

Executive summary

Maternal mortality

- In the five year period 2004 to 2008, during which 279,663 women gave birth in Queensland, there were 82 deaths of women within one year of the end of a pregnancy.
- Thirty-nine (39) of the 82 deaths met the World Health Organisation (WHO) definition of a maternal death¹. To allow for comparison with other Australian jurisdictions, the five maternal deaths from 2003, consistent with the same maternal death definition, are included in the maternal mortality ratio calculations.
- The maternal mortality ratio in the period 2003 to 2005 was 13.6 per 100,000 confinements, and the maternal mortality ratio in the period 2006 to 2008 was 8.4 per 100,000 confinements.
- The major causes of direct maternal death were thromboembolism and amniotic fluid embolism, and the most common causes of indirect maternal deaths related to suicide and pulmonary hypertension. Suicide, malignancy and motor vehicle trauma were the most prominent causes in maternal deaths between 42 and 365 days after the end of a pregnancy.
- Significant difficulties were encountered gathering data regarding maternal deaths and understanding the presence of possible avoidable factors, due to poor quality of data related to lack of legislated requirement for practitioners to cooperatively report deaths and due to the absence of autopsy information in a number of cases.

Perinatal mortality

- In 2009, the most recently reported period for Queensland, there were 686 perinatal deaths giving an overall rate of 11.1 per 1000 births. Perinatal deaths comprised 447 (65.2%) stillbirths, a rate of 7.2 per 1,000 and 239 (34.8%) neonatal deaths, a rate of 3.9 per 1,000 live births.
- During the 1990s there was a slight trend towards a reduction in the perinatal mortality rates (due to a reduction in neonatal death rates). However, there has been no improvement during the decade 2000 to 2009, and the stillbirth rate has not reduced during these two decades.
- This report includes more detailed analyses of 5,021 perinatal deaths over the period 2000 to 2008 made up of 3,270 stillbirths and 1,751 neonatal. The total births during this period was 483,116, giving perinatal, stillbirth and neonatal death rates of 10.4, 6.8, and 3.6 per 1,000 births respectively.
- The perinatal mortality, stillbirth and neonatal death rate for women birthing in Private hospitals remains lower than for women in Public hospitals; 6.8 v 11.9 per 1,000; 4.8 v 7.6; and 2.1 v 4.3 respectively.
- The majority of perinatal deaths (79.0%) occurred in the 8.6% of births born at or before 36 weeks gestation and 55.5% of deaths in the 0.9% of births at or before 28 weeks.
- The main conditions contributing to perinatal deaths classified according to the PSANZ-PDC classification of perinatal deaths over the period 2000 to 2008 were *Congenital anomaly* (22.6%) and *Spontaneous preterm* (23.3%). Other important categories were *Specific perinatal conditions* (7.5%) and *Antepartum haemorrhage* (7.2%).
- *Unexplained* stillbirths accounted for 19.9% of all perinatal deaths and 30.5% of stillbirths with a rate of 2.1 per 1,000 births. In 5% of cases potentially contributory or causal placental pathology was identified and in almost 8% no placental pathology report was available (either unknown if performed or not performed).
- Over the period 2000 to 2008 there were 26,391 babies born to Indigenous women. In this cohort there were 497 perinatal deaths made up of 306 stillbirths and 191 neonatal deaths, giving perinatal mortality, stillbirth and neonatal death rates for Indigenous women of 18.8, 11.6, and 7.3 per 1000 births respectively. This compares unfavorably with rates for non-Indigenous women of 10.1, 6.6, and 3.5 respectively.
- The perinatal death category accounting for most of the increased perinatal mortality in Indigenous populations was *Spontaneous preterm*, which was almost three times more frequent than in the non-Indigenous population. Other important contributors to this disparity were *Antepartum haemorrhage* and *Hypertension*.

1 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, and excluding deaths from accidental or incidental causes.

- The perinatal mortality rate for multiple births was 38.8 per 1,000 births compared with the rate for singletons of 9.3/1000. The perinatal death classifications accounting for most of the increased perinatal mortality in multiples were *Specific perinatal conditions* (largely twin-twin transfusion syndrome) and *Spontaneous preterm*.

Pregnancy outcomes 2000 to 2009

- 535,955 women gave birth to 545,168 babies in Queensland in the decade 2000 to 2009. Approximately 70% of women gave birth in Public hospitals and 30% in Private hospitals; 816 women had a planned home birth.
- The incidence of birth to women aged 35 years or more increased from 14.8% to 19.9%. Low birth weight birth, preterm birth, multiple birth and birth of babies requiring neonatal intensive care or special care nursery admission were all higher for this group when compared with younger women.
- Though the incidence of birth at gestations less than 36 weeks remained reasonably constant (approximately 5%), there was a noticeable increase in the incidence of birth in the gestational age group 36 to 38 weeks (late preterm births). Birth in the gestational period 36 to 38 weeks (both spontaneous and planned) is associated with an incidence of perinatal death and of needing Neonatal Intensive Care or Special Care Nursery admission.
- Women in Private hospital care had a higher incidence of giving birth to a baby in the 36 to 39 week gestational period, compared with women in Public hospital care, relating almost entirely to the high elective caesarean section rate in Private care.
- Preterm birth (before 37 weeks gestation) occurred in 59.5% of multiple pregnancies, compared with 7.3% of singleton pregnancies.
- Pregnancies conceived with the aid of assisted conception techniques were 13.8 times more likely to be multiple than those conceived without such technologies. Babies born from such pregnancies are more likely to be of low birth weight and to need neonatal intensive care or special care nursery admission.
- During the decade 2000 to 2009 56% to 58% of women laboured spontaneously, induction of labour decreased from 25.1% to 22.4%, and caesarean section without labour increased from 14.4% to 20.5%.
- The pattern of labour onset was quite different between Public hospital and Private hospital care. Spontaneous onset of labour decreased significantly in Private hospitals while remaining relatively constant at approximately 64% in Public hospitals. Caesarean section without labour increased from 11.0% to 14.6% in Public hospitals and from 24.2% to 34.3% in Private hospitals.
- The incidence of unassisted vaginal birth decreased significantly from 65.2% to 56.9%. The increasing incidence of caesarean section birth has been more obvious in the setting of Private hospital care (37.9% to 48.6%), when compared with Public hospital care (22.2% to 27.7%).
- Women who have previously had one or more pregnancies were more likely to have an unassisted vaginal birth and less likely to have an assisted vaginal birth, when compared with women who have not previously had a pregnancy; the rising caesarean section rate in both groups of women was similar.
- Highlighting the critical nature of the decision to perform a “first” caesarean section, women who had not had a previous caesarean section had a 78.5% to 80% likelihood of having an unassisted vaginal birth and 14% to 16% likelihood of a caesarean section birth; in contrast, while women who had had one or more previous caesarean sections had a 15% to 23% likelihood of having a vaginal birth and a 77% to 85% likelihood of a caesarean section birth.
- Indigenous mothers (29,723; 5.5% of 535,955) gave birth to 29,798 babies in this decade. Indigenous women were significantly more likely to give birth at gestations less than 37 weeks, but the incidence of pre-term birth (36 weeks or less) dropped from 13.1% to 11.6%.
- The pattern of birth weight to gestation is different for Indigenous and non-Indigenous babies, with Indigenous babies being smaller for gestational age than non-Indigenous babies. Maternal age and Indigenous status, as well as gestational age are shown to significantly influence on the birth weight of babies.