and 2001

| Type of birth | Midwife | | GP | | Obstetrician | | Total | |
|----------------------------|---------|------------------------------|------|------------------------------|--------------|------------------------------|-------|------------------------------|
| | No | Rate per 100 hospital births | No | Rate per 100 hospital births | No | Rate per 100 hospital births | No | Rate per 100 hospital births |
| 2000 | | | | | | | | |
| Acute caesarean section | 2701 | 11.3 | 754 | 13.4 | 815 | 17.4 | 4270 | 12.5 |
| Elective caesarean section | 1066 | 4.4 | 307 | 5.4 | 569 | 12.2 | 1942 | 5.7 |
| Forceps birth | 1139 | 4.7 | 279 | 5.0 | 285 | 6.1 | 1703 | 5.0 |
| Vacuum extraction | 1301 | 5.4 | 317 | 5.6 | 263 | 5.6 | 1881 | 5.5 |
| Induction of labour | 3255 | 13.6 | 806 | 14.3 | 831 | 17.8 | 4892 | 14.3 |
| Epidural | 5204 | 21.7 | 1693 | 30.0 | 1,418 | 30.4 | 8315 | 24.2 |
| Episiotomy | 2468 | 10.3 | 789 | 14.0 | 557 | 11.9 | 3814 | 11.1 |
| 2001 | | | | | | | | |
| Acute caesarean section | 2775 | 11.8 | 512 | 13.6 | 847 | 17.7 | 4134 | 12.9 |
| Elective caesarean section | 1190 | 5.1 | 248 | 6.6 | 762 | 15.9 | 2200 | 6.9 |
| Forceps birth | 899 | 3.8 | 164 | 4.4 | 239 | 5.0 | 1302 | 4.1 |
| Vacuum extraction | 1237 | 5.3 | 227 | 6.0 | 254 | 5.3 | 1718 | 5.4 |
| Induction of labour | 2784 | 11.8 | 435 | 11.6 | 731 | 15.2 | 3950 | 12.3 |
| Epidural | 4983 | 21.2 | 1022 | 27.2 | 1403 | 29.2 | 7408 | 23.1 |
| Episiotomy | 2208 | 9.4 | 519 | 13.8 | 546 | 11.4 | 3273 | 10.2 |

Data source: MNIS

In 2000, information on LMC type was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC. Intervention data was obtained from NMDS clinical codes. Note that some women will have more than one type of intervention.

In 2001, information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC. Intervention data was obtained from NMDS clinical codes. Note that some women will have more than one type of intervention.

Table 7.12: Length of stay at birth, by original LMC, 2000 and 2001

| Length of stay (days) | Midwife | | GP | | Obstetrician | | Total | |
|-----------------------|---------|-------|------|-------|--------------|-------|--------|-------|
| | No | % | No | % | No | % | No | % |
| 2000 | | | | | | | | |
| 0 | 3292 | 14.5 | 497 | 9.0 | 376 | 8.0 | 4165 | 12.6 |
| 1 | 5287 | 23.3 | 1203 | 21.7 | 864 | 18.3 | 7354 | 22.3 |
| 2 | 4313 | 19.0 | 1186 | 21.4 | 816 | 17.3 | 6315 | 19.2 |
| 3 | 3601 | 15.9 | 990 | 17.9 | 760 | 16.1 | 5351 | 16.2 |
| 4 | 2623 | 11.6 | 683 | 12.3 | 662 | 14.0 | 3968 | 12.0 |
| 5 | 1642 | 7.2 | 441 | 8.0 | 511 | 10.8 | 2594 | 7.9 |
| 6 | 888 | 3.9 | 239 | 4.3 | 310 | 6.6 | 1437 | 4.4 |
| 7-8 | 567 | 2.5 | 169 | 3.1 | 221 | 4.7 | 957 | 2.9 |
| >8 | 471 | 2.1 | 131 | 2.4 | 192 | 4.1 | 794 | 2.4 |
| Total | 22,684 | 100.0 | 5539 | 100.0 | 4712 | 100.0 | 32,935 | 100.0 |
| 2001 | | | | | | | | |
| 0 | 3334 | 15.0 | 356 | 9.7 | 374 | 8.0 | 4064 | 13.3 |
| 1 | 5258 | 23.7 | 860 | 23.3 | 836 | 17.8 | 6954 | 22.7 |
| 2 | 4162 | 18.7 | 790 | 21.4 | 765 | 16.3 | 5717 | 18.7 |
| 3 | 3508 | 15.8 | 590 | 16.0 | 698 | 14.9 | 4796 | 15.7 |
| 4 | 2451 | 11.0 | 466 | 12.6 | 717 | 15.3 | 3634 | 11.9 |
| 5 | 1559 | 7.0 | 291 | 7.9 | 556 | 11.9 | 2406 | 7.9 |
| 6 | 772 | 3.5 | 146 | 4.0 | 267 | 5.7 | 1185 | 3.9 |
| 7-8 | 596 | 2.7 | 103 | 2.8 | 242 | 5.2 | 941 | 3.1 |
| >8 | 561 | 2.5 | 83 | 2.3 | 233 | 5.0 | 877 | 2.9 |
| Total | 22,201 | 100.0 | 3685 | 100.0 | 4688 | 100.0 | 30,574 | 100.0 |

Data source: MNIS

Information on LMC type was not provided or the LMC was an organisation for 5754 (14.3 percent) of women who registered with an LMC, and information on length of stay at birth was not provided for a further 1598 women (4.0 percent) – these are women who did not give birth in hospital and were therefore not captured in the NMDS hospital database.

Information on LMC type was not provided or the LMC was an organisation for 5934 (15.3 percent) of women who registered with an LMC, and information on length of stay at birth was not provided for a further 2185 women (5.6 percent) – these are women who did not give birth in hospital and were therefore not captured in the NMDS hospital database.

