

PERINATAL STATISTICS



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PERINATAL STATISTICS

QUEENSLAND

1998

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- . The Registrar-General's Office for providing additional data on perinatal deaths,
- . The Queensland Office of the Australian Bureau of Statistics for its assistance and advice,
- . The staff of the Perinatal Data Collection,
- . The Queensland Council on Obstetric and Paediatric Morbidity and Mortality for their contribution,
- . The Newborn Screening Unit for their contribution.

INTRODUCTION

The Queensland Perinatal Data Collection commenced in November 1986 after State legislation under Part II of the *Health Act 1937* was amended to include 'Division XVI - Perinatal Statistics' requiring that perinatal data be provided to the Chief Health Officer for every child born in Queensland. The collection was established to provide a basic source of information for research into obstetric and neonatal care and to assist with the planning of Queensland's health services. In addition, it enables the monitoring of neonatal morbidity and congenital anomalies.

This report presents summary statistics based on the data collected for 1998.

Changes are routinely introduced to the collection on a financial year basis. Calendar year publications will reflect these changes as far as possible. Changes were made for the 1998 reference period and these changes are shown in Appendix C. For previous years, notations are made where relevant for items or coding that have changed in mid-year.

DATA COLLECTION

Perinatal Data Collection forms were forwarded to Queensland Health by public hospitals, private hospitals, and homebirth practitioners. The forms were designed to be an integral part of the mother's medical record, both to reduce duplication of recording and to ensure optimum accuracy of data. The Data Services Unit, which conducts the collection, has encouraged the practice that wherever possible, midwives complete the forms and suggests that the forms be considered an essential part of the nursing summary. For homebirths, the responsibility for the completion and return of the forms rests with homebirth practitioners.

Two forms were used in 1998. The Obstetric Summary and Neonatal Notes (MR63D) form collected antenatal, intrapartum and postpartum data. The Neonatal Morbidity/Congenital Anomaly form (MR66) was used to provide details of congenital anomalies and, if required, to record extra information regarding neonatal morbidity. The forms are shown in Appendix B.

In addition to information from these forms, the collection was supplemented by information from Medical Certificates of Cause of Perinatal Death from the Registrar-General's Office.

EXPLANATORY NOTES

Scope

The statistics shown in this report relate to confinements/births that occurred in Queensland during 1998 and were reported to the Perinatal Data Collection. Confinements/births that occurred outside Queensland, but where the mother was usually resident in Queensland, were not captured by the Collection. Conversely, births that occurred in Queensland, but where the mother's usual residence was overseas or interstate, are included in the statistics. The scope of the Collection ceases at the point of formal separation - discharge, transfer or death.

Data quality

A number of quality control procedures have been employed to ensure that the statistics produced are reliable. These include check coding, computer edit checks and checks on the statistical output. Any identified problems associated with data items are outlined in the text associated with the relevant tables. In general problems result from under-reporting.

Definitions

Apgar score

A numerical scoring system usually applied at one minute and five minutes after birth to evaluate the condition of the baby, based on heart rate, respiration, muscle tone, reflexes and colour.

Augmentation

Intervention after the onset of labour to assist the progress of labour.

Baby

A product of conception that is born alive or if stillborn is of at least 20 weeks gestation or 400 grams in weight.

Birth

The process by which a baby is expelled or extracted from the mother. The number of births per year is equal to the number of livebirths and stillbirths in that year.

Birthweight

The first recorded weight of the newborn baby, usually measured in the first hour after birth. Low birthweight babies are those whose weight is less than 2,500 grams and this category includes very low birthweight babies whose weight is less than 1,500 grams.

Congenital anomaly

A structural defect or chromosomal abnormality, including deformations that are present at birth and diagnosed prior to separation from care.

(Conditions listed in Chapter XIV of the *British Paediatric Association Classification of Diseases¹*).

Gestation

The estimated gestational age of the baby in completed weeks as determined by clinical assessment. Preterm births are identified as those babies whose gestation is less than 37 completed weeks.

Indigenous Status

An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which she lives.

Induction

Intervention to stimulate the onset of labour.

Livebirth

The complete expulsion or extraction from the mother of a baby which shows evidence of life, (eg: has a heartbeat), irrespective of birthweight or gestational age.

Medical conditions

Pre-existing maternal diseases and conditions, and other diseases, illnesses or conditions arising during the current pregnancy, that are not directly attributable to the pregnancy but may significantly affect care during the current pregnancy and/or pregnancy outcome.

Mother

A woman who gave birth to one or more babies in Queensland during the reference period.

Mortality rates

Stillbirth rate - the number of stillbirths per 1,000 births.

Neonatal mortality rate - the number of neonatal deaths per 1,000 livebirths.

Perinatal mortality rate - the number of perinatal deaths per 1,000 births.

Neonatal death

The death of a live born baby within the first 28 days of life.

Perinatal death

A stillbirth or neonatal death.

Plurality

The number of births resulting from a pregnancy.

Pregnancy complication

Complications arising up to the period immediately preceding delivery that are directly attributable to the pregnancy and may have significantly affected care during the current pregnancy and/ or pregnancy outcome.

Presentation

That part of the fetus which is lowermost in the uterus at birth.

Puerperium

The six week period for the mother following delivery.

Stillbirth

The complete expulsion or extraction from the mother of a product of conception of at least 20 weeks gestation or 400 grams birthweight which, after separation, did not show any signs of life, that is, did not have a heartbeat.

SUMMARY PERINATAL STATISTICS, QUEENSLAND, 1998

In 1998, details of 47,450 mothers who delivered 48,163 babies in Queensland were reported to the Perinatal Data Collection. There were 662 mothers who delivered twins (approximately 1 in 72), 25 mothers who delivered triplets (1 in 1,898) and 1 mother with other multiple births.

Mothers were most commonly aged between 20 and 34 years (79.8 per cent), with 6.5 per cent of mothers aged under 20 years and 13.7 per cent aged 35 years or more. The median age was 28 years with the age range of mothers being from 14 to 50.

While 73.5 per cent of mothers delivered in public facilities, 7.4 per cent of these were privately accommodated. There were 171 homebirths reported to the collection.

Labour began spontaneously for 62.9 per cent of all mothers but for 24.2 per cent it was induced. No labour was reported for 12.9 per cent of mothers, all of whose babies were delivered by Caesarean section.

Breech presentation was reported for 4.9 per cent of births.

Just over two-thirds of all births (67 per cent) were spontaneous vertex deliveries, 4.5 per cent were delivered with forceps and 4.4 per cent by vacuum extraction. A lower segment Caesarean section was performed in 23.0 per cent of births, while breech delivery accounted for 0.8 per cent.

There were 341 stillbirths and 208 neonatal deaths in 1998. The stillbirth rate was 7.1 per 1,000 births, the neonatal mortality rate was 4.3 per 1,000 livebirths and the overall perinatal death rate was 11.4 per 1,000 births.

The perinatal death rate for births resulting from a multiple pregnancy (42.1 per 1,000 births) was almost five times higher than that for singleton births (10.5 per 1,000 births).

