

Quality, Safety and Patient Experience Branch
Department of Health

BIRTHS IN VICTORIA

2007 and 2008

The Consultative Council on Obstetric and
Paediatric Mortality and Morbidity (CCOPMM)

Births in Victoria 2007 and 2008

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Table of Contents

Tables	iv	Reproductive history	22
Figures	vii	Gravidity	22
Acknowledgements	viii	Parity	22
Summary	1	Previous caesarean sections	23
Introduction	2	Labour and birth	24
Background	2	Gestation	24
Functions of CCOPMM	2	Onset of labour	24
Data Source	2	Method of birth	27
Data Quality	3	Analgesia and anaesthesia	33
Differences from previous reports	3	Perineal status	35
Births	5	Postpartum haemorrhage	36
Maternal characteristics	6	Infant factors	37
Maternal age	6	Factors related to infant sex	37
Marital status	10	Factors related to gestation	37
Maternal place of birth	11	Factors related to birthweight	40
Organisational factors	14	Resuscitation at birth	44
Admission status	14	Multiple births	45
Postnatal length of stay	15	Indigenous mothers and their babies	47
Place of birth	18	Comparisons between hospital types	49
Births planned to occur in birth centres	18	Residential information related to births	52
Planned home births	20		

Tables

Table 1: Total births in Victoria, 2007 and 2008	5
Table 2: Crude birth rate, Victoria, 2007 and 2008	5
Table 3: Trends in births, confinements and live births per 1,000 EFRP aged 15–44 years, Victoria, 1985–2008	5
Table 4: Maternal age group, all confinements, 2007 and 2008	6
Table 5: Trends in maternal age group, all confinements, 1985–2008	6
Table 6: Maternal age group by Department of Health region of residence, all confinements, pooled data, 2007 and 2008	8
Table 7: Trends in Department of Health region of residence (rural versus metropolitan), all confinements, 1990–2008	8
Table 8: Livebirths by Department of Health region of residence, 2007 and 2008	9
Table 9: Marital status, all confinements, 2007 and 2008	10
Table 10: Trends in marital status, all confinements 1985–2008 (%)	10
Table 11: Maternal place of birth, all confinements, 2007 and 2008	11
Table 12: Ten most common countries of birth, for women born in non-English speaking countries, confinements in 1990 and 2008	11
Table 13: Trends in maternal place of birth, all confinements, 1990 to 2008	12
Table 14: Maternal place of birth by Department of Health region of residence, all confinements, 2007 and 2008 pooled	12
Table 15: Maternal age group by maternal place of birth, all confinements, pooled data 2007 and 2008 (row %)	13
Table 16: Parity prior to index birth by maternal place of birth, all confinements, pooled data 2007 and 2008	13
Table 17: Admission status, all confinements, 2007 and 2008	14
Table 18: Trends in admission status, all confinements, 2000 to 2008 (%)	14
Table 19: Postnatal length of stay, all confinements, 2007 & 2008	15
Table 20: Postnatal length of stay by type of birth, 2007 and 2008 (confinements)	16
Table 21: Postnatal length of stay by admission status, pooled data 2007 and 2008	16
Table 22: Median and mean length of postnatal stay (days) by admission status and type of birth, 2007 and 2008 (confinements)	17
Table 23: Trends in median and mean postnatal length of stay (days) by type of birth, 1985 to 2008 (confinements)	17
Table 24: Actual place of birth, all confinements, 2007 and 2008	18
Table 25: Place of birth for women who initially intended to give birth in a birth centre, 2007 and 2008	18
Table 26: Place of birth by maternal age group for women who initially planned to give birth in a birth centre, 2007 and 2008	19
Table 27: Onset of labour for planned birth centre confinements by actual place of birth, 2007 and 2008	19
Table 28: Method of birth for planned birth centre confinements by actual place of birth, 2007 and 2008	19
Table 29: Age of women planning home confinements, 2007 and 2008	20
Table 30: Place of birth for planned home confinements by maternal age, 2007 and 2008	20
Table 31: Time of change in plan for women who planned home confinements and gave birth in hospital, 2007 and 2008	20

Table 32: Trend in number of women having planned home confinements, 1985–2008	21
Table 33: Method of birth for planned home confinements by actual place of birth, 2007 and 2008	21
Table 34: Gravidity, all confinements, 2007 and 2008	22
Table 35: Parity prior to the index birth, all confinements 2007 and 2008	22
Table 36: Trends in parity, all confinements, 1990 to 2008	22
Table 37: Number of previous caesarean sections, of all women who had one or more prior birth, 2000, 2007 and 2008	23
Table 38: Gestation at time of giving birth, all confinements 2007 and 2008	24
Table 39: Trends in gestation, all confinements 1990 to 2008	24
Table 40: Onset of labour, all confinements, 2007 and 2008	24
Table 41: Agents used to induce labour, 2007 and 2008	26
Table 42: Indications for induction of labour, 2007 and 2008	26
Table 43: Method of augmentation after spontaneous onset of labour, 2007 and 2008	27
Table 44: Method of birth, all confinements, 2007 and 2008	27
Table 45: Method of birth by onset of labour, all confinements, 2007 and 2008	28
Table 46: Method of birth by admission status, all confinements, pooled data 2007 and 2008	29
Table 47: Method of birth by maternal age and admission status, primiparous confinements 2007 & 2008	30
Table 48: Method of birth by maternal age and admission status, multiparous confinements 2007 & 2008	31
Table 49: Method of birth by presentation, all confinements, 2007 and 2008	32
Table 50: Trends in method of birth for breech presentation at term, singleton confinements, 1985 to 2008	32
Table 51: Indication for caesarean section, pooled data 2007 and 2008 (confinements)	32
Table 52: Analgesia used by women who experienced labour, 2007 and 2008	33
Table 53: Analgesia used by women who had an unassisted vaginal birth, 2007 and 2008	33
Table 54: Type of anaesthesia for operative birth, pooled data, 2007 and 2008 (confinements)	34
Table 55: Perineal status following vaginal birth (confinements), 2007 and 2008	35
Table 56: Postpartum haemorrhage by parity, 2007 and 2008 (confinements)	36
Table 57: Sex of infants born in 2007 and 2008	37
Table 58: Trends in pre-term and post-term births, 1985 to 2008	37
Table 59: Size of maternity service (annual births) for birth at various gestations (completed weeks) 2007 and 2008	38
Table 60: Gestation by parity, all births 2007 and 2008 (%)	38
Table 61: Gestation by sex, all births 2007 and 2008 (%)	39
Table 62: Type of birth by gestation, all births 2007 and 2008	39
Table 63: Birthweight categories, all births 2007 and 2008	40
Table 64: Trends in birthweight 1985 to 2008 (%)	40
Table 65: Size of maternity service (annual births) for birth at various birthweights, 2007 and 2008	41
Table 66: Birthweight by parity, all births 2007 and 2008 (%)	42

Table 67: Birthweight by sex, all births 2007 and 2008 (%)	42
Table 68: Type of birth by birthweight category, all births 2007 and 2008	43
Table 69: Apgar score at 5 minutes, 2007 and 2008 (livebirths only)	43
Table 70: Most intensive method of resuscitation used, 2007 and 2008 (livebirths only)	44
Table 71: Multiple births, 2007 and 2008	45
Table 72: Trends in multiple births, 1990 to 2008	45
Table 73: Multiple birth by maternal age group, all confinements in 2007 and 2008 (% of mothers in each age group)	45
Table 74: Gestation by plurality, all confinements in 2007 and 2008	46
Table 75: Method of birth for multiples, by presentation order (rank), 2007 and 2008	46
Table 76: Method of birth for singleton and multiple births, 2007 and 2008	46
Table 77: Trends in births and confinements to indigenous women, 1985 to 2008	47
Table 78: Maternal age by indigenous status, confinements 2007 and 2008	47
Table 79: Type of birth by indigenous status, confinements 2007 and 2008	47
Table 80: Onset of labour by indigenous status, confinements 2007 and 2008	48
Table 81: Birth weight by maternal indigenous status, births in 2007 and 2008	48
Table 82: Gestation by maternal indigenous status, births in 2007 and 2008	48
Table 83: Confinements by hospital category, 2007 and 2008	49
Table 84: Induction of labour by hospital category, 2007 and 2008	49
Table 85: Type of birth by hospital category, 2007 and 2008 (% of confinements)	50
Table 86: Postnatal length of stay by hospital category, 2007 and 2008 (% of confinements)	51
Table 87: Births and confinements by Local Government Area, 2007 and 2008	52
Table 88: Births and confinements by Department of Health Region, 2007 and 2008	54
Table 89: Livebirths by Local Government Area, 2007–2008	55
Table 90: Confinements to women younger than 20 years, and proportion of all confinements by Local Government Area, 2007 and 2008	57
Table 91: Births and confinements by reporting hospital, 2007 and 2008	59