8. Maternal and infant mortality 1999

The three main sources of information for mortality data are: medical certificates from doctors or coroners, post-mortem reports from private pathologists and hospitals, and death registration forms which are usually completed by the funeral directors. A number of factors, including changes in death registration, computer software and personnel, have resulted in significant delays in processing mortality statistics.

8.1 MATERNAL DEATHS

Table 8.1 shows the number and rate of maternal deaths from 1989 to 1999 according to the World Health Organization (WHO) definition:

“Maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.”

For statistical purposes maternal deaths are further subdivided into two groups defined by WHO as:

1. **Direct obstetric deaths:** those resulting from obstetric complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above.
2. **Indirect obstetric deaths:** those resulting from previous existing disease that developed during pregnancy and which was not due to direct obstetric causes, but was aggravated by physiological effects of pregnancy.”

Table 8.1: Maternal deaths (WHO Definition), 1989–1999

| Year | Direct | | Indirect | | Total | | Live births |
|------|--------|------------------------------|----------|------------------------------|-------|------------------------------|-------------|
| | No | Rate per 100,000 live births | No | Rate per 100,000 live births | No | Rate per 100,000 live births | |
| 1989 | 4 | 6.9 | 2 | 3.4 | 6 | 10.3 | 58,091 |
| 1990 | 3 | 5.0 | 1 | 1.7 | 4 | 6.6 | 60,153 |
| 1991 | 7 | 11.7 | 2 | 3.3 | 9 | 15.0 | 59,994 |
| 1992 | 2 | 3.4 | 3 | 5.1 | 5 | 8.4 | 59,266 |
| 1993 | 6 | 10.2 | 4 | 6.8 | 10 | 17.0 | 58,867 |
| 1994 | 4 | 7.0 | 0 | 0.0 | 4 | 7.0 | 57,435 |
| 1995 | 2 | 3.5 | 0 | 0.0 | 2 | 3.5 | 57,791 |
| 1996 | 4 | 7.0 | 0 | 0.0 | 4 | 7.0 | 57,434 |
| 1997 | 2 | 3.5 | 1 | 1.7 | 3 | 5.2 | 57,734 |
| 1998 | 1 | 1.7 | 3 | 5.2 | 4 | 6.9 | 57,734* |
| 1999 | 3 | 5.2 | 1 | 1.7 | 4 | 7.0 | 57,421 |

Data source: NZHIS

* The 1997 live birth figure has been re-used for 1998 because of issues with the 1998 figure. The number of live birth registrations for 1998 was lower than expected because of problems relating to the prompt registration of births.

8.2 FETAL AND INFANT DEATHS

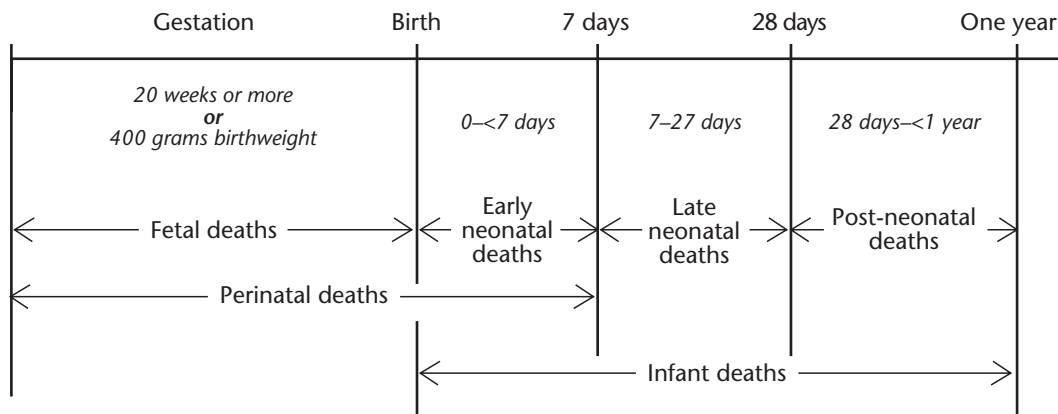


Figure 8.1: Fetal and infant death periods

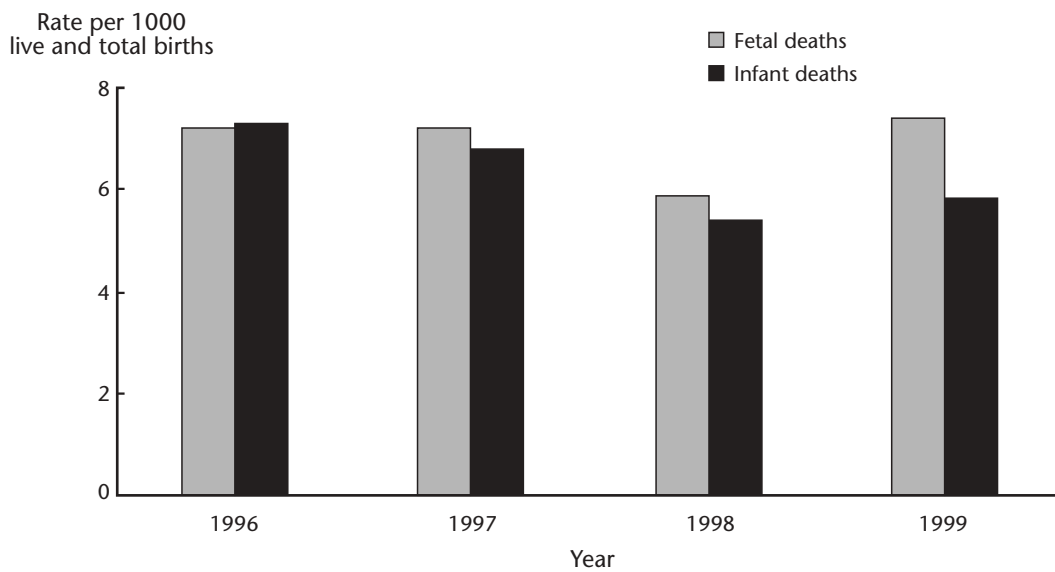


Figure 8.2: Fetal and infant deaths per 1000 live and total births, 1996-1999

Data source: MNIS

Note: Fetal deaths are per 1000 total births, and infant deaths are per 1000 live births.