Of all mothers delivering in Queensland in 1998, 4.5 per cent were Aboriginal and 1.1 per cent Torres Strait Islanders. There were 92 mothers who identified as being both Aboriginal and Torres Strait Islander. The proportion of low birthweight babies (less than 2,500 grams) for Aboriginal mothers (11.6 per cent) was almost twice that for all mothers (6.8 per cent). Perinatal deaths were almost twice as common for births to Aboriginal mothers (20.6 per 1,000 births) than for all births (11.4 per 1,000 births).

AGE OF MOTHER, QUEENSLAND 1998

The proportion of mothers aged 35 and over continued to increase in 1998 whilst the proportion of mothers aged 20-34 remained relatively constant (Figure 1). This has resulted in a fall in the proportion of mothers aged less than 20.

In 1997, 5.2% of all mothers delivering in Australia were aged less than 20 (Australia's mothers and babies 1997, AIHW, 1999, p. 54). The Northern Territory, Tasmania, and Queensland reported the highest proportion of mothers less than 20 years (14.7, 7.9, and 6.8 per cent respectively).

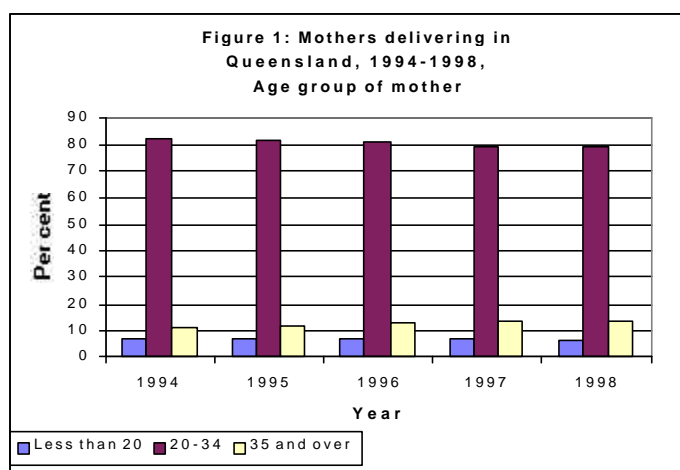
Labour and delivery details

Mothers aged less than 20 were more likely than older mothers to have a spontaneous onset of labour, a vaginal delivery, and an intact perineum. However, fetal distress, primary postpartum haemorrhage and postnatal transfer were reported more frequently for the younger mothers than for any other age group.

Baby Details

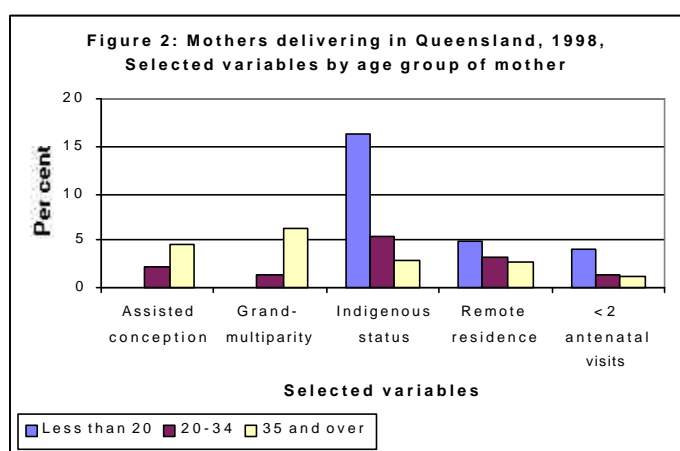
Although preterm birth was highest for births to mothers aged 35 and over (9.4%), births for mothers aged less than 20 were more likely to be of low birthweight. An apgar score of four or less at five minutes was reported in 0.7% of livebirths to mothers aged less than 20 and in 0.5% of livebirths to mothers aged 35 years and over.

The perinatal death rate in 1998 was 15.1 per 1,000 births for to mothers aged less than 20. This was higher than the perinatal death rate for births to mothers aged 35 years and over (12.6 per 1,000). The perinatal death rate was lowest for babies of mothers aged between 20 and 34 (10.9 per 1,000).



Antenatal details

Assisted conception, grand multiparity and non-English speaking country of birth were associated more with mothers aged over 34 than with any other age group. Mothers aged under 20 were more likely to be Indigenous, be usually resident in a remote area, and have less than two antenatal visits (Figure 2).



FURTHER INFORMATION...

Further information is contained in a perinatal profile in the Excel workbook *profage.xls*.

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Australian Bureau of Statistics
 Births Australia - catalogue 3301.0
 Deaths Australia - catalogue 3302.0
 Causes of Death Australia - catalogue 3303.0

FACILITY OF BIRTH, QUEENSLAND 1998

Most mothers delivering in Queensland in 1998 delivered in a public facility (72.9%). This includes 2,608 (7.5%) women who were privately accommodated in a public facility.

Although the proportion of deliveries in a birth centre (0.6%) fell slightly in 1998, birth centre deliveries continued to exceed the proportion of deliveries reported as planned homebirths (0.4%) (Figure 1). It is suspected that not all planned homebirths are reported to the collection. It is also suspected that not all antenatal or postnatal transfers from homebirths and birth centres have been reported.

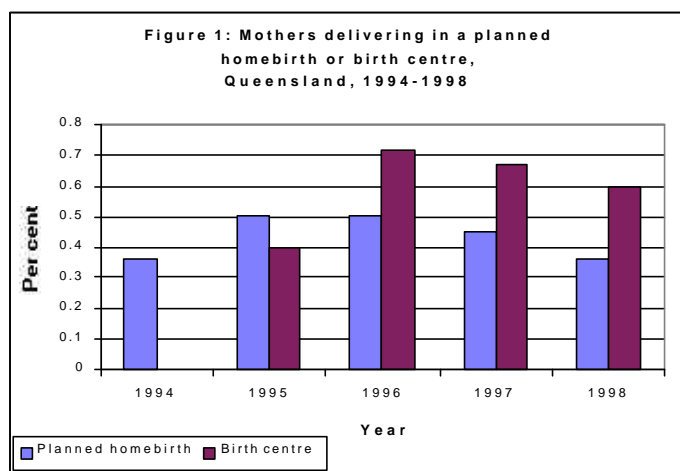
Labour and delivery details

Mothers delivering in a private facility were more likely than all other mothers to have labour induced (29.8%), a Caesarean Section (33.0%) or an instrumental delivery (15.1%). However retained placenta or membranes without haemorrhage (1.4%) and primary postpartum haemorrhage (1.6%) was lowest for these mothers.

Baby Details

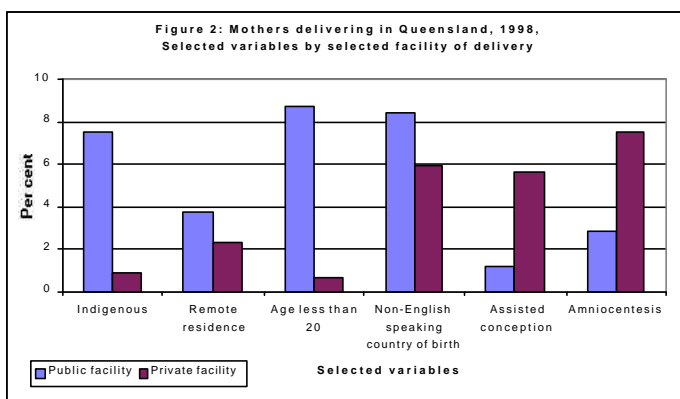
The numbers of low birthweight or preterm babies born in a birth centre or as a planned homebirth were small. As expected the highest numbers of preterm births occurred in public facilities - over 40% in a facility with a tertiary level nursery.