Figures

Figure 1: Perinatal morbidity statistics form for the years 1999–2008	4
Figure 2: Median age at first birth in Victoria, 1985–2008	7
Figure 3: Trends in maternal age group, all confinements, 2007 and 2008	7
Figure 4: Admission for the birth as a public patient by maternal age group, all confinements, 2007 and 2008	14
Figure 5: Trends in postnatal length of stay, all confinements 1985 to 2008	15
Figure 6: Postnatal length of stay by admission status, all confinements 2007 and 2008 (pooled)	17
Figure 7: Trends in onset of labour, all confinements, 1990 to 2008 (%)	25
Figure 8: Onset of labour by admission status, all confinements, 2007 and 2008	25
Figure 9: Trends in method of birth, all confinements, 1985 to 2008	28
Figure 10: Method of birth by admission status, all confinements 2007 and 2008	29
Figure 11: Analgesia used by women who had an unassisted vaginal birth, by admission status, 2007 and 2008	34
Figure 12: Perineal status following unassisted vaginal birth by admission status, pooled data 2007 and 2008	35
Figure 13: Trends in preterm and post-term birth, 1985 to 2008	37
Figure 14: Trends in major birthweight categories, 2000 to 2008	41

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We thank all of these people for their contribution.

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Summary

- The number of births in Victoria continued to rise to 72,119 in 2007 and 72,205 in 2008 (compared with 62,555 in 2000) (Table 1).
- The number of livebirths per 1,000 estimated female resident population aged 15–44 years increased to 64.0 in 2007 and 63.2 per 1,000 in 2008 (compared with 59.0 in 2000) (Table 3).
- Women aged younger than 20 years continued to make up a small proportion of all women giving birth: 2.6% in 2007 and 2.6% in 2008 compared with 4.4% in 1985 (Table 4).
- The increase in the proportion of women giving birth who were 35 years or older continued: 26.5% of all confinements in 2008 compared with 7.8% in 1985 (Figure 3).
- In 2008, 54.8% of women who had an unassisted vaginal birth stayed in hospital two days or less following the birth, while 77.1% of those who had a caesarean section stayed four or more days (Table 20).
- First births made up 43.3% of all births (Table 36).
- Over one-quarter (27.8%) of multiparous women who gave birth in 2008 had had one or more prior caesarean section; up from one-fifth (19.7%) in 2000 (Table 37).
- The rate of caesarean section is unchanged on recent years. In 2008, 30.6% of women gave birth by caesarean section – twice the rate in 1985 (Figure 9).
- Women admitted as private patients were more likely than those admitted as public patients to have labour induced (27.0% and 23.1% respectively), and to have an instrumental vaginal birth (including vaginal breech birth) (17.8% and 11.8% respectively) or a caesarean section (37.8% and 27.1% respectively) (Figure 8, Table 46).
- Postpartum haemorrhages were reported for 14.0% of primiparous women and 9.8% of multiparous women in 2008 (Table 56).
- 7.9% of babies were born preterm (before 37 weeks) (Table 58).
- 6.5% of babies had a low birthweight (<2,500 grams) (Table 63).
- Twins made up 3.3% of all births in 2008 (Table 71).
- There was an increasing number of births to Indigenous women, making up 1.0% of all births (727 babies) in 2008 compared with 0.5% in 1985. Indigenous women giving birth were younger than other women, and more likely to have an entirely spontaneous labour (46.3% compared with 37.4% of non-Indigenous women) and an unassisted vaginal birth (68.5% and 55.1% respectively) (Tables 78 to 81).
- Babies born to Indigenous mothers were more likely to be born preterm (Table 82) and with a low birthweight (Table 82) than other babies (12.6% compared with 7.9%, and 13.8% compared with 6.5% respectively).

Introduction

Background

The Victorian Perinatal Data Collection (VPDC) was established in 1982, by an amendment to the Health Act. It is a population-based mandatory surveillance system designed to collect information on, and in relation to, the health of mothers and babies. The midwife attending the birth of every baby in Victoria at 20 or more weeks' gestation (or weighing at least 400 g if gestation is unknown) provides information that includes maternal medical conditions, complications of pregnancy, management of labour and birth, maternal and neonatal morbidity, birth defects and demographic factors. The hospital (or private practitioner in cases of homebirths) where the birth occurs is responsible for sending the data to the VPDC.

The VPDC reports to the Consultative Council on Obstetric and Paediatric Mortality and Morbidity (CCOPMM), which is the advisory body to the Minister of Health on maternal, perinatal and paediatric mortality and morbidity. Council encourages the use of the data to inform clinical practice, while carefully protecting the confidentiality of the information.

Functions of CCOPMM

- Collect, collate, analyse and interpret information on all births in Victoria;
- Provide data to the Consultative Council on Obstetric and Paediatric Mortality and Morbidity to assist in their process of monitoring all perinatal, infant, child (up to 18 years of age), and maternal deaths in Victoria;
- Provide annual feedback to individual hospitals and homebirth practitioners allowing for statewide comparisons of practice and outcomes;
- Maintain a register of birth defects diagnosed in children up to 18 years of age who were born in Victoria;
- Identify risk factors contributing to adverse outcomes of Victorian mothers, their pregnancies, and the health status of their babies;
- Identify and monitor trends in perinatal health and birth defects;
- Provide Victorian data, compliant with the Australian Institute of Health and Welfare (AIHW), to enable analysis of national data, and comparison of characteristics and birth outcomes between States and Territories (<http://www.preru.unsw.edu.au/PRERUWeb.nsf/page/AIHW+National+Perinatal+Statistics+Unit>) and production of *Australia's Mothers and Babies*;
- Describe for all Victorian births the demographic, medical and pregnancy history of mothers, and the characteristics of their babies;
- Conduct epidemiological studies related to the health of pregnant women and infants;
- Respond to requests for perinatal and birth defect data from people involved in research, service provision and the study and maintenance of health of mothers and babies in Victoria; and
- Assist in the planning, implementation and evaluation of health services for Victorian pregnant women and their babies.

Data Source

Midwives complete and submit to the VPDC a standardised Perinatal Morbidity Statistics Form (either manual or computer generated) for every Victorian birth (Figure 1). This includes births that occur in hospitals or elsewhere.

Data Quality

Data submitted to VPDC are checked for completeness and accuracy. Inconsistent or incomplete data are rectified by sending a query to the hospital of birth. Data are double entered into a database that includes range and logical checks. Extensive data cleaning is carried out when all data for the calendar year have been entered.

Validation activities to assess, maintain and improve the quality of data provided to VPDC by hospitals are an integral part of our work. This complements and extends the checks built into the system.

1. Validation of Number of Births Reported to the VPDC (to ensure a form is received for each birth)

Each year a validation is undertaken to compare the number of births that are reported to the VPDC with the number of births recorded at each hospital in the State. The most recent study (of births in 2008) showed that 99.5% of all births in Victorian hospitals were reported to VPDC without prompting, while the remainder were submitted after the validation process identified their omission.

2. Statewide Validation of Perinatal Data (to determine the quality and reliability of data)

Projects designed to determine the accuracy of VPDC data are undertaken regularly. These projects compare the data in the VPDC dataset with that recorded in the medical record. They have been conducted in 1984, 1985, 1992, 1998, 1999 and 2003. The most recent study found that the accuracy of most items is excellent, although some morbidity items are under-reported.

3. Education and Liaison Program

VPDC staff includes a part-time midwife whose role includes liaison with the midwives who provide the data. She provides guidance on definitions and completion of items, and gives an overview of the use of the data so as to motivate the provision of complete and accurate data. She gives lectures to undergraduate and post-graduate students of midwifery at a number of universities.

Differences from previous reports

Data presented in this report may differ slightly from those presented in previous reports due to a continual updating of data in the files as new information becomes available.

There are a number of changes from the format of the previous report following internal review of the content. Extra tables have been added related to the number of births and confinements to residents of Local Government Areas and Department of Health Regions, and the number of births and confinements reported by hospitals.

Mortality is reported in detail in the publication, *Annual Report for the Year 2007, incorporating the 46th survey of Perinatal Deaths in Victoria* (http://www.health.vic.gov.au/ccopmm/downloads/ccopmm_annrep07.pdf) and is not duplicated here.