Table 8.2 gives the number of fetal and infant deaths in New Zealand by DHB region for 1999. The data is broken up into a number of different age groups, as shown in Figure 8.1.

Table 8.2: Total births, live births, fetal and infant deaths by DHB region and age at death, total population, 1999

| DHB region | Total births | Live births | Fetal deaths | Rate per 1000 | Perinatal deaths | Rate per 1000 | Early neonatal deaths | Rate per 1000 | Neonatal deaths | Rate per 1000 | Post-neonatal deaths | Rate per 1000 | Infant deaths | Rate per 1000 | Fetal + infant deaths | Rate per 1000 |
|------------------------|--------------|-------------|--------------|---------------|------------------|---------------|-----------------------|---------------|-----------------|---------------|----------------------|---------------|---------------|---------------|-----------------------|---------------|
| Northland | 2169 | 2157 | 12 | 5.5 | 18 | 8.3 | 6 | 2.8 | 8 | 3.7 | 12 | 5.6 | 20 | 9.3 | 32 | 14.8 |
| Waitemata | 6472 | 6422 | 50 | 7.7 | 66 | 10.2 | 16 | 2.5 | 19 | 3.0 | 8 | 1.2 | 27 | 4.2 | 77 | 11.9 |
| Auckland | 5929 | 5894 | 35 | 5.9 | 47 | 7.9 | 12 | 2.0 | 17 | 2.9 | 11 | 1.9 | 28 | 4.8 | 63 | 10.6 |
| Counties Manukau | 7276 | 7217 | 59 | 8.1 | 82 | 11.3 | 23 | 3.2 | 24 | 3.3 | 16 | 2.2 | 40 | 5.5 | 99 | 13.6 |
| Waikato | 5230 | 5194 | 36 | 6.9 | 45 | 8.6 | 9 | 1.7 | 12 | 2.3 | 22 | 4.2 | 34 | 6.5 | 70 | 13.4 |
| Lakes | 1706 | 1696 | 10 | 5.9 | 16 | 9.4 | 6 | 3.5 | 7 | 4.1 | 6 | 3.5 | 13 | 7.7 | 23 | 13.5 |
| Bay of Plenty | 2719 | 2699 | 20 | 7.4 | 31 | 11.4 | 11 | 4.1 | 11 | 4.1 | 10 | 3.7 | 21 | 7.8 | 41 | 15.1 |
| Tairāwhiti | 777 | 770 | 7 | 9.0 | 8 | 10.3 | 1 | 1.3 | 1 | 1.3 | 6 | 7.8 | 7 | 9.1 | 14 | 18.0 |
| Hawke's Bay | 2200 | 2180 | 20 | 9.1 | 26 | 11.8 | 6 | 2.8 | 7 | 3.2 | 4 | 1.8 | 11 | 5.0 | 31 | 14.1 |
| Taranaki | 1512 | 1497 | 15 | 9.9 | 19 | 12.6 | 4 | 2.7 | 5 | 3.3 | 5 | 3.3 | 10 | 6.7 | 25 | 16.5 |
| MidCentral | 2209 | 2191 | 18 | 8.1 | 22 | 10.0 | 4 | 1.8 | 6 | 2.7 | 3 | 1.4 | 9 | 4.1 | 27 | 12.2 |
| Whanganui | 965 | 959 | 6 | 6.2 | 10 | 10.4 | 4 | 4.2 | 5 | 5.2 | 0 | 0.0 | 5 | 5.2 | 11 | 11.4 |
| Capital & Coast | 3846 | 3812 | 34 | 8.8 | 45 | 11.7 | 11 | 2.9 | 11 | 2.9 | 13 | 3.4 | 24 | 6.3 | 58 | 15.1 |
| Hutt Valley | 2122 | 2105 | 17 | 8.0 | 24 | 11.3 | 7 | 3.3 | 7 | 3.3 | 12 | 5.7 | 19 | 9.0 | 36 | 17.0 |
| Wairarapa | 557 | 553 | 4 | 7.2 | 5 | 9.0 | 1 | 1.8 | 2 | 3.6 | 1 | 1.8 | 3 | 5.4 | 7 | 12.6 |
| Nelson Marlborough | 1505 | 1491 | 14 | 9.3 | 18 | 12.0 | 4 | 2.7 | 4 | 2.7 | 3 | 2.0 | 7 | 4.7 | 21 | 14.0 |
| West Coast | 404 | 403 | 1 | 2.5 | 2 | 5.0 | 1 | 2.5 | 1 | 2.5 | 1 | 2.5 | 2 | 5.0 | 3 | 7.4 |
| Canterbury | 5605 | 5559 | 46 | 8.2 | 60 | 10.7 | 14 | 2.5 | 16 | 2.9 | 14 | 2.5 | 30 | 5.4 | 76 | 13.6 |
| South Canterbury | 621 | 616 | 5 | 8.1 | 8 | 12.9 | 3 | 4.9 | 3 | 4.9 | 0 | 0.0 | 3 | 4.9 | 8 | 12.9 |
| Otago | 2021 | 2007 | 14 | 6.9 | 22 | 10.9 | 8 | 4.0 | 11 | 5.5 | 5 | 2.5 | 16 | 8.0 | 30 | 14.8 |
| Southland | 1416 | 1412 | 4 | 2.8 | 8 | 5.6 | 4 | 2.8 | 4 | 2.8 | 1 | 0.7 | 5 | 3.5 | 9 | 6.4 |
| Overseas and undefined | 588 | 587 | 1 | 1.7 | 1 | 1.7 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 1.7 |
| Total NZ | 57,849 | 57,421 | 428 | 7.4 | 583 | 10.1 | 155 | 2.7 | 181 | 3.2 | 153 | 2.7 | 334 | 5.8 | 762 | 13.2 |