Data presented in this profile are intended to provide a basic source of information into the outcomes of mothers and babies utilising the main types of services available in Queensland. They are not intended as an evaluation of these services. The issues surrounding choice, availability, suitability, and access to maternity services are complex and individual. Therefore, direct comparison of outcomes between the main types of services using data in this report is not possible. Caution should also be used when interpreting data based on small numbers.



Antenatal details

Mothers delivering in a public facility were more likely to be Indigenous, live remotely, and be aged less than 20. Public facilities were also more likely than private facilities to have a higher proportion of mothers who were born in a non-English speaking country. For mothers delivering in private facilities higher rates of assisted conception and amniocentesis were reported (Figure 2).



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COUNTRY OF BIRTH OF MOTHER, QUEENSLAND 1998

Of the mothers delivering in Queensland in 1998, 83.6% were born in Australia, 8.6% were born in other English speaking countries and 7.8% in non-English speaking countries. There appears to be little change in the proportion of mothers born in non-English speaking and other English speaking countries over the last 3 years (Figure 1).

Tasmania had the highest proportion of mothers born in Australia (93.4%), followed by the Northern Territory (86.2%), South Australia (84.0%) then Queensland (83.5%) in 1997. (Australia's mothers and babies 1997, AIHW, 1999, p. 59).

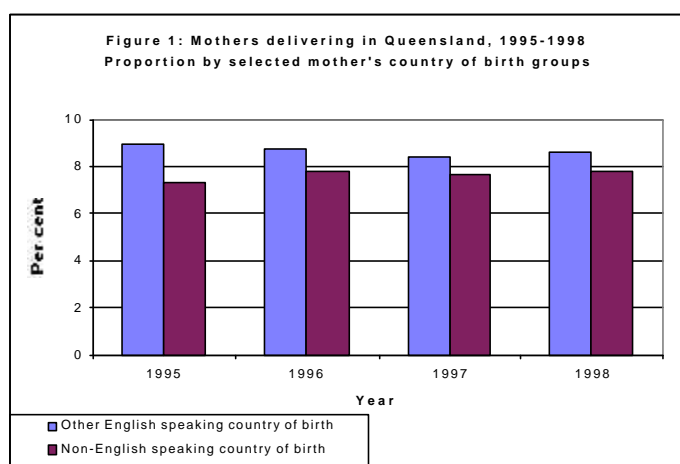
Labour and delivery details

Mothers born in Australia were more likely than all other mothers to have an induced labour and deliver in a private facility. A higher proportion of mothers born in another English speaking country delivered in a birth centre or as a planned homebirth whereas mothers born in a non-English speaking country were most likely to deliver in a public facility and have a spontaneous labour.

Baby Details

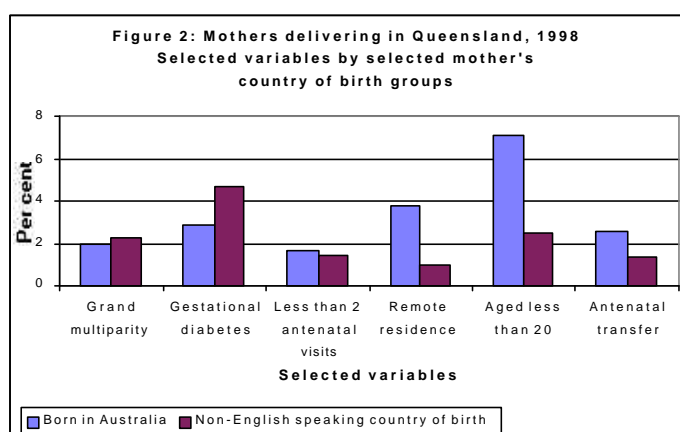
Although preterm birth and low birthweight babies were more frequently reported from Australian-born mothers, babies of these mothers were less likely to be born in a facility with a tertiary nursery. Mothers from non-English speaking countries of birth were least likely to breastfeed their babies at the time of discharge (79.5%).

The perinatal death rate in 1998 was 11.2 per 1,000 births for Australian-born mothers and was 11.5 per 1000 births for mothers born in a non-English speaking country. Births for mothers born in another English speaking country had the highest perinatal mortality rate (12.3 per 1,000).



Antenatal details

Grand multiparity and gestational diabetes were associated more with mothers from a non-English speaking country of birth. Mothers born in Australia were more likely to be usually resident in a remote area, aged less than 20, and transferred antenatally. (Figure 2).



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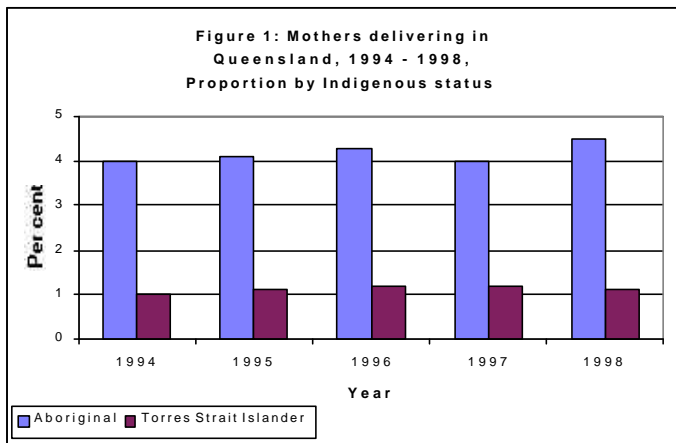
Deaths Australia - catalogue 3302.0

Causes of Death Australia - catalogue 3303.0

INDIGENOUS STATUS OF MOTHER, QUEENSLAND 1998

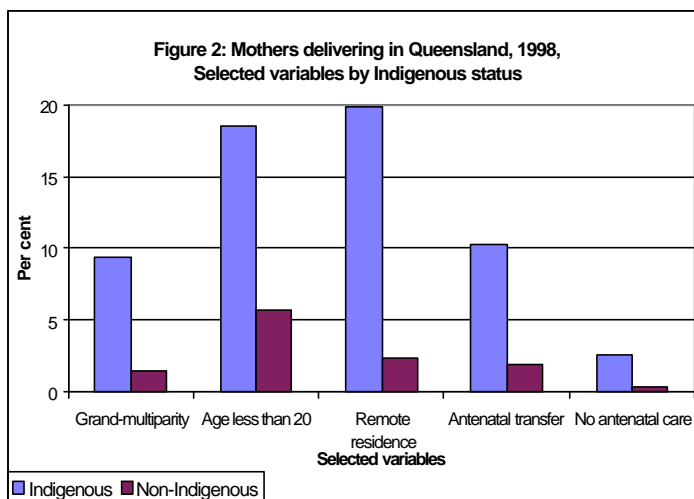
The proportion of mothers reported as Aboriginal increased slightly in 1998 to 4.5%. The proportion of mothers reported as Torres Strait Islander has remained comparatively stable (Figure 1). The proportion of Indigenous mothers delivering in Australia in the period from 1994 to 1996 was 3.0% of all confinements with Queensland reporting the highest number of all Indigenous confinements in Australia (Indigenous mothers and their babies Australia 1994-1996, AIHW, 1999, p. 1).