Feedback regarding the content is welcome.

Births

Table 1: Total births in Victoria, 2007 and 2008

	2007	2008
Total births _{unadj}	72,474	72,545
Terminations of pregnancy*	355	340
Other stillbirths	394	398
Total livebirths**	71,780	71,843
Adjusted livebirths [#]	71,725	71,807
Adjusted births [#]	72,119	72,205

* terminations at 20 or more weeks' gestation for congenital anomalies or maternal psychosocial indications

** includes babies born alive who died soon after, following induction of labour for congenital anomalies

excludes terminations of pregnancy for congenital anomalies or for maternal psychosocial indications

There were a total of 72,474 births in Victoria in 2007 and 72,545 in 2008. This includes 355 terminations of pregnancy for congenital anomalies or maternal psychosocial indications at 20 or more weeks' gestation in 2007, and 340 in 2008. A further 394 babies were stillborn in 2007 and 398 in 2008 (Table 1).

The remainder of this report excludes terminations of pregnancy for congenital anomalies or maternal psychosocial indications, and uses adjusted births (i.e. total births minus terminations of pregnancy) as the denominator.

The 72,119 births in 2007 represent a 3.7% increase over 2006, and the 72,205 in 2008 represent a further 0.1% increase over 2007.

Table 2: Crude birth rate, Victoria, 2007 and 2008

	2007	2008
Livebirths	71,725	71,807
Estimated female resident population aged 15–44 years	1,121,365	1,136,485
Crude birth rate per 1,000 EFRP*	64.0	63.2

* EFRP – Estimated female resident population aged 15–44 years. ABS Website : 3218.0 Regional Population Growth Australia

Table 3: Trends in births, confinements and live births per 1,000 EFRP aged 15–44 years, Victoria, 1985–2008

	1985	1990	1995	2000	2005	2006	2007	2008
Total births	61,189	66,878	64,717	62,555	66,340	69,550	72,119	72,205
Total live births	60,784	66,374	63,247	62,148	65,993	69,186	71,725	71,807
Total confinements	60,468	66,004	62,734	61,562	65,115	68,244	70,838	70,988
EFRP*	974,347	1,044,969	1,033,818	1,053,114	1,082,355	1,091,465	1,121,365	1,136,485
Live births per 1,000 EFRP	62.4	63.5	61.2	59.0	61.0	63.4	64.0	63.2
Total births per 1,000 EFRP [#]	62.8	64	62.6	59.4				

* EFRP – Estimated female resident population aged 15–44 years. Births to women aged younger than 15 have been included in the 15–19 age group, and those to women aged 45 or older are included in the 40–44 age group.

total births per 1,000 EFRP were reported in earlier editions of Births in Victoria, and are repeated here to indicate the small difference between reporting on all births and livebirths.

The number of live births per 1,000 estimated female resident population aged 15–44 years decreased from 63.5 in 1990 to the nadir of 58.2 in 2004. Subsequently it has increased until reaching a plateau in 2006 (64.0 in 2007 and 63.2 in 2008) (Table 3).

Live births are used for these calculations in common with Australian Bureau of Statistics reporting methods.

Maternal characteristics

In this section, the number of *women* who gave birth is the primary interest, regardless of whether they had a singleton or a multiple birth, so the women are counted once only (also known as a *confinement*). This differs from the number of *births*, which counts all babies, including multiple births.

Maternal age

Table 4: Maternal age group, all confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Younger than 15 years	7	0.0	11	0.0
15–19 years	1,812	2.6	1,876	2.6
20–24 years	8,033	11.3	8,083	11.4
25–29 years	17,975	25.4	17,901	25.2
30–34 years	24,849	35.1	24,356	34.3
35–39 years	15,284	21.6	15,599	22.0
40–44 years	2,732	3.9	3,026	4.3
45+ years	146	0.2	134	0.2
Unknown	0	0.0	2	0.0
	70,838	100.0	70,988	100.0

Table 5: Trends in maternal age group, all confinements, 1985–2008

	1985	1990	1995	2000	2005	2006	2007	2008
Younger than 20 years	4.4	4.3	3.5	3.3	2.7	2.8	2.6	2.6
20–24 years	23.1	18.3	15.7	12.4	11.3	11.4	11.3	11.4
25–29 years	40.2	37.6	33.6	30.7	25.4	25.0	25.4	25.2
30–34 years	24.4	29	32.7	34.6	37.0	36.4	35.1	34.3
35–39 years	6.9	9.3	12.5	16.2	19.9	20.5	21.6	22.0
40+ years	0.9	1.3	2.1	2.9	3.7	3.9	4.1	4.5
Median age – overall (years)	27	28	29	30	31	31	31	31
Median age – primiparae (years)	25	26	27	28	29	29	29	29
Mean age – overall (years)	27.5	28.2	29.1	29.9	30.6	30.6	30.7	30.8
Mean age – primiparae (years)	25.4	26.2	27.2	28.2	29.1	29.1	29.1	29.1

The typical woman giving birth in 2008 was 4 years older than her counterpart in 1985. The median age at first birth rose from 25 years in 1985 to 29 years in 2005, and has since remained unchanged. The median age for all births rose from 27 years in 1985 to 31 years in 2005 and also appears to have reached a plateau.

Figure 2: Median age at first birth in Victoria, 1985–2008

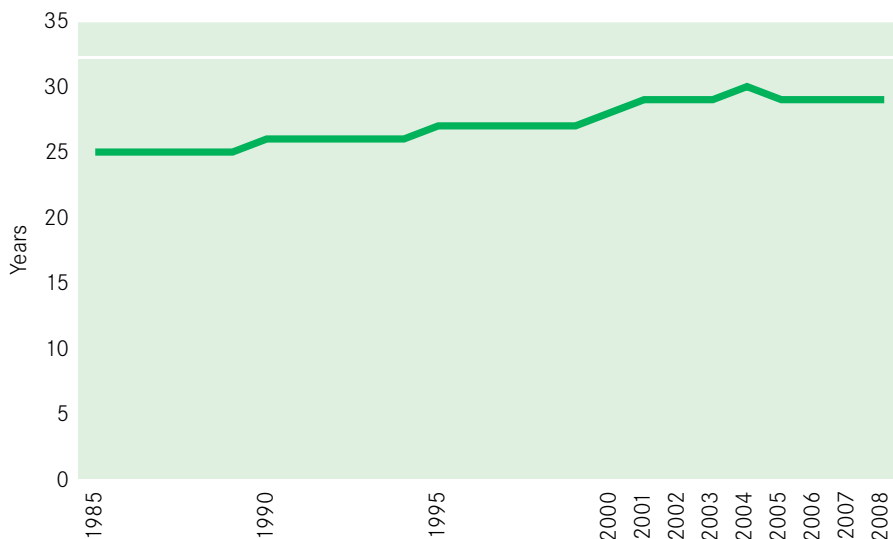
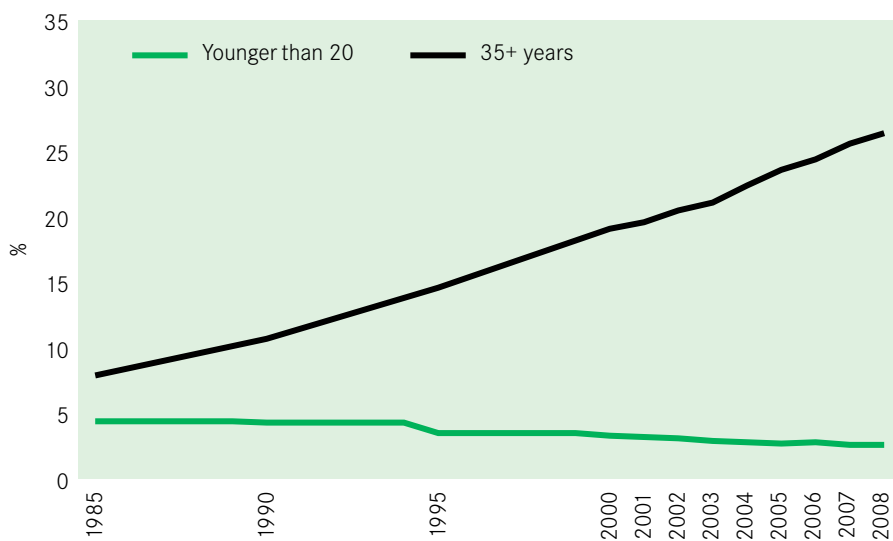


Figure 3: Trends in maternal age group, all confinements, 1985–2008



Women younger than 20 years of age continue to make up a small proportion of all women giving birth. They accounted for 4.4% of all confinements in 1985, decreasing to 2.6% in 2008 (Table 5).