Data source: NZHIS

Implications of the Births, Deaths and Marriages Registration Act 1995 on fetal and infant deaths

The Births and Deaths Act 1951 was repealed on 31 August 1995, and was replaced by the Births, Deaths and Marriages Act 1995. The change in legislation fundamentally changed the definition of 'stillborn child' (fetal death).

Before 1 September 1995, the legislation required that a certificate of cause of death be issued for any fetal death of 20 weeks or greater period of gestation, but a registration form was not required. Registration forms were required only for fetuses of 28 or more weeks gestation. Fetal deaths of 20–27 weeks gestation were termed 'intermediate fetal deaths', and fetal deaths of 28 weeks or greater were termed 'late fetal deaths' or 'stillbirths'.

The 1995 legislation defines 'stillborn child' as

“...a dead fetus that –

- (a) weighed 400 g or more when it issued from its mother; or
- (b) issued from its mother after the 20th week of pregnancy.”

Under the 1995 legislation a medical certificate of cause of death and a birth registration form are required to be completed in respect of each 'stillborn child'.

Statistics presented for the year 1996 in Table 8.2 reflect the new definitions.

Appendix 1. New Zealand deprivation scores

New Zealand deprivation (NZDep) scores have been generated from the 1996 Census data as an attempt to measure special health needs, calculated as a function of nine socioeconomic variables (Salmond et al 1998a, 1998b). Each class is of equal size in terms of New Zealand's population. The general theory is that an area with a high NZDep score is, on the whole, more likely to need health services than one with a low NZDep score. These variables have been shown through the literature to be associated with mortality or morbidity or some type of disadvantage. The variables are calculated by mesh block and then aggregated up to domicile area (using population weights), where a domicile is a geographical area defined by Statistics New Zealand for census and related purposes. The list of variables used is given below:

| Name of variable | Description of variable |
|-------------------------|---|
| Communication | People with no access to a telephone |
| Income | People aged 18–59 receiving a means-tested benefit |
| Income | Equivalised ¹ household income below an income threshold |
| Transport | People with no access to a car |
| Living space | Equivalised household below a bedroom occupancy threshold |
| Owned home | People not living in own home |
| Employment | Unemployed people aged 18–59 |
| Qualifications | People aged 18–59 without any qualifications |
| Support | People aged <60 living in a single-parent family |

¹ Equivalisation: methods used to control for family composition.

Appendix 2. Diagnosis-Related Groups (DRGs)

WHAT IS A DRG?

Diagnostic-Related Groups (DRGs) are a patient classification scheme which provides a clinically meaningful way of relating the number and types of patients treated in hospital to the resources required by the hospital. DRGs are allocated by 'grouper' software based on the patient's diagnosis and procedure codes, and age. Clinical coding staff select the appropriate diagnosis and procedure codes.

The version of the grouper used in this report is AR-DRG version 4.1.

HOW ARE DISCHARGE RECORDS ALLOCATED TO EACH OF THESE DRGs?

The grouper software evaluates the following decisions to allocate events into DRGs. This section looks specifically at the four DRG codes that are analysed in this report:

- O62Z Threatened abortion
- O64Z False labour
- O65A Other antenatal admission with severe complicating diagnosis
- O65B Other antenatal admission with moderate or no complicating diagnosis.

In order for an event to be classified in one of these four DRGs it must pass through the following steps:

1. The principal diagnosis relates to pregnancy, childbirth and the puerperium.
2. The patient is female.
3. The procedure and diagnoses are not about a normal birth.
4. The procedure and diagnoses are not about a caesarean birth.
5. The procedure or principal diagnosis do not describe an ectopic pregnancy.
6. The diagnoses and procedures do not describe postpartum or post abortion procedures.
7. The diagnoses and procedures do not describe an abortion with D&C, aspiration curettage or hysterectomy.
8. The diagnoses and procedures do not describe postpartum or post-abortion operating room procedures.
9. If the diagnosis describes a threatened abortion, assign **DRG O62Z** (if this is not the case go to 10).
10. The patient did not have an abortion.
11. If the diagnosis is for false labour, assign **DRG O64Z** (if this is not the case go to 12).
12. The diagnosis is for another antenatal admission
13. If there is a severe or complicating principal diagnosis, assign **DRG O65A** (if this is not the case go to 14).
14. If the principal diagnosis does not describe a severe or complicating condition, assign **DRG O65B**.

O62Z – Threatened abortion

Events are given this DRG when they have any of the following principal diagnosis codes:

- O200 Threatened abortion,
- O208 Other haemorrhage in early pregnancy, or
- O209 Haemorrhage in early pregnancy, unspecified.

O64Z False labour

Events where the principal diagnosis is

- O470 False labour <37 weeks gestation
- O140 False labour ≥37 completed weeks gestation
- O479 False labour unspecified.

This includes any labour pains that did not lead to a birth in this hospital event.

O65A – Other antenatal admission with severe complicating diagnosis

Events where the principal diagnosis is one of a large number of codes, including such conditions as:

- Pre-existing hypertension
- Gestational oedema
- Late vomiting in pregnancy
- Infections in kidney or urinary tract or genital tract
- Malnutrition
- Twins or triplets
- Suspected damaged fetus due to alcohol, drugs or radiation.