However, when expressed as a proportion of all mothers in each State and Territory, 5.2% of mothers birthing in Queensland were reported as Indigenous as compared with 35.0% in the Northern Territory and 5.7% in Western Australia (Indigenous mothers and their babies Australia 1994-1996, AIHW, 1999, p. 11).



Antenatal details

Grand multiparity, age less than 20 and remote usual residence were associated more with Indigenous mothers than non-Indigenous mothers. Indigenous mothers were also more likely to be transferred antenatally and have no antenatal care (Figure 2).



Labour and delivery details

Indigenous mothers were more likely than non-Indigenous mothers to have a spontaneous onset of labour, a vaginal delivery, and an intact perineum. However, primary postpartum haemorrhage, retained placenta and postnatal transfer were reported more frequently for Indigenous mothers than for non-Indigenous mothers.

Baby Details

Although preterm birth and low birthweight babies were more frequently reported in babies born to Indigenous mothers, babies of Indigenous mothers were less likely to be born in a facility with a tertiary nursery. An apgar score of four or less at five minutes was reported in 1.0% of livebirths to Indigenous mothers and in 0.5% of livebirths to non-Indigenous mothers.

The perinatal death rate in 1998 was 21.4 per 1,000 births for Indigenous mothers. This was twice the perinatal death rate for births to non-Indigenous mothers (10.7 per 1,000).

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PREVIOUS DELIVERIES OF MOTHER, QUEENSLAND 1998

The proportion of all mothers delivering for the first time (primiparas) in 1998 was 39.0% while the proportion with five or more previous deliveries (grand-multiparas) was 1.9%. These proportions have changed only slightly since 1997 from 39.6% primiparas and 1.8% grand-multiparas (Figure 1).

Compared to other States and Territories, Queensland, along with South Australia, had the lowest proportion of primiparous mothers (39.6%) while Northern Territory had the highest (50.0%) in 1997 (Australia's mothers and babies 1997, AIHW, 1999, p.55).

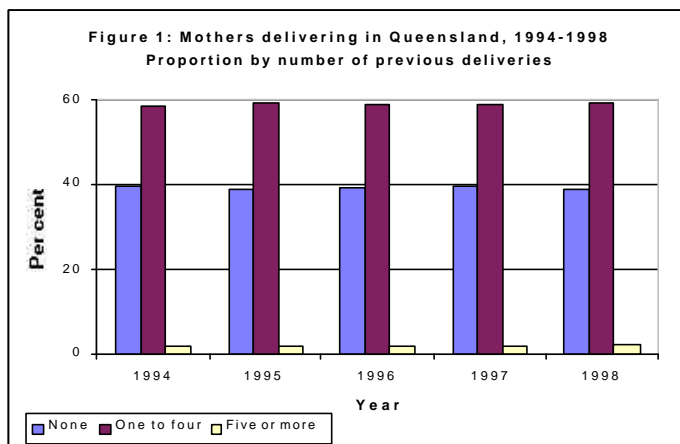
Labour and delivery details

Mothers delivering for the first time were more likely than all other mothers to have labour induced, an instrumental or operative delivery, and an episiotomy. However, primary post-partum haemorrhage and postnatal transfer were reported more frequently for mothers with five or more previous deliveries.

Baby Details

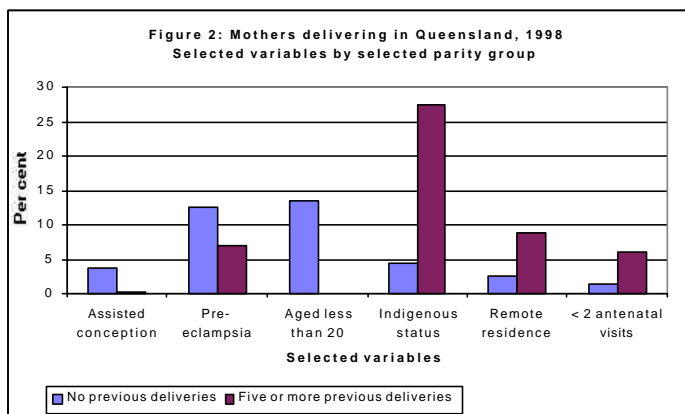
Although preterm birth and low birthweight babies were more frequently reported in babies born to mothers with five or more previous deliveries, babies of grand-multiparous mothers were less likely to be born in a facility with a tertiary nursery. Liveborn babies of primiparous mothers were more likely to be breastmilk fed on discharge (85.6%), whereas mothers with five or more previous deliveries were least likely to breastfeed their babies at the time of discharge (74.0%).

The perinatal death rate in 1998 was 16.0 per 1,000 births to mothers with five or more previous deliveries and was 12.3 per 1,000 births to primiparous mothers. Births to mothers with one to four previous deliveries had the lowest perinatal mortality rate (10.7 per 1,000).



Antenatal details

Assisted conception, pre-eclampsia and a maternal age less than 20 were associated more with mothers delivering for the first time. Mothers with five or more previous deliveries were more likely to be Indigenous, be usually resident in a remote area, and have less than two antenatal visits (Figure 2).



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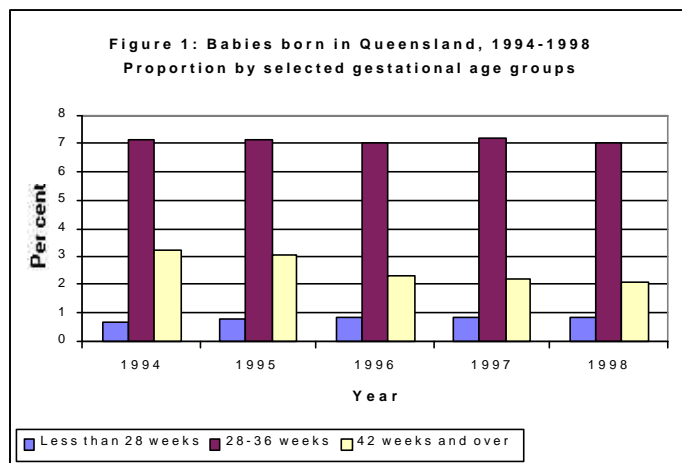
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BIRTHWEIGHT AND GESTATION, QUEENSLAND 1998

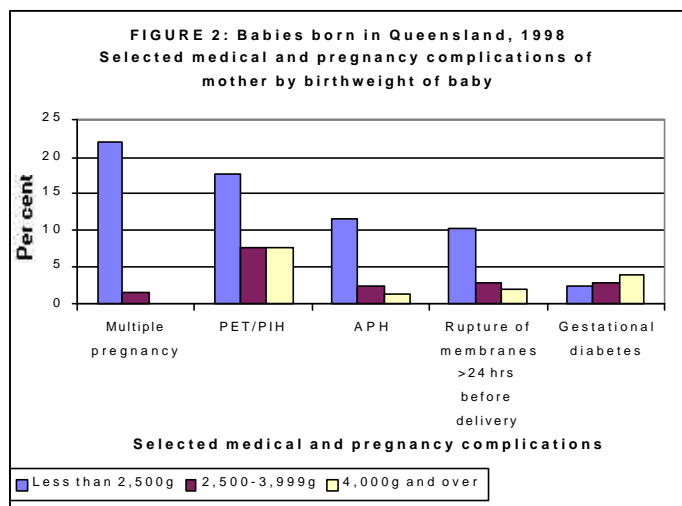
The proportion of all babies born with a low birthweight (less than 2,500g) has increased slightly over the last ten years, ranging from 6.4% in 1989 to 6.8% in 1998 with a peak in 1997 at 6.9%.