On the other hand, those aged 35 years or older have increased steadily from 7.8% of all women giving birth in 1985 to 26.5% in 2008 (Table 5, Figure 3).

Table 6: Maternal age group by Department of Health region of residence, all confinements, pooled data, 2007 and 2008

Health Region	Maternal age groups (years)												
	<20	%	20-24	%	25-29	%	30-34	%	35-39	%	40+	%	Total
Barwon S W	334	3.8	1,226	14.0	2,354	26.8	2,951	33.6	1,632	18.6	291	3.3	8,788
Grampians	243	4.6	822	15.7	1,474	28.1	1,662	31.6	878	16.7	173	3.3	5,252
Loddon Mallee	430	5.8	1,313	17.6	2,014	27.0	2,227	29.9	1,232	16.5	239	3.2	7,455
Hume	306	4.6	1,127	16.9	1,881	28.3	2,021	30.4	1,098	16.5	223	3.4	6,656
Gippsland	316	5.3	1,129	19.0	1,840	31.0	1,631	27.4	843	14.2	183	3.1	5,942
Western Metro	459	2.0	2,531	11.0	6,222	27.1	8,039	35.0	4,755	20.7	960	4.2	22,966
Northern Metro	496	2.0	2,530	10.3	5,796	23.7	8,812	36.0	5,761	23.5	1,083	4.4	24,478
Eastern Metro	284	1.2	1,477	6.4	5,099	22.0	9,057	39.0	6,147	26.5	1,160	5.0	23,224
Southern Metro	701	2.0	3,504	10.2	8,417	24.5	11,968	34.8	8,103	23.6	1,656	4.8	34,349
Other*	137	5.0	457	16.8	779	28.7	837	30.8	434	16.0	70	2.6	2,716

* refers to women who live in a postcode outside Victoria, but who gave birth at a Victorian hospital

A higher proportion of rural residents giving birth were in the younger age groups (younger than 30 years) compared with metropolitan residents. The converse was true for the older age groups (30 years or older).

Table 7: Trends in Department of Health region of residence (rural versus metropolitan), all confinements, 1990-2008

Place of residence	1990	1995	2000	2005	2006	2007	2008
	n=66,004 %	n= 62,734 %	n= 61,562 %	n=65,115 %	n=68,244 %	n=70,838 %	n=70,988 %
Rural	27.9	27.0	25.9	24.4	24.3	24.0	24.1
Metropolitan	71.4	72.0	72.2	73.5	73.4	74.0	74.1
Outside Victoria	0.8	1.0	1.9	2.1	2.3	2.0	1.9

Rural Victorian residents made up a slightly smaller proportion of childbearing women than during the 1990s. However the number of women who lived outside Victoria has increased. Many of these women are likely to live near the Victorian border, in rural or regional areas.

Table 8: Livebirths by Department of Health region of residence, 2007 and 2008

Region	Total livebirths			
	2007	%	2008	%
Barwon S W	4,461	6.2	4,444	6.2
Grampians	2,629	3.7	2,693	3.8
Loddon Mallee	3,814	5.3	3,717	5.2
Hume	3,354	4.7	3,383	4.7
Gippsland	2,966	4.1	3,044	4.2
<i>Rural (subtotal)</i>	<i>17,224</i>	<i>24.0</i>	<i>17,281</i>	<i>24.1</i>
Western Metro	11,536	16.1	11,699	16.3
Northern Metro	12,304	17.2	12,472	17.4
Eastern Metro	11,907	16.6	11,612	16.2
Southern Metro	17,349	24.2	17,401	24.2
<i>Metro (subtotal)</i>	<i>53,096</i>	<i>74.0</i>	<i>53,184</i>	<i>74.1</i>
Other*	1,405	2.0	1,342	1.9
Total	71,725	100	71,807	100

* refers to women who live in a postcode outside Victoria, but who gave birth at a Victorian hospital

Marital status

Table 9: Marital status, all confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Married	50,389	71.1	52,090	73.4
De facto	10,875	15.4	9,561	13.5
Single	8,795	12.4	8,526	12.0
Separated	359	0.5	311	0.4
Divorced	234	0.3	321	0.5
Widowed	30	0.0	23	0.0
Unknown	156	0.2	156	0.2
	70,838	100	70,988	100

Table 10: Trends in marital status, all confinements 1985–2008 (%)

	1985	1990	1995	2000	2005	2006	2007	2008
Married	89.3	83.4	78.3	75.3	71.8	70.9	71.1	73.4
De facto	2.3	6.2	9.4	11.8	14.6	15.7	15.4	13.5
Single	7.1	9.2	10.6	11.7	12.4	12.2	12.4	12.0
Separated/Divorced/Widowed	1.2	1.1	1.3	1.1	0.9	0.9	0.8	0.9

Most women who gave birth in 2007 and 2008 were married. The proportion has increased slightly in 2007 and 2008 after a steady decline in the preceding years. Correspondingly fewer women giving birth were in de facto relationships in 2007 and 2008, after a steady increase in the last two decades. The proportion of single women appears to have plateaued at around 12% (Table 10).

Maternal place of birth

Table 11: Maternal place of birth, all confinements, 2007 and 2008

Country of birth	2007	%	2008	%
Australia	52,032	73.5	51,703	72.8
Asia	8,458	11.9	9,089	12.8
Europe	2,088	2.9	1,992	2.8
Oceania inc NZ	1,869	2.6	2,016	2.8
UK and Eire	1,911	2.7	1,719	2.4
Africa	1,819	2.6	1,825	2.6
Mid East	1,436	2.0	1,563	2.2
Nth America	446	0.6	424	0.6
Sth America	418	0.6	427	0.6
Unknown	361	0.5	230	0.3
Total	70,838	100	70,988	100

Table 12: Ten most common countries of birth, for women born in non-English speaking countries, confinements in 1990 and 2008

1990		Number of confinements	2008		Number of confinements
1	Vietnam	1,068	1	India	1,856
2	Former Yugoslavia	971	2	Vietnam	1,616
3	Lebanon	721	3	China	1,115
4	Italy	712	4	Philippines	642
5	Philippines	609	5	Sri Lanka	621
6	Turkey	584	6	Other Africa [#]	588
7	Malaysia	502	7	Former Yugoslavia	525
8	Greece	489	8	Malaysia	476
9	India	385	9	Lebanon	472
10	Sri Lanka	346	10	North Africa	469

[#] other Africa excludes South, North and Central Africa

Amongst women giving birth in Victoria in 2008 who were born in a non-English speaking country, India is the most common maternal country of birth, followed by Vietnam. Other countries that were in the top 10 non-English speaking countries of birth in both 1990 and 2008 are the former Yugoslavia, Lebanon, the Philippines and Sri Lanka. The relatively large number of women giving birth in 1990 who were born in Italy, Turkey and Greece has fallen substantially by 2008, with a concomitant increase in the number born in China, 'other' African countries and North Africa.

Table 13: Trends in maternal place of birth, all confinements, 1990 to 2008

	1990 n=66,044 %	1995 n=62,734 %	2000 n=61,562 %	2005 n=65,115 %	2006 n=68,244 %	2007 n=70,838 %	2008 n=70,988 %
Australia	75.4	75.1	75.7	75.6	75.2	73.5	72.8
Asia	6.7	9.3	10.1	9.8	10.5	11.9	12.8
Europe	5.7	4.1	3.5	3.0	2.9	2.9	2.8
Oceania incl NZ	2.4	2.3	2.5	2.6	2.7	2.6	2.8
UK and Eire	5.2	4.3	3.2	2.6	2.6	2.7	2.4
Africa	1.1	1.2	1.5	2.4	2.4	2.6	2.6
Middle East	2.3	2.4	2.3	2.3	2.2	2.0	2.2
Nth America	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Sth America	0.5	0.6	0.6	0.6	0.6	0.6	0.6

Nearly three-quarters of women who gave birth in Victoria in 2007 and 2008 were born in Australia. One in eight was born in Asia.

Considerably fewer women were born in other regions of the world. Since 1990 there has been an increase in the number born in Africa, as well as a decrease in the number born in the UK and Eire, and Europe (Table 13).