This list includes admissions where pre-existing conditions complicate the pregnancy or childbirth, eg, an obstetric patient admitted for asthma complicating pregnancy.

O65B – Other antenatal admission with moderate or no complicating diagnosis

Events where any diagnosis code (but not principal diagnosis) is amongst a large number of codes, including such conditions as:

- Gestational proteinuria
- Pre-eclampsia or eclampsia
- Diabetes
- Pre-existing IDDM or NIDDM
- Poor fetal growth.

Appendix 3. Ethnicity

MNIS and the NMDS record up to three different ethnicities, and for ease of analysis these ethnic groups are prioritised into one. The prioritisation system used is included in the table below. This is the standard prioritisation of ethnicity used by the New Zealand Health Information Service.

| Ethnicity | Prioritisation order |
|------------------|-----------------------------|
| European/Pākehā | 9 |
| Other European | 8 |
| Māori | 1 |
| Pacific Island | 2 |
| South East Asian | 3 |
| Chinese | 5 |
| Indian | 4 |
| Other Asian | 6 |
| Other | 7 |
| Not reported | 10 |

Appendix 4. Population data 2001

The 2001 Census populations were used for the calculation of all rates in this publication.

Prioritised usually resident female population by ethnicity and age for New Zealand, as at 6 March 2001

| Age | Female population | | | | | | Total |
|-------------|-------------------|---------|-----------------|---------|--------|---------------|-----------|
| | European | Māori | Pacific peoples | Asian | Other | Not specified | |
| 0–4 years | 73,488 | 32,913 | 11,979 | 8010 | 1017 | 4704 | 132,108 |
| 5–9 years | 81,930 | 31,944 | 11,382 | 8145 | 996 | 4446 | 138,837 |
| 10–14 years | 86,367 | 30,972 | 10,599 | 8796 | 1077 | 4293 | 142,107 |
| 15–19 years | 78,264 | 24,867 | 9126 | 12,714 | 1119 | 4245 | 130,332 |
| 20–24 years | 72,396 | 21,987 | 9009 | 11,730 | 903 | 4962 | 120,990 |
| 25–29 years | 82,977 | 21,588 | 8562 | 9534 | 882 | 5343 | 128,892 |
| 30–34 years | 98,913 | 21,057 | 8895 | 11,124 | 1038 | 6054 | 147,081 |
| 35–39 years | 107,250 | 20,361 | 7884 | 12,192 | 1041 | 6057 | 154,785 |
| 40–44 years | 106,035 | 17,376 | 6258 | 10,809 | 870 | 5769 | 147,117 |
| 45–49 years | 96,225 | 12,981 | 4890 | 8400 | 630 | 5130 | 128,256 |
| 50–54 years | 94,068 | 10,008 | 3927 | 5868 | 447 | 4893 | 119,214 |
| 55–59 years | 74,307 | 7137 | 2865 | 3660 | 267 | 3849 | 92,082 |
| 60–64 years | 63,699 | 5958 | 2298 | 3093 | 213 | 3465 | 78,726 |
| 65–69 years | 54,411 | 4101 | 1701 | 2199 | 156 | 2865 | 65,433 |
| 70–74 years | 53,910 | 2766 | 1239 | 1329 | 90 | 2778 | 62,112 |
| 75–79 years | 48,015 | 1551 | 735 | 834 | 63 | 2565 | 53,766 |
| 80–84 years | 34,617 | 744 | 402 | 441 | 36 | 2064 | 38,307 |
| 85+ years | 31,251 | 477 | 225 | 318 | 45 | 1803 | 34,122 |
| Total | 1,338,123 | 268,797 | 101,976 | 119,196 | 10,890 | 75,288 | 1,914,270 |

Data source: Statistics New Zealand

Note: Because of rounding, individual figures in this table do not always sum to give stated totals. Ethnic data in this table is based on prioritised self-identified ethnicity ('mixed ethnicity'), where individuals select up to three ethnic groups that they feel they belong to.

Many of the calculations in this report are based on women of reproductive age – for the purpose of this report women of reproductive age are those aged between 15 and 44 years.

Appendix 5. MNIS Advisory Group

The following is a list of current MNIS Advisory Group members and the organisations they represent.

| Name | Organisation |
|---------------------|--|
| Dharma Dharmalingam | Population Studies Centre, University of Waikato |
| Alec Ekeroma | Pasifika Medical Association |
| Dawn Elder | New Zealand Paediatric Society |
| William Ferguson | New Zealand College of General Practitioners |
| Karen Guilliland | New Zealand College of Midwives |
| Penny Guy | Parents' Centres New Zealand |
| Lynda Williams | Federation of Women's Health Councils |
| Neil Pattison | Royal Australian and New Zealand College of Gynaecologists and Obstetricians |
| Joanne Rama-Manga | Ngā Māia o Aotearoa me te Wai Pounamu Charitable Trust |
| Jeannette Lazet | Home Birth Aotearoa |
| Barry Twyde | DHB National Maternity Manager's Forum |

The following employees of the Ministry of Health and the New Zealand Health Information Service (NZHIS) also contributed to this report:

Barbara Browne
Jane Little
Amanda Newton
Rebecca Kay
Greg McPheat

Appendix 6. DHB regions



Appendix 7. Catchment areas

| DHB region | Tertiary maternity & level III specialist neonatal services | Secondary maternity & level II specialist neonate services | Primary maternity |
|-------------------|---|--|---|
| Auckland | National Women's | | Birthcare Auckland |
| Northland | | Whangarei | Bay of Islands (Kawakawa) Dargaville Kaitaia Hokianga |
| Waitemata | | North Shore, Waitakere | Wellsford Warkworth Helensville |
| Counties Manukau | Middlemore | | Pukekohe Papakura Botany Downs |
| Waikato | Waikato | | Waihi Birthcare Huntly Thames Rhoda Read (Morrinsville) Matariki (Te Awamutu) Te Kuiti Taumarunui Tokoroa Pohlen (Matamata) Hamilton (River Ridge) |
| Lakes | | Rotorua | Taupo |
| Bay of Plenty | | Tauranga, Whakatane | Opotiki Murupara |
| Tairāwhiti | | Gisborne | Te Puia Springs |
| Taranaki | | Taranaki Base (New Plymouth) | Hawera Elizabeth R (Stratford) |
| Capital and Coast | Wellington | | Paraparaumu Kenepuru (Porirua) |
| Wanganui | | Wanganui | Waimarino (Raetihi) Marton Taihape |
| Hawke's Bay | | Hastings | Wairoa Chatham Islands Napier Waipukurau |
| Wairarapa | | Masterton | |
| MidCentral | | Palmerston North | Otaki Horowhenua (Levin) Fielding Dannevirke |
| Hutt Valley | | Hutt | |

| DHB region | Tertiary maternity & level III specialist neonatal services | Secondary maternity & level II specialist neonate services | Primary maternity |
|--------------------|---|--|--|
| Canterbury | Christchurch Women's | | Kaikoura St George's (Christchurch) Avonlea (Christchurch) Burwood Darfield Akaroa Waikari Lincoln Rangiora Ashburton |
| Nelson Marlborough | | Wairau (Blenheim), Nelson | Motueka Golden Bay (Takaka) |
| Greymouth | | Greymouth | Buller (Westport) |
| Nelson Marlborough | | Timaru | |
| Otago | Dunedin | | Oamaru Charlotte Jean (Alexandra) Dunstan Maniototo Health Services (Ranfurly) Clutha Health First (Balclutha) |
| Southland | | Southland (Invercargill) | Gore Lakes District (Queenstown) Tuatapere Northern Southland (Lumsden) Winton |

Appendix 8. Tables sourced from NMDS and MNIS

Tables sourced from NMDS:

| | | | | | |
|-----|------|------|------|-----|------|
| 1.1 | 2.1 | 3.1 | 4.1 | 5.1 | 6.1 |
| 1.2 | 2.2 | 3.2 | 4.2 | 5.2 | 6.2 |
| | 2.3 | 3.3 | 4.3 | | 6.3 |
| | 2.4 | 3.6 | 4.4 | | 6.4 |
| | 2.5 | 3.7 | 4.5 | | 6.5 |
| | 2.6 | 3.8 | 4.7 | | 6.6 |
| | 2.10 | 3.9 | 4.8 | | 6.7 |
| | 2.11 | 3.10 | 4.9 | | 6.8 |
| | 2.12 | 3.11 | 4.10 | | 6.9 |
| | 2.13 | 3.12 | 4.11 | | 6.10 |
| | | 3.13 | 4.12 | | |
| | | | 4.13 | | |
| | | | 4.14 | | |

Tables sourced from MNIS:

| | | | | | |
|-----|------|-----|-----|------|------|
| 1.1 | 2.7 | 3.4 | 4.6 | 5.3 | 7.1 |
| | 2.8 | 3.5 | | 5.4 | 7.2 |
| | 2.9 | | | 5.5 | 7.3 |
| | 2.14 | | | 5.6 | 7.4 |
| | | | | 5.7 | 7.5 |
| | | | | 5.8 | 7.6 |
| | | | | 5.9 | 7.7 |
| | | | | 5.10 | 7.8 |
| | | | | | 7.9 |
| | | | | | 7.10 |
| | | | | | 7.11 |

Appendix 9. Non-Section-51 data

In 2000 and 2001, these providers had a non-standard contract for Lead Maternity Care.

Albany Maternity & Gynaecology Ltd (Dunedin)
 Aramoho Maternity Services Ltd (Wanganui)
 Avonlea Birthing Centre Partnership (Christchurch)
 Community Birth Services Ltd (Palmerston North)
 Dannevirke Health Services Ltd
 Wellington Midwifery Service Domino Ltd
 Hamilton Birthing Ltd
 Hokianga Health Enterprise Trust (Northland)
 Hutt Valley Union & Community Health Service
 Mangere Health Resources Trust
 Matpro Ltd (Wellington)
 Midwifery & Maternity Provider Organisation Ltd
 Mothers & Midwives Associated Ltd (Auckland)
 Newtown Union Health Service (Wellington)
 Ngati Porou Hauora Inc (East Coast)
 Pegasus Medical Group Ltd (Christchurch)
 Pohlen Hospital Trust Board (Matamata)
 Porirua Union & Community Health Service
 South Auckland Maternity Care Ltd
 South Link Health Inc.

The following information has been supplied by some of the non-Section-51 Lead Maternity Care providers.

Previous parity recorded at registration (percentage), 2001

| Parity | Dannevirke Health Services | Wellington Midwifery Service Domino Ltd | MMPO ¹ | Pohlen ² | Samcl ³ | South Link ⁴ |
|-------------------|----------------------------|---|-------------------|---------------------|--------------------|-------------------------|
| 1 | 20.0 | 47.0 | 37.6 | 35.4 | 40.0 | 45.8 |
| 2 | 49.5 | 26.0 | 34.2 | 30.5 | 33.7 | 33.0 |
| 3-5 | 24.5 | 25.0 | 26.1 | 31.7 | 24.9 | 20.1 |
| 6-12 | 6.0 | 2.0 | 1.3 | 2.4 | 1.2 | 2.0 |
| Parity not stated | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 |
| Total % | 100.0 | 100.0 | 99.2 | 100.0 | 99.9 | 100.9 |