The proportion of births with extreme prematurity (less than 28 weeks gestation) has ranged from 0.7% in 1989 to 0.9% in 1998. In contrast the proportion of all births with a gestation of 42 completed weeks or more has declined in recent years to 2.1% in 1998 (Figure 1).



Antenatal details

Multiple pregnancy was associated with 22.1% of babies of low birthweight and 19.1% of premature babies. Pre-eclampsia, antepartum haemorrhage, and prolonged/premature rupture of membranes were also more frequently reported for both low birthweight and preterm babies. Gestational diabetes was associated more with mothers of babies weighing 4,000g or more at birth (Figure 2).



Importantly, 9.5% of all low birthweight babies and 8.7% of all preterm babies were born to Indigenous mothers while only 5.7% of mothers were Indigenous. However, 11.4% of all babies born to Indigenous mothers weighed less than 2,500g at birth compared with 6.6% of all babies born to non-Indigenous mothers. The proportion of preterm births to Indigenous mothers in 1998 was 12.0% compared with 7.6% for non-Indigenous mothers.

Labour and delivery details

Over 40% of low birthweight babies were delivered by Caesarean section. Over 25% percent of babies weighing less than 2,500g at birth were delivered prior to the onset of labour. The proportion of post-term babies (42 weeks and over) with fetal distress (16.6%) was higher than for any other gestational age group.

Baby Details

The numbers of low birthweight or preterm babies born in a birth centre or as a planned homebirth were small. As expected, the highest numbers of preterm births occurred in public facilities - over 40% occurred in a facility with a tertiary level nursery. The average length of stay for extremely low birthweight babies (less than 1,000g) discharged home was 93.4 days - over 21 times longer than the average length of stay for all liveborn babies discharged home (4.4 days). The average length of stay decreased as birthweight increased.

In 1998, the perinatal death rate for preterm births was 108.0 per 1,000 preterm births. For low birthweight babies, the perinatal death rate was 125.5 per 1,000 low birthweight babies. Whereas the perinatal death rate for all births in Queensland in 1998 was 11.4 per 1,000 births.

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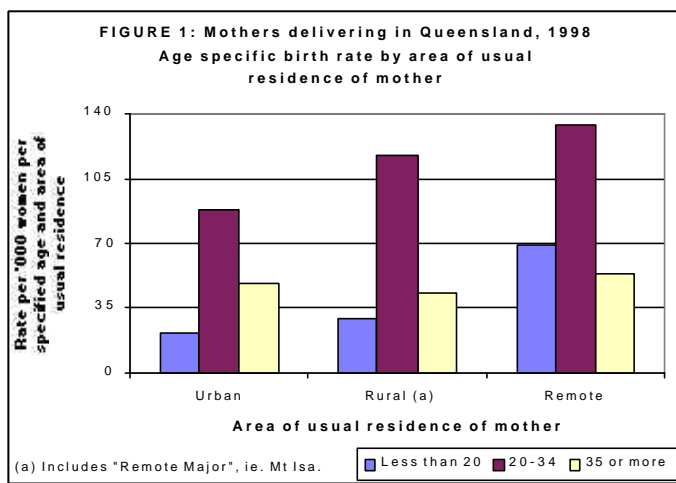
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USUAL RESIDENCE OF MOTHER, QUEENSLAND 1998

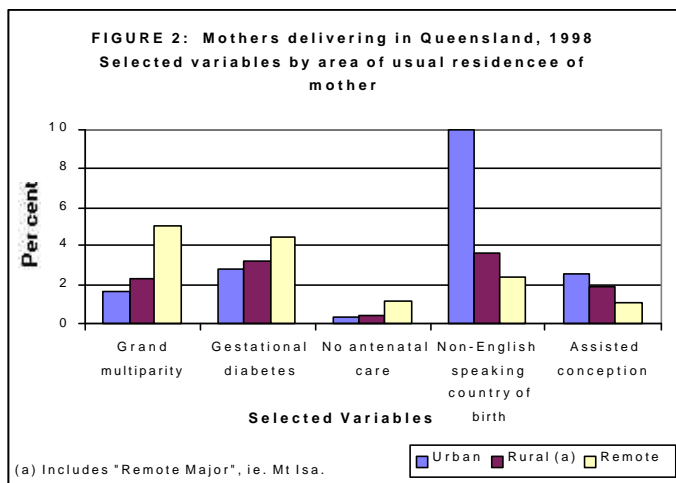
Most mothers delivering in Queensland in 1998 were usually resident in a capital city or other urban area - 31,077 (65.5%). There were 1,579 (3.3%) mothers who were reported to be usually resident in a remote area (excluding Mt Isa). A further 14,428 mothers (30.4%) were usually resident in a rural area or the Major Remote area of Mt Isa.

These proportions generally reflect the distribution of the estimated resident population in these areas for women aged between 15 and 49 (Population by Age and Sex, Queensland, ABS, 3235.3). The birth rate for women in remote areas is higher than for women in urban areas. This is particularly so for women aged less than 20 (Figure 1).



Antenatal details

Grand multiparity, gestational diabetes and no antenatal care were associated more with mothers from a remote area. Mothers usually resident in an urban area were more likely being from a non-English speaking country of birth, and have assisted conception (Figure 2).



Labour and delivery details

Mothers usually resident in an urban area were more likely than all other mothers to have labour induced and have an operative or instrumental delivery. Mothers from remote areas were most likely to have a spontaneous vertex delivery and they were also more likely to deliver in a public facility.

Baby Details

Low birthweight & preterm babies were more frequently reported for babies of mothers usually resident in remote areas of Queensland. Babies born to mothers usually resident in rural areas were least likely to be born in a facility with a tertiary nursery.

Mothers residing in urban areas of Queensland were least likely to breastfeed their babies at the time of discharge (82.3%), whilst babies of mothers from remote areas were most likely to be breastfed (87.3%).

The perinatal death rate in 1998 was 11.2 per 1,000 births for mothers usually resident in rural areas and was 15.7 per 1,000 births of mothers resident in a remote area. Babies born to mothers usually resident in an urban area had the lowest perinatal mortality rate (10.5 per 1,000 births).

FURTHER INFORMATION...

Further information is contained in a perinatal profile in the Excel workbook [profage.xls](#).

Other sources of information include:

For ad hoc (special) queries on Queensland data:
Client Services Unit
Health Information Centre
Queensland Health ph: 3234 1875 fax: 3234 0254
email: HlthStat@health.qld.gov.au
www.health.qld.gov.au/hic/1998peri/home.html

Queensland Health Electronic Publishing Service (QHEPS) - for Census figures and other standard information.