Table 14: Maternal place of birth by Department of Health region of residence, all confinements, 2007 and 2008 pooled

	Barwon S W n=8,788 %	Grampians n=5,252 %	Loddon Mallee n=7,455 %	Hume n=6,656 %	Gippsland n=5,942 %	Western Metro n=22,966 %	Northern Metro n=24,478 %	Eastern Metro n=23,224 %	Southern Metro n=34,349 %	Other n=2,716 %
Australia	90.7	93.2	92.7	90.8	92.8	60.4	68.9	71.3	65.8	91.1
Asia	2.3	1.7	2.0	2.3	2.2	20.0	11.5	17.6	15.3	2.8
Europe	1.7	0.6	0.6	1.3	0.9	3.8	3.0	2.3	4.5	0.9
Oceania incl NZ	1.6	1.3	1.8	1.8	1.2	3.7	2.6	2.0	3.9	2.0
UK and Eire	1.9	1.5	1.5	0.9	1.5	2.2	2.2	3.0	3.9	1.7
Africa	0.8	0.7	0.4	0.6	1.0	5.2	2.8	1.7	3.3	0.4
Middle East	0.2	0.2	0.5	1.6	0.1	1.8	7.2	0.7	1.4	0.3
Nth America	0.5	0.5	0.2	0.3	0.3	0.5	0.6	0.7	0.9	0.2
Sth America	0.2	0.2	0.1	0.1	0.1	1.2	0.5	0.5	0.8	0.2

* excludes 591 women for whom country of birth was not recorded

The overwhelming majority of rural women giving birth in 2007 and 2008 were born in Australia (more than 90% in all rural regions), with a small proportion from each of Asia, UK and Eire, and Oceania.

Around two-thirds of metropolitan residents who gave birth were born in Australia, with a substantial minority born in Asia. Smaller numbers were born in all other regions of the world.

Table 15: Maternal age group by maternal place of birth, all confinements, pooled data 2007 and 2008 (row %)

	Younger than 20 yrs	20–24 yrs	25–29 yrs	30–34 yrs	35–39 yrs	40+ yrs	Mean age (years)	Total
Australia	3.1	11.6	24.4	34.9	22.1	3.9	30.7	103,735
Asia	0.6	9.7	32.1	26.3	18.6	3.9	30.7	17,547
Europe	0.4	9.0	25.6	35.1	22.9	6.8	31.6	4,080
Oceania incl NZ	4.0	14.0	24.9	30.9	20.3	5.9	30.4	3,885
UK incl Eire	0.5	3.3	15.5	38.4	33.4	9.0	33.4	3,630
Africa	2.9	14.1	26.5	33.5	18.6	4.5	30.3	3,644
Middle East	2.6	20.3	28.1	26.6	17.2	5.2	29.6	2,999
Nth America	0.2	4.5	20.0	37.8	30.9	6.6	32.8	870
Sth America	0.6	7.2	21.5	38.1	26.8	5.7	32.1	845

* excludes 591 women for whom country of birth or maternal age was not recorded

Table 15 reports the age distribution of women giving birth in 2007 and 2008, who were born in various regions of the world e.g. 3.1% of women born in Australia who gave birth in Victoria in 2007 or 2008 were aged younger than 20 years; and 14.1% of women born in Africa who gave birth in Victoria in 2007 or 2008 were aged 20–24 years.

Parturients born in Australia, Oceania, the Middle East and Africa were more likely than others to be younger than 20 years; and more than 30% of those born in the United Kingdom and Ireland, North America and South America were aged 35 years or older.

Table 16: Parity prior to index birth by maternal place of birth, all confinements, pooled data 2007 and 2008

	Nulliparous	%	Para 1–2	%	Para 3+	%	Total
Australia	44,329	42.7	51,790	49.9	7,616	7.3	103,735
Asia	8,811	50.2	7,869	44.8	867	4.9	17,547
Europe	1,844	45.2	2,043	50.1	193	4.7	4,080
Oceania incl NZ	1,488	38.3	1,729	44.5	668	17.2	3,885
UK incl Eire	1,519	41.8	1,847	50.9	264	7.3	3,630
Africa	1,204	33.0	1,585	43.5	855	23.5	3,644
Middle East	935	31.2	1,416	47.2	648	21.6	2,999
Nth America	391	44.9	404	46.4	75	8.6	870
Sth America	353	41.8	425	50.2	67	7.9	845

* excludes 591 women for whom country of birth or parity was not recorded

Half (50.2%) of all parturients born in Asia who gave birth in Victoria in 2007 or 2008 did so for the first time. More than 20% of those born in Africa and the Middle East gave birth to a fourth or subsequent baby.

Organisational factors

Admission status

Table 17: Admission status, all confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Public	46,278	65.3	46,198	65.1
Private in public hospital	3,321	4.7	3,119	4.4
Private in private hospital	20,986	29.6	21,366	30.1
Private – planned home birth	248	0.4	298	0.4
	70,833*	100	70,981*	100

* note this excludes 3 women who had no maternity care; and 5 women in 2007 and 4 in 2008 who gave birth at home with a private midwife, but were reported as planning a hospital birth.

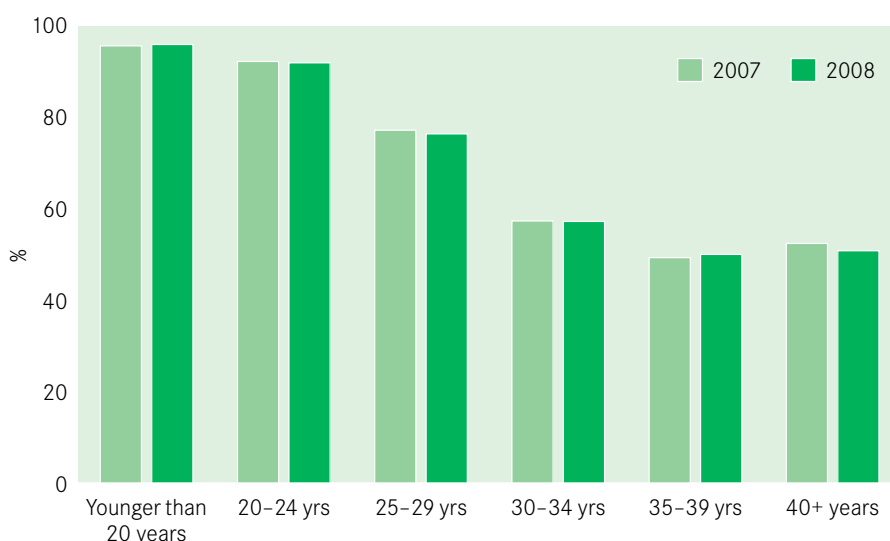
Just under two-thirds of women who gave birth in 2007 and 2008 were admitted for the birth as public patients. The remainder were treated as private patients, most commonly in private hospitals, with fewer than five percent treated as private patients in public hospitals. Planned home births accounted for 0.4% of confinements, all of whom were cared for by midwives in private practice.

Table 18: Trends in admission status, all confinements, 2000 to 2008 (%)

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Public	69.6	64.9	62.7	63.9	63.7	63.5	64.2	65.3	65.1
Private	30.4	35.1	37.3	36.1	36.3	36.5	35.8	34.7	34.9

Overall, 34.9% of women were cared for as private patients in 2008 compared with 36.5% in 2005 and 30.4% in 2000. This includes those cared for by midwives in private practice for planned home birth.

Figure 4: Admission for the birth as a public patient by maternal age group, all confinements, 2007 and 2008



2007	95.5	92.1	77.1	57.3	49.3	52.4
2008	95.8	91.8	76.3	57.2	50.0	50.8

Younger women were substantially more likely to give birth under public care than older women.