¹ Midwifery and Maternity Provider Organisation

² Pohlen Hospital Trust

³ South Auckland Maternity Care Ltd

⁴ South Link Health Ltd

Percentage of pregnancies (gravida), 2001

| Gravida | Dannevirke Health Services | Wellington Midwifery Service Domino Ltd | MMPO | Pohlen | Samcl | South Link |
|---------|----------------------------|---|-------|--------|-------|------------|
| 1 | 21.0 | 36.0 | 27.8 | 30.2 | 30.9 | 31.1 |
| 2 | 36.0 | 28.0 | 31.1 | 28.3 | 29.8 | 32.5 |
| 3 | 26.0 | 16.0 | 18.8 | 16.6 | 18.8 | 18.1 |
| 4 | 5.0 | 8.0 | 10.1 | 11.2 | 9.5 | 9.4 |
| 5 | 4.0 | 5.0 | 6.4 | 6.8 | 5.3 | 4.7 |
| 6 | 2.5 | 3.0 | 2.9 | 3.9 | 2.8 | 2.4 |
| 7 | 2.5 | 1.0 | 0.9 | 2.0 | 3.0 | 1.0 |
| 8 | 0.0 | 1.0 | 0.5 | 0.5 | 0.0 | 0.4 |
| 9 | 1.5 | 0.0 | 0.7 | 0.0 | 0.0 | 0.1 |
| 10 | 1.5 | 0.0 | 0.3 | 0.0 | 0.0 | 0.1 |
| 11 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| 12 | 0.0 | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 |
| 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 14 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 15 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 16 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 17 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 18 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total % | 100.0 | 98.0 | 100.5 | 99.5 | 100.1 | 99.9 |

Type of birth (percentage), 2001

| Birth type | Dannevirke | MMPO | Samcl |
|-----------------------------|------------|------|-------|
| Normal birth | 100.0 | 70.4 | 66.8 |
| Total caesarean section | 0.0 | 18.6 | 20.2 |
| Emergency caesarean section | 0.0 | 13.7 | 14.5 |
| Elective caesarean section | 0.0 | 4.9 | 5.8 |
| Total operative birth | 0.0 | 10.7 | 11.5 |
| Vaginal breech birth | 0.0 | 0.9 | 0.5 |
| Forceps birth | 0.0 | 4.2 | 3.5 |
| Vacuum extraction | 0.0 | 0.0 | 7.4 |
| Ventouse | 0.0 | 5.6 | 0.0 |
| Total % | 100.0 | 99.7 | 98.5 |

**Breastfeeding rates at time of transfer to well-child provider (percentage),
2001**

| Breastfeeding status | Dannevirke Health Services | Wellington Midwifery Service Domino Ltd | Samcl | South Link |
|----------------------|----------------------------|---|-------|------------|
| Exclusively | 60.0 | 80.0 | 71.0 | 68.6 |
| Partially | 20.0 | 11.0 | 17.0 | 10.4 |
| Not at all | 20.0 | 9.0 | 12.0 | 20.9 |
| Total % | 100.0 | 100.0 | 100.0 | 99.9 |

Glossary

Abortion, induced

An abortion brought about intentionally. Also called an artificial or therapeutic abortion, as opposed to a spontaneous abortion (a miscarriage).

Abortion, spontaneous

The spontaneous expulsion of a fetus of less than 20 weeks gestation and less than 400 grams birthweight.

Admission

The documentation process, which may include entry to the NHI, by which a person becomes resident in a healthcare facility. Healthcare users who attend for more than three hours should be admitted.

Antenatal hospital events

All women who were admitted to a hospital up to 44 weeks before the date of birth, irrespective of the diagnosis. Events where the admission was a transfer from another facility have been excluded.

Apgar score

Numerical score used to evaluate the infant's condition at one and five minutes after birth. Five variables are scored: colour, breathing, heart rate, reactivity to stimulation, and muscle tone. A baby may be able to be resuscitated after an initial one-minute Apgar score of zero but a five-minute score of zero usually means that the infant cannot be resuscitated. If no heart rate had been heard before or during resuscitation then this would be documented as a stillbirth. If a heart rate had been heard but the baby could not be fully resuscitated, this would be called a live birth and neonatal death.

Asphyxia

Cessation of blood flow and/or oxygen delivery to vital body organs. This may occur before, during or after birth. The long-term effect on the fetus or infant depends on the length of the period of asphyxia and whether blood flow and/or oxygen supply can be restored.

Bacterial meningitis

Inflammation of the meninges due to a bacterial infection, often with the streptococcus B bacteria.

Birth

A birth of a baby (or babies for a multiple birth) over 400 grams or after a minimum of 20 weeks gestation.

Birthing unit

A hospital that provides services for labour and birth but does not provide inpatient postnatal care and is designated by the Ministry of Health as a birthing unit. As at 1 March 2002, the designated birthing units are situated in Wellsford, Murupara, Raetihi, Marton and Otaki.

Birthweight

The first weight of the baby obtained after birth (usually measured to the nearest 5 grams and obtained within one hour of birth).

Caesarean section

Operative birth through an abdominal incision.

Caesarean section, acute

Caesarean section performed urgently for maternal or fetal health once labour has started.

Caesarean section, elective

Caesarean section performed before the onset of labour.

Patient clinical complexity level (PCCL)

A measure of the complexity/severity of each woman's co-morbidities and complications, in comparison to other women within the same DRG.

Diagnosis-related group (DRG) code

A DRG is produced by invoking a DRG program that compares all diagnostic codes in a health event and assigns a DRG code based on a complex series of decision trees. This provides another way of analysing event information based on classifying episodes of inpatient care into clinically meaningful groups with similar resource consumption.

District Health Board (DHB)

District Health Boards are responsible for providing or buying government-funded healthcare services for the population of a specific geographical area. There are 21 DHBs in New Zealand, and they have existed since 1 January 2001.