Queensland Council on Obstetric and Paediatric Mortality and Morbidity
www.uq.net.au/qcopmm/

National Perinatal Statistics Unit (AIHW)- for national figures
University of New South Wales
McNevin Dickson Building
Randwick Hospital Campus, Randwick, NSW, 2031
www.aihw.gov.au/npsu/index.html

Australian Bureau of Statistics
Births Australia - catalogue 3301.0
Deaths Australia - catalogue 3302.0
Causes of Death Australia - catalogue 3303.0

ASSISTED CONCEPTION QUEENSLAND 1996-1998

The data quality of assisted conception status has, in the past, been questionable both in terms of completeness and accuracy. More recently data quality has improved with greater interest and more rigorous editing of this field.

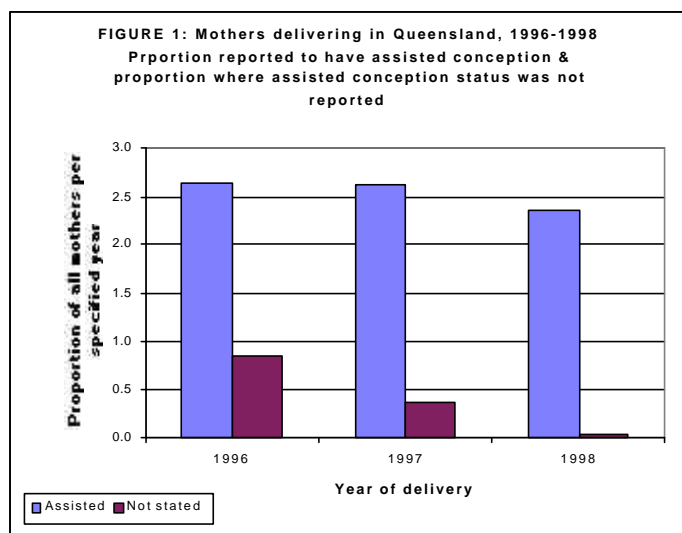
It is expected that the quality of assisted conception data will continue to improve although reporting of this information is dependent on mothers disclosing it to staff.

Labour and delivery details

The proportion of all mothers with assisted conception delivering prior to the onset of labour was almost twice that of all mothers. Similarly, mothers with assisted conception were nearly twice as likely than all mothers to deliver in a private facility, have a Caesarean section or instrumental delivery, and have an episiotomy (for a vaginal birth).

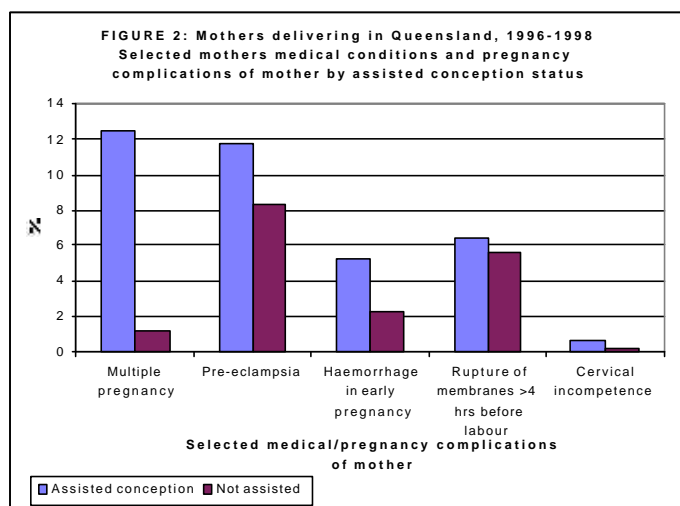
Baby Details

Preterm and low birthweight babies were more frequently reported for mothers with assisted conception. However, babies of mothers who were reported to have used artificial reproductive technology were more likely to be born in a facility with a tertiary nursery. Liveborn babies of mothers with assisted conception were less likely to be exclusively breastmilk fed on discharge (80.7%) than mothers with no assisted conception reported (82.6%). The perinatal death rate in the years 1996-1998 was 20.9 per 1,000 births for mothers with assisted conception whereas the perinatal death rate for all births in Queensland in the same period was 11.5 per 1,000 births. Further analysis may need to control for factors such as gestational age of baby, birthweight and plurality of pregnancy at birth. Caution should be used when interpreting small numbers.



Antenatal details

Assisted conception methods were associated with advancing maternal age, mothers with no previous deliveries and mothers in private accommodation. Pre-eclampsia, prelabour rupture of membranes, cervical incompetence, and early antepartum haemorrhage were also reported more frequently for mothers with assisted conception. As expected, multiple pregnancy was also associated with the use of artificial reproductive techniques particularly IVF and GIFT (Figure 2).



FURTHER INFORMATION...

Further information is contained in a perinatal profile in the Excel workbook *profart.xls*.

Other sources of information include:

For ad hoc (special) queries on Queensland data:
Client Services Unit
Health Information Centre
Queensland Health ph: 3234 1875 fax: 3234 0254
email: HlthStat@health.qld.gov.au
www.health.qld.gov.au/hic/1998peri/home.html

Queensland Health Electronic Publishing Service (QHEPS) - for Census figures and other standard information.

Queensland Council on Obstetric and Paediatric Mortality and Morbidity
www.uq.net.au/qcopmm/

National Perinatal Statistics Unit (AIHW) - for national figures
University of New South Wales
McNevin Dickson Building
Randwick Hospital Campus, Randwick, NSW, 2031
www.aihw.gov.au/npsu/index.html

Australian Bureau of Statistics
Births Australia - catalogue 3301.0
Deaths Australia - catalogue 3302.0
Causes of Death Australia - catalogue 3303.0

**Queensland Council on Obstetric and Paediatric Morbidity and Mortality
(QCOPMM)
Cause of Perinatal Death according to the Queensland Council Classifications**

The Queensland Council on Obstetric and Paediatric Morbidity and Mortality has as one of its main terms of reference the responsibility to “*Consider, investigate and report to the Minister for Health on the patterns of maternal, perinatal and paediatric morbidity and mortality in Queensland so that action may be taken to reduce preventable death and disability*”.

All perinatal deaths are reviewed by the Perinatal Working Party of the QCOPMM. The Perinatal Data Collection Unit (PDCU) assists the QCOPMM in this activity by providing information on deaths which is routinely requested by the Chief Health Officer on behalf of the QCOPMM. For each case, the death certificate (Form T) and the Perinatal Data Collection Form (MR66) is reviewed. In addition, the Congenital Anomaly Form (MR63D), Autopsy report and any other information supplied by the institution where the death occurred such as the clinical summaries are reviewed when available. During 1997 and 1998 a number of institutional mortality committees collaborated directly with the Council in this process by forwarding summaries and case classification to the Council secretariat. These were committees at the Mater Mothers’ and Royal Women’s Hospital, Brisbane; the Kirwan Hospital for Women, Townsville; and the Peninsula and Torres Strait Island Committee.

Of the 549 perinatal deaths in 1998, the Perinatal Mortality Working Group received a total of 227 confidential perinatal death case summaries from the collaborating institutional committees.

Each perinatal death is classified according to the primary cause of death using the clinical classifications developed by the Council. Two classifications are applied to perinatal deaths: an obstetric antecedent classification (Queensland Council Obstetric Antecedent Classification – QCPMC) for all perinatal deaths and in addition the Neonatal Mortality Classification for all neonatal deaths.

