KEY FINDINGS

• Between 1988 and 2007 the number of births in Queensland increased by 45.8%. In relative terms this increase in birth numbers occurred mostly in the private sector (116.1% increase in private hospital births compared with 27.4% increase in public hospital births). Homebirths made up 0.28% of the total births in Queensland in that period.

• As a percentage of total births, there has been a significant increase in births to women 35 years and over (increase from 7.7% to 19.3% from 1988 to 2007), with a relative decrease in births to women 34 and younger.

• There has been an 8% increase in the incidence of birth between 28 and 36 weeks gestation, relating primarily to an increased incidence of multiple pregnancies. As would be expected, this has led to an increase in number of low birthweight (LBW, less than 2500g) and very low birthweight (VLBW, less than 1500g) babies.

• There has been a marked reduction in the incidence of birth at or later than 42 weeks gestation (3.4% in 1988 vs. 0.7% in 2007); this is consistent with evidence related to avoiding post-maturity over 42 weeks gestation.

• There has been a 42% increase in the percentage of multiple births, with this increase being most marked in mothers 35 years and older (50%). The incidence of preterm birth in multiple pregnancies has increased, primarily in the 28-36 week gestation cohort.

• Since 1995, data has been collected regarding the use of assisted conception techniques. In the period 1995-2007 2.9% of pregnancies were identified as being conceived with such assistance, with a steady rise from 2.1% to 3.6%. The percentage of multiple pregnancies was markedly increased in this group, especially where extracorporeal techniques such as in-vitro fertilisation were employed (average 19.8% vs 1.2% in pregnancies conceived without assisted conception techniques). The percentage of low birthweight and very low birthweight babies being born in pregnancies conceived with the aid of reproductive technologies was more than double that of pregnancies conceived without such aid. If the influence of multiple birth is removed outcomes in these pregnancies are much closer to those of pregnancies conceived without assisted conception techniques.

• There has been a 20% decrease in the incidence of spontaneous onset of labour, with the associated rise in the incidence of elective caesarean section exceeding 100%; the incidence of induction of labour has increased marginally. These changes have occurred in both public and private hospitals, though are more marked in the private sector.

• The incidence of caesarean section has almost doubled in this 20 year period, with unassisted vaginal birth and assisted vaginal birth both becoming less frequent. These changes have been most marked in the private hospital setting. The decline in the incidence of assisted vaginal birth has been accompanied by a shift from the use of obstetric forceps to the use of vacuum extraction.

• There has been a major increase in the incidence of the use of caesarean section to deliver women with multiple pregnancies, such that more than 74% of such births occurred by caesarean section in 2007.

• Caesarean section has become the mode of birth for an ever increasing percentage of women with breech presentation, such that more than 90% of women with a breech presentation gave birth by caesarean section in 2007 (up from just over 75% in 1988).

• The decision to undertake a first caesarean section in a woman’s reproductive career is crucial to future birth outcomes. Women who had not had a previous caesarean section had a 78-80% likelihood of having an unassisted vaginal birth and 14-16% likelihood of a caesarean section birth; in stark contrast, women who had had one or more previous caesarean sections had a 14-20% likelihood of having an unassisted vaginal birth and 77-84% likelihood of a repeat caesarean section birth.
• Indigenous mothers were more likely than their non-Indigenous counterparts to be less than 20 years of age and were almost exclusively cared for in public hospitals. The Indigenous women were more likely than non-Indigenous women to give birth before 37 weeks gestation, and their babies were more likely to weigh less than 2500g at birth.

• Though the numbers of maternal deaths are small, there would appear to have been an upward trend to the incidence of direct and indirect maternal deaths in Queensland between 1998 and 2003. The maternal mortality ratio in Queensland was greater than the Australian average for most of the period examined.

• Over this 20 year period, the overall perinatal mortality rate in Queensland has not changed significantly; there has been a decrease in the neonatal mortality rate, and an increase in the stillbirth rate. There is anecdotal information and data from the Australian and New Zealand Neonatal Network (not included in this report) which suggests that neonatal morbidity rates have improved.

• The perinatal mortality rates for babies of Indigenous women (both fetal and neonatal mortality rates) were close to double those for babies of non-Indigenous women. Classification of the causes of perinatal deaths indicate that the distribution of the causes of death differ between Indigenous and non-Indigenous populations.

• In the ten year period 1998-2007, 40.2 babies in every thousand were born with one or more diagnosed congenital anomalies.
1. PREGNANCY AND NEWBORN CARE

1.1 Care mode:

Over the twenty year period from 1988 to 2007, 964,224 women gave birth to 979,185 babies in Queensland. During this period, the number of births per year increased by 45.8%; there was an increase in public hospital births of 27.4% and 116.1% in private hospital births (Figure 1, Table 2). This trended increase was not statistically significant in public hospital care ($R^2=0.23$) but highly statistically significant in private hospital care ($R^2=0.95$).

![Figure 1: Number of births in Queensland 1988 to 2007, by care provider (refer Table 2)](image)

In relative terms, there has been a significant change in the hospital care mode chosen by women, with an increase in the percentage of private care from 20.4% to 30.1% and a concomitant decrease in public hospital care from 79.4% to 69.7%. (Figure 2, Table 2)

![Figure 2: Percentage of women accessing public and private birth care Queensland 1988 to 2007 (refer Table 2)](image)
From 2000 onwards data relating to intended place of birth and actual place of birth have been collected, with data collection from 2001 onwards being complete.

In the seven years from 2001 to 2007, 361,505 of the 366,079 (98.8%) women intended to give birth in a hospital; 359,672 of the 366,709 (99.5%) women who intended to give birth in hospital achieved that aim, with 169 giving birth at home, 13 giving birth in a Birth Centre, and the remaining 1651 (0.5%) giving birth in “other” circumstances (ie. “Born before arrival”).

In the same period, 3,887 intended to give birth in a Birth Centre (1.1%); 3,154 (81.1%) achieved that aim, with 660 (17.0%) giving birth in hospital, 11 giving birth at home, and 62 in “other” circumstances.

In this seven year period 533 of 687 women (77.6%) who intended to birth at home did so, and 154 of 687 (22.4%) who intended to have a home birth were transferred for birth elsewhere.

Data was incomplete for 84 women in this period.
1.2 Home birth:

Two thousand, six hundred and seventy-two (2,672) women are recorded as having a planned home birth between 1988 and 2007 (Tables 2 and 3). This number represents 0.28% of the total births in Queensland in that period. Eight of the births were multiple births.

The number of home births peaked between 1991 and 1999 (highest 242 in 1995), and has declined since then to less than 100 per year (Figure 3, Table 3). The age profile of women giving birth at home has changed significantly over this period, with an increasing percentage of the women being 35 or more years of age (35+ vs <35; odds ratio 2.99; 95% confidence limits 1.29, 6.96) (Figure 4, Table 2).

![Fig 3: Number of home births in Queensland 1988 to 2007, by maternal age group (refer Table 3)](image1)

![Fig 4: Percentage of home births Queensland 1988 to 2007, by maternal age group (refer Table 3)](image2)