Postnatal length of stay

Table 19: Postnatal length of stay*, all confinements, 2007 & 2008

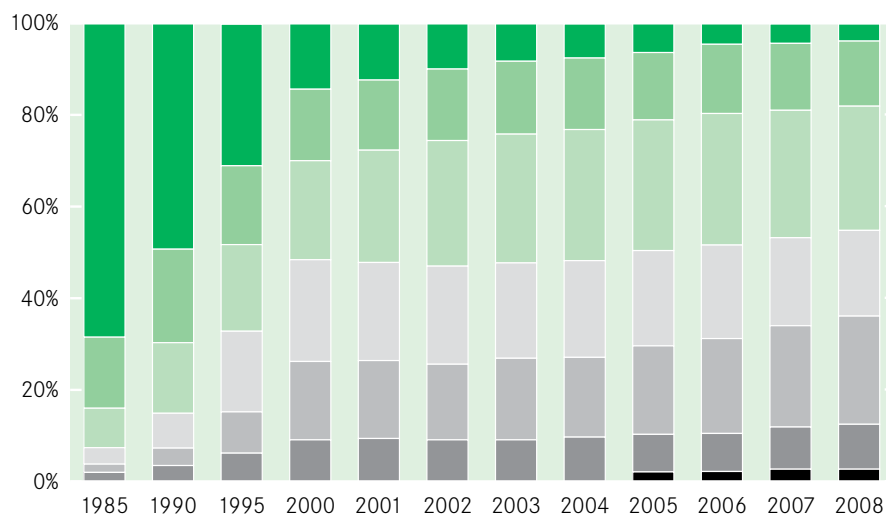
	2007		2008	
	n	%	n	%
<1 day	1,930	2.7	1,918	2.7
1 day	6,545	9.2	6,951	9.8
2 days	15,681	22.1	16,763	23.6
3 days	13,580	19.2	13,292	18.7
4 days	19,722	27.8	19,273	27.1
5 days	10,311	14.6	10,079	14.2
6 days or longer	3,069	4.3	2,709	3.8
	70,838	100	70,985#	100

* excludes time spent in a second hospital following transfer e.g. to an external intensive care unit or a hospital closer to home; and excludes cases for whom length of stay is unknown;

also excludes 3 women who had no maternity care.

Over one-third (36.1%) of all women stayed in hospital 2 days or less in 2008 compared with 4% in 1985. The proportion staying 3–5 days has changed little in recent years, but the number staying 6 or more days continued to decrease (Figure 5).

Figure 5: Trends in postnatal length of stay, all confinements 1985 to 2008



6 days or longer	68.6	49.3	30.9	14.4	12.3	10.1	8.3	7.5	6.4	4.7	4.3	3.8
5 days	15.5	20.4	17.2	15.6	15.3	15.6	15.9	15.6	14.7	15.1	14.6	14.2
4 days	8.6	15.4	18.9	21.6	24.5	27.4	28.1	28.6	28.5	28.7	27.8	27.1
3 days	3.6	7.6	17.6	22.2	21.4	21.4	20.8	21.1	20.8	20.4	19.2	18.7
2 days	1.8	3.8	9.0	17.1	17.0	16.5	17.8	17.4	19.3	20.7	22.1	23.6
1 day	2.0	3.5	6.2	9.1	9.4	9.1	9.1	9.7	8.2	8.3	9.2	9.8
<1 day									2.1	2.2	2.7	2.7

Table 20: Postnatal length of stay by type of birth, 2007 and 2008 (confinements)

	2007		2008	
	n	%	n	%
Unassisted cephalic birth				
<1 day	1,716	4.4	1,760	4.5
1 day	5,805	14.9	6,202	15.8
2 days	12,732	32.6	13,561	34.5
3 days	8,089	20.7	7,319	18.6
4 days	8,885	22.8	8,878	22.6
5 days	1,178	3.0	1,061	2.7
6 days or longer	628	1.6	578	1.5
	39,033	100	39,359	100
Caesarean section				
<1 day	62	0.3	51	0.2
1 day	247	1.1	234	1.1
2 days	871	4.0	903	4.2
3 days	3,140	14.3	3,797	17.5
4 days	7,174	32.7	6,638	30.5
5 days	8,387	38.3	8,327	38.3
6 days or longer	2,033	9.3	1,804	8.3
	21,914	100	21,754	100

The impact of caesarean section on the length of stay is apparent, although the proportion staying 4 or more days fell from 80.3% in 2007 to 77.1% in 2008. This compares with 26.8% of those who had an unassisted vaginal birth in 2008.

Table 21: Postnatal length of stay by admission status, pooled data 2007 and 2008

	Public		Private	
	n	%	n	%
<1 day	2,907	3.1	944	1.9
1 day	12,621	13.6	875	1.8
2 days	30,514	33.0	1,930	3.9
3 days	22,316	24.1	4,556	9.2
4 days	16,096	17.4	22,899	46.4
5 days	5,045	5.5	15,345	31.1
6 days or longer	3,006	3.2	2,772	5.6
	92,505	100	49,321	100

Figure 6: Postnatal length of stay by admission status, all confinements 2007 and 2008 (pooled)

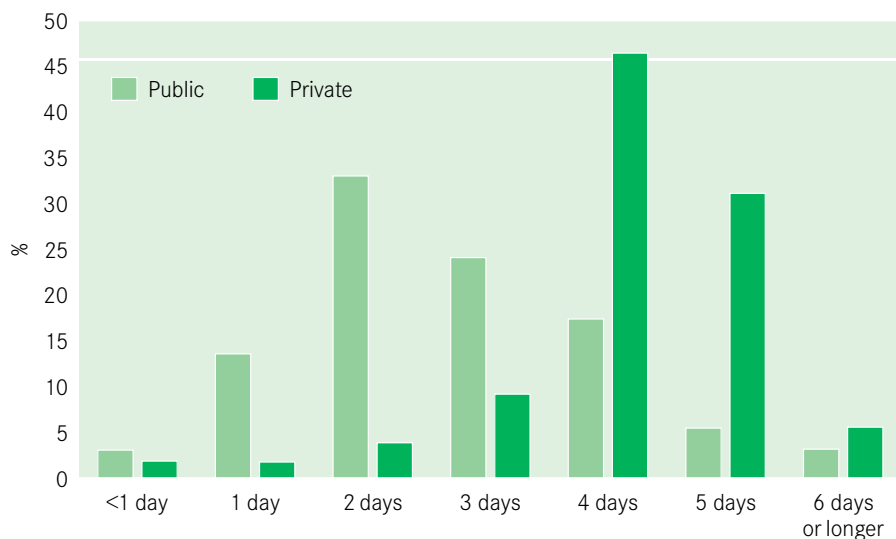


Table 22: Median and mean length of postnatal stay (days) by admission status and type of birth, 2007 and 2008 (confinements)

	2007				2008			
	Public		Private		Public		Private	
	median	mean	median	mean	median	mean	median	mean
All confinements	3	2.8	4	4.2	2	2.7	4	4.2
Vaginal birth*	2	2.3	4	3.7	2	2.3	4	3.7
Caesarean section	4	3.9	5	4.9	4	3.9	5	4.9

* includes unassisted and instrumental vaginal births

In 2007 and 2008, women stayed in hospital longer if they gave birth by caesarean section (Table 22), and if they were admitted as a private patient (Figure 6).

The median length of stay following caesarean section fell from 8 days in 1985 to 4 days in 2008. The corresponding change following vaginal birth has been from 6 days to 3 days (Table 23).

Table 23: Trends in median and mean postnatal length of stay (days) by type of birth, 1985 to 2008 (confinements)

	1985	1990	1995	2000	2005	2006	2007	2008
All confinements								
median	6	5	4	4	3	3	3	3
mean	6.5	5.6	4.6	3.7	3.4	3.3	3.3	3.2
Vaginal births*								
median	6	5	4	3	3	3	3	3
mean	6.1	5.2	4.2	3.2	2.9	2.8	2.8	2.7
Caesarean sections								
median	8	7	6	5	5	4	4	4
mean	8.5	7.5	6.3	5.1	4.5	4.4	4.4	4.3

* includes unassisted and instrumental vaginal births

Place of birth

The perinatal form reports the planned place of birth as well as the actual place of birth. These can differ for social or clinical reasons. The change in plans can occur many weeks before the birth, or any time before birth including during labour.

Table 24: Actual place of birth, all confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Hospital	68,773	97.1	69,270	97.6
Birth centre	1,472	2.1	1,082	1.5
Planned home births	248	0.35	298	0.42
Unplanned out-of-hospital births	345	0.49	338	0.48
	70,838	100	70,988	100

Fewer women gave birth in birth centres in 2008 than in 2007. Birth centres are units that provide care for women at low risk of complications. A small number of women planned to give birth in a hospital birth suite, but in fact gave birth in a birth centre (72 in 2007, and 6 in 2008).

Even fewer women gave birth at home as planned (0.35% of confinements in 2007 and 0.42% in 2008) or unexpectedly (0.49% in 2007 and 0.48% in 2008).

Births planned to occur in birth centres

In 2007 and 2008, five hospitals provided birth centre care: Mercy Hospital for Women, Royal Women's Hospital, Monash Medical Centre, Barwon Health and Angliss Hospital.