Queensland Council Perinatal Mortality Classification (QCPMC)

In order to develop preventive strategies, it is necessary to be able to focus on those maternal/fetal factors which if absent, (or successfully treated) would most likely have resulted in the death not occurring. After extensive experience with classifying perinatal deaths and in order to overcome several perceived shortcomings of the earlier classification systems and with the ICD 9 system, members of the perinatal mortality subcommittee developed a more comprehensive and user-friendly system. This QCOPMM Perinatal Mortality Classification system attempts to unequivocally identify the primary maternal and/ or fetal factors which led to the death.

Neonatal Classification

The QCOPMM has adopted (and slightly modified) the system of classifying neonatal deaths developed by the South Australian Perinatal Committee. This classification addresses the cause of death in the neonatal period. The purpose of this Neonatal Classification is therefore to assist in the identification of preventable aspects of neonatal mortality and to provide direction for future research. The classification is applied to all babies who were born alive and died within 28 days of birth.

It is hoped, by the process of classifying the deaths in this way, that appropriate strategies may be focussed (or developed) to address the underlying causes of perinatal mortality, and that as a result, preventable mortality and morbidity may be reduced.

The QCOPMM and its secretariat work closely with the Perinatal Epidemiology Unit at the Mater Hospital, South Brisbane in preparing an Annual Maternal, Perinatal and Paediatric Mortality Report for the QCOPMM. The tables included here are taken from the cause of death analyses for the 549 perinatal deaths in the Perinatal Mortality chapter of the QCOPMM Mortality Report for deaths in 1998. The Council is pleased to collaborate with the Perinatal Data Collection Unit in submitting these classifications, for publication in this Perinatal Statistics Report.

Assoc Prof David Tudehope, AM, MBBS, MRACP, FRACP
Acting Chair, Queensland Council on Obstetric and Paediatric Morbidity and Mortality.

APPENDIX A: UNPUBLISHED DATA AVAILABLE FROM THE PERINATAL DATA COLLECTION

(Release of data is subject to confidentiality restrictions)

MOTHER

Place of confinement
Age
Country of Birth
Indigenous Status
State of usual residence
Statistical local area of usual residence
Marital status
Class of patient
Antenatal transfer
Antenatal transfer place
Time of antenatal transfer
Reason for antenatal transfer
Assisted conception
Date of admission
Previous pregnancy outcomes
(live births, stillbirths, miscarriages/abortions)
Date of LMP
Estimated date of confinement
Antenatal care
Number of antenatal visits
Medical conditions
Pregnancy complications
Procedures and operations
Onset of labour
Presentation
Anaesthesia/analgesia methods used in labour/delivery
Method of delivery
Reason for Caesarean
Accoucheur
Perineal Status
Labour and delivery complications
Puerperium complications
Feeding method
Separation type
Date of separation
Place of transfer

BABY

Date of Birth
Time of Birth
Birthweight
Gestation
Plurality
Sex
Route of administration of vitamin K
Apgar score (1 and 5 minutes)
Time to establish respirations
Resuscitation methods
Neonatal morbidity
Neonatal treatment methods
Congenital anomalies
Days in ICN/SCN
Method of infant feeding
Separation type
Date of separation
Place of transfer

PERINATAL DEATHS

Date of death
Place of death
Macerated (stillbirths)
When heartbeat ceases
Post-mortem performed
Post-mortem confirmed

APPENDIX B: PERINATAL DATA COLLECTION FORM (MR63D)

**OBSTETRIC SUMMARY AND NEONATAL NOTES—
PERINATAL DATA COLLECTION FORM**
Complete details as specified or tick appropriate box