Domicile

The mother's usual residential address.

Ectopic pregnancy

A fertilised egg settles and grows in any location other than the inner lining of the uterus. The large majority (95 percent) of ectopic pregnancies occur in the Fallopian tube. However, they can occur in other locations, such as the ovary, cervix or abdominal cavity.

Epidural

Injection of analgesic agent outside the dura mater that covers the spinal canal; includes lumbar, spinal and epidural anaesthetics.

Episiotomy

An incision of the perineal tissue surrounding the vagina at the time of birth.

Estimated delivery date (EDD)

The estimated date on which the baby is due, calculated either from the last menstrual period, an ultrasound scan, or the best estimate.

Ethnic code

The code that defines the mother's ethnic group.

Facility

The place that mothers attend or are resident in for the primary purpose of receiving maternity care.

Forceps

An operative vaginal birth using a metallic obstetric instrument.

Gestational age

The duration of pregnancy in completed weeks, calculated from the date of the first day of a woman's last menstrual period and her infant's date of birth, or derived from clinical assessment during pregnancy, or from examination of the infant after birth.

Gravida number

The total number of pregnancies, including previous pregnancies, irrespective of the pregnancy outcome (miscarriages, etc) and including the current pregnancy. This is calculated at the time of registration with the LMC and at labour and birth.

Health Benefits (HB)

The organisation that operates as part of the Ministry of Health to manage payment claims. Now known as Health Payments, Agreements and Compliance (HealthPAC).

Home birth

A birth that takes place in a person's home and not in a maternity facility or birthing unit.

Hypertension

(Also called high blood pressure.) A repeatedly elevated blood pressure exceeding 140 over 90 mm Hg – a systolic pressure above 140 with a diastolic pressure above 90.

Hysterectomy

A surgical operation to remove the uterus and, sometimes, the cervix. Removal of the body of the uterus without removing the cervix is referred to as a subtotal hysterectomy; removal of the entire uterus and the cervix is referred to as a total hysterectomy.

ICD-10-AM (International Classification of Diseases, 10th Revision) clinical codes

Codes based on the official version of the World Health Organization's International Classification of Diseases. This is designed for classification of morbidity and mortality information for statistical purposes, and for indexing hospital records by disease and operations, for data storage and retrieval. The clinical codes are used to classify the clinical description of a condition, cause of intentional and unintentional injury, underlying cause of death, operation or procedure performed, or pathological nature of a tumour.

Induction of labour

An intervention undertaken to stimulate the onset of labour by pharmacological or other means.

Lead maternity carer (LMC)

The general practitioner, midwife or obstetric specialist who has been selected by the woman to co-ordinate and provide comprehensive maternity care, including the management of labour and birth.

Length of stay

Defined by the number of nights a woman spends in a facility.

Live birth

The complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered liveborn. (*WHO definition*)

Major diagnostic category (MDC)

A group of DRGs.

Major surgery

Any surgery that requires opening of a body cavity.

Maternal and Newborn Information System (MNIS)

A collection of perinatal information amalgamating data from LMC payments claims to HB with data collected at hospital discharge and recorded in the NMDS.

Maternity facility

A hospital that provides labour and birth services and inpatient postnatal care.

Median

The middle data point when the data is ranked from the lowest to the highest number. It is used instead of the mean when the data is not distributed normally.

Ministry of Health

The Government's principal advisor on health and disability in New Zealand.

Miscarriage

All women whose pregnancies ended spontaneously before 20 weeks gestation. 'Hospital miscarriages' includes all women who are referred to a hospital during a miscarriage.

National Health Index (NHI)

The unique identifier number assigned to the healthcare user.

National Minimum Dataset (NMDS)

An integrated collection of health data that is collected routinely from all people who are discharged from a hospital in New Zealand.

Neonatal deaths

Deaths occurring up to 27 days after birth.

New Zealand Deprivation Scores (NZDep scores)

Scores generated from the 1996 Census data as an attempt to measure special health needs. An area with a high NZDep score is, on the whole, more likely to need health services than one with a low NZDep score.

New Zealand Health Information Services (NZHIS)

A group within the Ministry of Health responsible for the collection and dissemination of health-related data. The NZHIS has as its foundation the goal of making accurate information readily available and accessible in a timely manner throughout the health sector.

Normal birth

The birth of a baby without obstetric operative intervention (vaginal birth).

Operative birth

A vaginal birth that includes operative procedures (eg, vaginal breech birth, forceps birth, vacuum extraction).

Parity

The number of times a woman has borne children that are either dead or alive after 20 weeks gestation.

Perinatal deaths

All stillbirths and babies from 20 weeks gestation and/or over 400 grams who died within seven days of birth.

Postnatal

All pregnancy events following birth.

Post-partum haemorrhages

Abnormal bleeding that occurs soon after labour or childbirth.

Pre-term labour

Labour before 37 completed weeks of gestation.

Re-admissions

All women admitted up to 6 weeks after the date of birth, irrespective of the diagnosis.

Registration

The documentation showing that a woman has selected a lead maternity carer; this includes the forwarding of this information to Health Benefits.

Reproductive age

Women aged 15–44 years.

Rural area

An area is defined as rural if the census area unit (domicile) is located in an area of fewer than 10,000 people.

Stillbirth

Birth that takes place after 20 weeks gestation, and/or over 400 grams, where the baby shows no signs of life.

Urban area

An area is defined as urban if the census area unit (domicile) is located in an area of more than 10,000 people.

Vacuum extraction

Assisted birth using a suction cap applied to the baby's head.

Vaginal breech birth

Birth of the baby by the buttocks first, rather than the head.

Well-child provider

An organisation or individual to whom the care of a baby is transferred to at the end of the LMC postnatal care (eg, Plunket).

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