Table 25: Place of birth for women who initially intended to give birth in a birth centre, 2007 and 2008

	2007		2008	
	n	%	n	%
Birth centre	1,400	60.3	1,076	57.1
Hospital	895	38.5	781	41.5
Home	17	0.7	17	0.9
In transit	11	0.5	10	0.5
	2,323		1,884	

Around 40% of women who planned to give birth in a birth centre changed their plan to a hospital birth, 19.5% before the onset of labour.

Table 26: Place of birth by maternal age group for women who initially planned to give birth in a birth centre, 2007 and 2008

	2007						2008					
	Birth centre		Hospital		Home/In transit		Birth centre		Hospital		Home/In transit	
	n	%	n	%	n	%	n	%	n	%	n	%
Younger than 20 years	11	52.4	10	47.6	0	0.0	7	70.0	3	30.0	0	0.0
20–24 years	159	64.6	83	33.7	4	1.6	98	59.4	64	38.8	3	1.8
25–29 years	386	59.0	261	39.9	7	1.1	282	52.7	248	46.4	5	0.9
30–34 years	499	58.3	347	40.5	10	1.2	401	57.4	286	41.0	11	1.6
35–39 years	296	64.8	155	33.9	6	1.3	245	60.6	152	37.6	7	1.7
40+ years	49	55.1	39	43.8	1	1.1	43	59.7	28	38.9	1	1.4
	1,400	60.3	895	38.5	28	1.2	1,076	57.1	781	41.5	27	1.4

Table 27: Onset of labour for planned birth centre confinements by actual place of birth, 2007 and 2008

	2007 and 2008			
	Birth centre		Hospital	
	n	%	n	%
Spontaneous	2,296	92.7	503	30.0
Augmented	150	6.1	531	31.7
Induced	30	1.2	556	33.2
No labour	0	0.0	86	5.1
	2,476	100	1,676	100

Table 28: Method of birth for planned birth centre confinements by actual place of birth, 2007 and 2008

	2007 and 2008			
	Birth centre		Hospital	
	n	%	n	%
Unassisted vaginal-cephalic	2,453	99.1	748	44.6
Vaginal breech	7	0.3	8	0.5
Vacuum	12	0.5	249	14.9
Forceps	2	0.1	184	11.0
Caesarean section	2	0.1	487	29.1
	2,476	100	1,676	100

Thirty percent of women who changed their care from birth centre care to hospital care had a spontaneous labour without augmentation, another 32% had a spontaneous labour augmented, and another 33% had labour induced.

Nearly half of those who changed to hospital care went on to an unassisted vaginal birth. Their caesarean section rate was slightly lower than the overall Victorian rate (Table 28, Table 44).

Planned home births

A small number of women in Victoria plan to give birth at home, usually under the care of an independent midwife (a total of 638 in 2007 and 2008).

Table 29: Age of women planning home confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Younger than 20 years	0	0.0	0	0
20–24 years	11	3.7	14	4.1
25–29 years	60	20.3	71	20.8
30–34 years	111	37.5	136	39.8
35–39 years	97	32.8	96	28.1
40+ years	17	5.7	25	7.3
	296	100	342	100

Table 30: Place of birth for planned home confinements by maternal age, 2007 and 2008

	2007				2008			
	Home		Hospital		Home		Hospital	
	n	%	n	%	n	%	n	%
Younger than 20 years	0	0.0	0	0.0	0	0.0	0	0.0
20–24 years	7	63.6	4	36.4	13	92.9	1	7.1
25–29 years	50	83.3	10	16.7	67	94.4	4	5.6
30–34 years	97	87.4	14	12.6	118	86.8	18	13.2
35–39 years	80	82.5	17	17.5	79	82.3	17	17.7
40+ years	14	82.4	3	17.6	21	84.0	4	16.0
	248		48		298		44	

Table 31: Time of change in plan for women who planned home confinements and gave birth in hospital, 2007 and 2008

	2007		2008	
	n	%	n	%
Before onset of labour	15	31.3	10	22.7
During labour	33	68.8	34	77.3
	48		44	

Ninety-two of the 638 women (14.4%) who planned to give birth at home in 2007 or 2008 changed their plan and gave birth in hospital: 25 of them before labour began, and 67 transferred during labour. Older women were no more likely than younger women to require transfer to hospital care.

Table 32: Trend in number of women achieving planned home confinements, 1985–2008

	1985	1990	1995	2000	2005	2006	2007	2008
Number	144	181	110	114	182	197	248	298
% of all confinements	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.4

Table 33: Method of birth for planned home confinements by actual place of birth, 2007 and 2008

	2007				2008				2007 & 2008	
	Home		Hospital		Home		Hospital		Total	
	n	%	n	%	n	%	n	%	n	%
Unassisted vaginal-cephalic	243	98.0	18	37.5	293	98.3	20	45.5	574	90.0
Vaginal breech	4	1.6	1	2.1	4	1.3	0	0	9	1.4
Vacuum	1	0.4	11	22.9	1	0.3	5	11.4	18	2.8
Forceps	0	0	3	6.3	0	0	1	2.3	4	0.6
Caesarean section	0	0	15	31.3	0	0	18	40.9	33	5.2
	248	100	48	100	298	100	44	100	638	100

Nearly all of the planned home births in 2007 and 2008 were unassisted, although they included 2 vacuum extractions and 8 vaginal breech births (which are reported separately from vaginal cephalic births).

Those women who changed their plan and gave birth in hospital would be expected to have a relatively high intervention rate. Thirty-three of these 92 women had a caesarean section (35.9%) and 20 had an instrumental vaginal birth (21.7%). Forty-one percent had an unassisted vaginal birth.

Reproductive history

Gravidity

Gravidity is the number of pregnancies a woman has had, including the index pregnancy, regardless of outcome or number of fetuses.

Table 34: Gravidity, all confinements, 2007 and 2008

Gravida	2007	%	2008	%
One (index pregnancy)	23,302	32.9	23,702	33.4
Two	21,469	30.3	21,084	29.7
Three	13,057	18.4	12,958	18.3
Four	6,674	9.4	6,687	9.4
Five	3,200	4.5	3,297	4.6
Six or more	3,136	4.4	3,260	4.6
Total	70,838	100	70,988	100

Parity

Parity is the number of previous pregnancies that have ended at 20 or more weeks' gestation, regardless of the number of fetuses, and regardless of whether the baby survived.

Table 35: Parity prior to the index birth, all confinements 2007 and 2008

Para	2007	%	2008	%
None	30,486	43.0	30,715	43.3
One or more	40,352	57.0	40,273	56.7
	70,838	100	70,988	100

Table 36: Trends in parity, all confinements, 1990 to 2008

	1990 n=66,004	1995 n=62,734	2000 n=61,562	2005 n=65,115	2006 n=68,244	2007 n=70,838	2008 n=70,988
Parity	%	%	%	%	%	%	%
None	40.8	40.1	41.7	42.9	43.2	43.0	43.3
One	33.3	34.4	34.6	34.3	34.2	34.3	33.8
Two	17	16.6	15.7	15	14.7	14.9	14.8
Three	5.9	5.8	5.2	4.9	4.9	4.9	5
Four	1.9	1.8	1.7	1.6	1.7	1.7	1.8
Five or more	1.1	1.2	1.2	1.2	1.3	1.2	1.5

First confinements have steadily increased as a proportion of all confinements from 40.8% in 1990 to 43.3% in 2008 (Table 36). There was little change in the proportion who had four or more prior births.

Previous caesarean sections

Table 37: Number of previous caesarean sections, of all women who had one or more prior birth, 2000, 2007 and 2008

	2000	%	2007	%	2008	%
None	28,806	80.3	29,062	72.0	29,077	72.2
One	5,572	15.5	8,866	22.0	8,620	21.4
Two	1,241	3.5	1,981	4.9	2,126	5.3
Three	231	0.6	366	0.9	368	0.9
Four	32	0.1	61	0.2	63	0.2
Five or more	9	0	16	0	19	0
Total*	35,891	100	40,352	100	40,273	100

The proportion of all multiparous women who have had at least one caesarean prior to their 2008 birth was 27.8%, compared with 19.7% in 2000, while 450 women (1.1% of all multiparous women) had three or more prior caesarean sections.

Labour and birth

Gestation

Table 38: Gestation at time of giving birth, all confinements 2007 and 2008

Gestation (completed weeks)	2007	%	2008	%
20–27 wks	453	0.6	420	0.6
28–31 wks	466	0.7	480	0.7
32–36 wks	4,075	5.8	4,136	5.8
37–41 wks	64,881	91.6	64,975	91.5
42+ wks	960	1.4	971	1.4
Unknown	3	0	6	0
Total	70,838	100	70,988	100

In 2007 and 2008, 7.1% of women gave birth before 37 weeks' gestation.