MOTHER'S DETAILS	PLACE OF CONFINEMENT _____ SURNAME _____ UR No. <input type="text"/>
	MOTHER'S COUNTRY OF BIRTH _____ GIVEN NAMES _____ DOB <input type="text"/>
PREVIOUS PREGNANCIES	INDIGENOUS STATUS: Australian Aboriginal <input type="checkbox"/> Torres Strait Islander <input type="checkbox"/> Aborig. & Torres Str. Is. <input type="checkbox"/> Not indigenous <input type="checkbox"/>
	MARITAL STATUS: Never Married <input type="checkbox"/> Married/defacto <input type="checkbox"/> Widowed <input type="checkbox"/> Divorced <input type="checkbox"/> Separated <input type="checkbox"/>
PRESENT PREGNANCY	CLASS OF PATIENT: Standard <input type="checkbox"/> Private shared <input type="checkbox"/> Private single <input type="checkbox"/>
	USUAL RESIDENCE _____ POSTCODE <input type="text"/> STATE <input type="text"/> SLA <input type="text"/>
LABOUR AND DELIVERY	RPR: Rubella <input type="checkbox"/> Hepatitis B <input type="checkbox"/> Other _____
	Blood Group: Rh _____ Antibodies Yes <input type="checkbox"/> No <input type="checkbox"/>
BABY	PREVIOUS PREGNANCIES: None <input type="checkbox"/> Live births _____ Stillbirths _____ Abortion/miscarriages _____
	Number of Pregnancies Resulting in: _____ Was ANY previous delivery by Caesarean section? No <input type="checkbox"/> Yes <input type="checkbox"/>
POSTNATAL DETAILS	LMP <input type="text"/> EDC <input type="text"/>
	by US scan/dates/clinical assessment ANTENATAL CARE: Public hospital/clinic <input type="checkbox"/> Shared care <input type="checkbox"/> Private medical practitioner <input type="checkbox"/> Private midwifery practitioner <input type="checkbox"/> No antenatal care <input type="checkbox"/>
DISCHARGE DETAILS	NUMBER OF VISITS: Less than 2 <input type="checkbox"/> 2 - 4 <input type="checkbox"/> 5 - 7 <input type="checkbox"/> 8 or more <input type="checkbox"/>
	CURRENT MEDICAL CONDITIONS (affecting the management of this pregnancy) You may tick more than one box: None <input type="checkbox"/> Essential hypertension <input type="checkbox"/> Pre-existing diabetes mellitus <input type="checkbox"/> Asthma (treated during this pregnancy) <input type="checkbox"/> Epilepsy <input type="checkbox"/> Genital herpes (active during this pregnancy) <input type="checkbox"/> Renal condition (specify) _____ Cardiac condition (specify) _____ Other (specify) _____
DISCHARGE DETAILS	PREGNANCY COMPLICATIONS (You may tick more than one box): None <input type="checkbox"/> APH (<20 weeks) <input type="checkbox"/> APH (20 weeks or later) due to: <input type="checkbox"/> abruption <input type="checkbox"/> placenta praevia <input type="checkbox"/> other <input type="checkbox"/> Gestational diabetes (treatment—diet / insulin) <input type="checkbox"/> PIH/PE: mild <input type="checkbox"/> moderate/severe <input type="checkbox"/> Other (specify) _____
	PROCEDURES AND OPERATIONS (during pregnancy) You may tick more than one box: None <input type="checkbox"/> Chorionic villus sampling <input type="checkbox"/> Amniocentesis <input type="checkbox"/> Cordocentesis <input type="checkbox"/> Cervical suture <input type="checkbox"/> Other (specify) _____
DISCHARGE DETAILS	ASSISTED CONCEPTION: Was this pregnancy the result of assisted conception? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, indicate method/s used: AIH / AID <input type="checkbox"/> Ovulation induction <input type="checkbox"/> IVF <input type="checkbox"/> GIFT <input type="checkbox"/> Other <input type="checkbox"/>
	ULTRASOUND SCAN: Yes <input type="checkbox"/> No <input type="checkbox"/>
DISCHARGE DETAILS	ONSET OF LABOUR (Tick one box only): Spontaneous <input type="checkbox"/> Induced <input type="checkbox"/> No labour (Caesarean section) <input type="checkbox"/>
	PRESENTATION (Tick one box only): Vertex <input type="checkbox"/> Breech <input type="checkbox"/> Other (specify) _____
DISCHARGE DETAILS	METHOD OF DELIVERY (Tick one box only): Spontaneous vertex <input type="checkbox"/> Forceps <input type="checkbox"/> Vacuum extractor <input type="checkbox"/> LSCS <input type="checkbox"/> Classical CS <input type="checkbox"/> Breech <input type="checkbox"/> Other (specify) _____
	PRINCIPAL ACCOUCHEUR (Tick one box only): Obstetrician <input type="checkbox"/> Other medical officer <input type="checkbox"/> Midwife <input type="checkbox"/> Student midwife <input type="checkbox"/> Medical student <input type="checkbox"/> Other (specify) _____
DISCHARGE DETAILS	LABOUR AND DELIVERY COMPLICATIONS (You may tick more than one box): None <input type="checkbox"/> Meconium liquor <input type="checkbox"/> Fetal distress <input type="checkbox"/> Cord prolapse <input type="checkbox"/> Cord entanglement with compression <input type="checkbox"/> Failure to progress <input type="checkbox"/> Prolonged second stage (active) <input type="checkbox"/> Precipitate labour/delivery <input type="checkbox"/> Retained placenta with manual removal <input type="checkbox"/> Primary PPH (>600ml) <input type="checkbox"/> Other (specify) _____
	PERINEUM (You may tick more than one box): Intact <input type="checkbox"/> Lacerated -1st degree <input type="checkbox"/> -2nd degree <input type="checkbox"/> -3rd degree <input type="checkbox"/> -4th degree <input type="checkbox"/> Episiotomy <input type="checkbox"/> Other genital trauma _____
DISCHARGE DETAILS	ANALGESIA/ANAESTHESIA (You may tick more than one box): None <input type="checkbox"/> Nitrous oxide <input type="checkbox"/> Narcotic (IM/IV) <input type="checkbox"/> Caudal <input type="checkbox"/> Epidural <input type="checkbox"/> Spinal <input type="checkbox"/> General anaesthetic <input type="checkbox"/> Other (specify) _____
	REASON FOR CAESAREAN: _____ If previous CS: <input type="checkbox"/> • repeat elective CS <input type="checkbox"/> • trial of scar <input type="checkbox"/> Comment _____
DISCHARGE DETAILS	PLACENTA / CORD: _____
	CTG in labour: Yes <input type="checkbox"/> 7534 No <input type="checkbox"/> FSE in labour: Yes <input type="checkbox"/> 7532 No <input type="checkbox"/> Fetal scalp pH: <input type="text"/>
DISCHARGE DETAILS	For multiple births complete one form per baby: BIRTH UR No. <input type="text"/> Date of birth <input type="text"/> Time of birth _____ hours _____ minutes _____ seconds
	PLURALITY: Single <input type="checkbox"/> Twin I <input type="checkbox"/> Twin II <input type="checkbox"/> Other <input type="checkbox"/>
DISCHARGE DETAILS	APGAR SCORE: 1 min 5 mins: Heart rate <input type="text"/> Respiratory effort <input type="text"/> Muscle tone <input type="text"/> Reflex irritability <input type="text"/> Colour <input type="text"/> TOTAL <input type="text"/>
	RESUSCITATION (You may tick more than one box): None <input type="checkbox"/> Suction (oral, pharyngeal etc) <input type="checkbox"/> Suction of meconium (oral, pharyngeal etc) <input type="checkbox"/> Suction of meconium via ETT <input type="checkbox"/> Facial O ₂ <input type="checkbox"/> Bag and mask <input type="checkbox"/> PPV via ETT <input type="checkbox"/> Narcotic antagonist injection <input type="checkbox"/> External cardiac massage <input type="checkbox"/> Other (specify—include drugs) _____
DISCHARGE DETAILS	NEONATAL TREATMENT: None <input type="checkbox"/> Oxygen for >4 hours <input type="checkbox"/> Phototherapy <input type="checkbox"/> IV/IM antibiotics <input type="checkbox"/> IV fluid <input type="checkbox"/> Mechanical ventilation <input type="checkbox"/> Other treatment _____
	CONGENITAL ANOMALY: No <input type="checkbox"/> Yes <input type="checkbox"/> Suspected <input type="checkbox"/> If yes or suspected enter detail below and also complete form MR66. _____
DISCHARGE DETAILS	MOTHER PUERPERIUM COMPLICATIONS: None <input type="checkbox"/> GT/UTI <input type="checkbox"/> Wound infection <input type="checkbox"/> Other (specify) _____
	Feeding method on discharge: _____
DISCHARGE DETAILS	BABY NEONATAL MORBIDITY: None <input type="checkbox"/> Jaundice <input type="checkbox"/> Respiratory distress <input type="checkbox"/> Infection <input type="checkbox"/> Other (specify) _____
	Discharge weight _____ grams
DISCHARGE DETAILS	Discharged <input type="checkbox"/> Transferred <input type="checkbox"/> Died <input type="checkbox"/>
	Date <input type="text"/>

MR 63D 190555-MAC-GOPRINT® JULY 1998

APPENDIX C: 1998 PERINATAL DATA COLLECTION FORM CHANGES (MR63D)

These changes were implemented from 1 July 1998, and are as follows.

1. Ethnic origin has been changed to Indigenous status, with new categories as follows:

1. Indigenous – Aboriginal but not Torres Strait Islander
2. Indigenous – Torres Strait Islander but not Aboriginal
3. Indigenous – Both Aboriginal and Torres Strait Islander
4. Neither Aboriginal nor Torres Strait Islander

2. The marital status category of 'Single' has been changed to 'Never married'.

3. Number of antenatal visits. New categories have been added as follows:

1. Less than 2
2. 2 – 4
3. 5 – 7
4. 8 or more

4. Perineum has been changed with new categories as follows:

1. Intact
2. 1st degree laceration
3. 2nd degree laceration
4. 3rd degree laceration
5. 4th degree laceration
6. Episiotomy

Staff will be able to tick more than one box to indicate episiotomies with an extended tear. There is a box to record whether there was a surgical repair of the vagina or perineum.

APPENDIX D:

COMMONWEALTH HEALTH SUB-REGIONS



REFERENCES

- 1 *British Paediatric Association Classification of Disease*, 1987, (A paediatric supplement compatible with the ninth revision of the WHO International Classification of Diseases, 1977), London.
- 2 World Health Organisation (WHO), *The Australian Version of The International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), Volumes 1-4*,1996, National Coding Centre, Sydney.
- 3 National Perinatal Statistics Unit (NPSU), *Indigenous Mothers and their Babies, Australia 1994-1996*,1999,AIHW, Sydney.
- 4 National Perinatal Statistics Unit (NPSU), *Australia's Mothers and Babies,1997*,1999 AIHW, Sydney.