Table 39: Trends in gestation, all confinements 1990 to 2008

Gestation (weeks)	1990 n=66,004 %	1995 n=62,734 %	2000 n=61,562 %	2005 n=65,115 %	2007 n=70,838 %	2008 n=70,988 %
20–27 wks	0.6	0.7	0.7	0.6	0.6	0.6
28–31 wks	0.6	0.7	0.7	0.6	0.7	0.7
32–36 wks	5.0	5.1	5.5	5.5	5.8	5.8
37–41 wks	88.1	89.9	91.8	91.9	91.6	91.5
42+ wks	4.5	3.0	1.3	1.3	1.4	1.4
Unknown	1.1	0.7	0	0	0	0

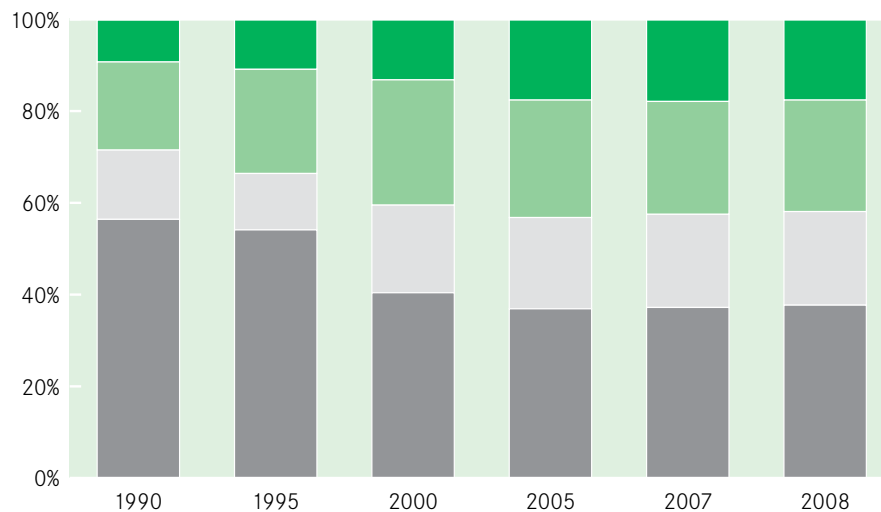
The proportion of confinements that occurred at 42 or more completed weeks' gestation reduced markedly between 1990 and 2000, and has since remained steady (1.4% in 2008) (Table 39).

Onset of labour

Table 40: Onset of labour, all confinements, 2007 and 2008

Onset of Labour	2007	%	2008	%
Spontaneous	26,381	37.2	26,773	37.7
Spontaneous & augmented	14,376	20.3	14,495	20.4
Induced	17,423	24.6	17,215	24.3
No labour	12,658	17.9	12,505	17.6
Total	70,838	100	70,988	100

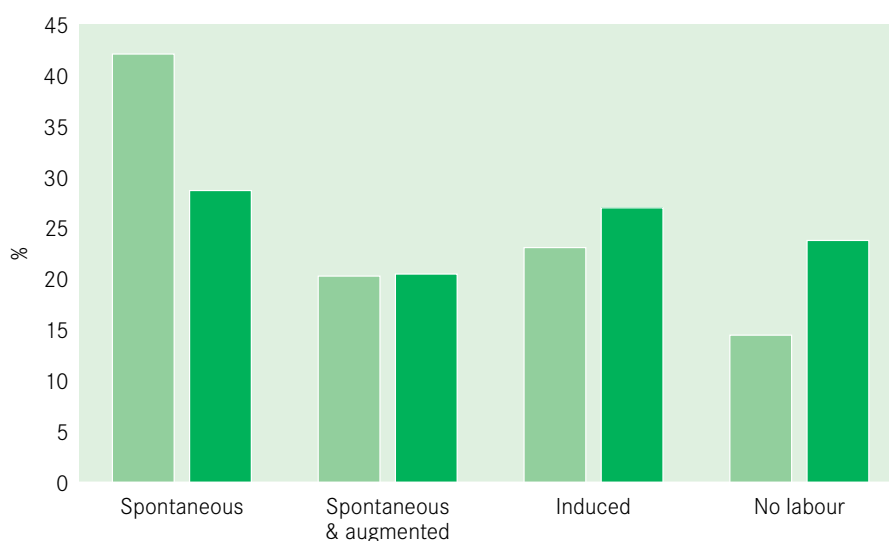
Figure 7: Trends in onset of labour, all confinements, 1990 to 2008 (%)



■ No labour	9.2	11.0	13.2	17.6	17.9	17.6
■ Induced	19.2	22.7	27.3	25.6	24.6	24.3
■ Spon & augmented	15.1	12.3	19.1	19.9	20.3	20.4
■ Spontaneous	56.4	54.1	40.4	36.9	37.2	37.7

After decreasing in the late 1990s, the proportion of all confinements in which labour is neither induced nor augmented appears to have levelled at around 37%. After a large increase in the 1990s, the rate of induction of labour has reduced from 27% in 2000 to 24% in 2008. The rate of augmentation has changed little in recent years, but the proportion of women who experience no labour (and have a pre-labour caesarean section) has nearly doubled since 1990 (Figure 7).

Figure 8: Onset of labour by admission status, all confinements, 2007 and 2008



■ Public	42.1	20.3	23.1	14.5
■ Private	28.7	20.5	27.0	23.8

Women admitted for the birth as private patients were more likely to have labour induced than those admitted as public patients. They were also substantially more likely to have a pre-labour caesarean section.

Table 41: Agents used to induce labour, 2007 and 2008

Induction Agent(s)	2007		2008	
	n	% of inductions	n	% of inductions
Oxytocin	2,667	15.3	2,743	15.9
Prostaglandin only	2,751	15.8	2,780	16.1
ARM* only	1,149	6.6	1,148	6.7
Oxytocin & prostaglandin	687	3.9	647	3.8
Oxytocin & ARM	5,858	33.6	5,701	33.1
Prostaglandin & ARM	1,402	8.0	1,289	7.5
Prostaglandin, oxytocin & ARM	2,907	16.7	2,905	16.9
Other	2	0	2	0
Total number induced	17,423	100	17,215	100

* ARM = Artificial Rupture of Membranes

Amongst labours that were induced, the most common strategy was a combination of artificial rupture of the membranes (ARM) and an oxytocin infusion, with or without cervical ripening with prostaglandin gel. Overall, prostaglandins were administered in 44.4% of cases.

Table 42: Indications for induction of labour, 2007 and 2008

Indication	2007		2008	
	n	%	n	%
Prolonged pregnancy (41 or more weeks)	4,431	25.4	4,199	24.4
Social induction*	2,716	15.6	2,340	13.6
Hypertensive disorders of pregnancy	1,965	11.3	2,071	12.0
Prelabour rupture of membranes/ prolonged rupture of membranes	2,100	12.1	2,213	12.9
Diabetes	1,214	7.0	1,326	7.7
Intrauterine growth retardation	763	4.4	843	4.9
Non-reassuring fetal status	413	2.4	486	2.8
Fetal death in utero (FDIU)	186	1.1	191	1.1
Blood group isoimmunisation	49	0.3	47	0.3
Chorioamnionitis	41	0.2	32	0.2
Other indications	3,545	20.3	3,467	20.1
Total	17,423	100	17,215	100

* "Social induction" includes cases designated as social or where the stated indication for induction was prolonged pregnancy but the gestation was less than 41 weeks (i.e. not prolonged) and there was no other medical or obstetric indication specified

The most common indication for induction of labour in 2007 and 2008 was prolonged pregnancy (defined as 41 or more weeks gestation or >286 days), followed by 'social' inductions (e.g. 'maternal choice' or 'post-dates' where gestation is <41 weeks). Complications of pregnancy or maternal medical conditions account for the remainder.

Table 43: Method of augmentation after spontaneous onset of labour, 2007 and 2008

Augmentation agent(s)	2007		2008	
	Number augmented	% of augmentations	Number augmented	% of augmentations
Oxytocin only	3,945	27.4	3,849	26.6
ARM only	7,929	55.2	8,028	55.4
Oxytocin & ARM	2,477	17.2	2,605	18.0
Other	25	0.2	13	0.1
Total	14,376	100	14,495	100

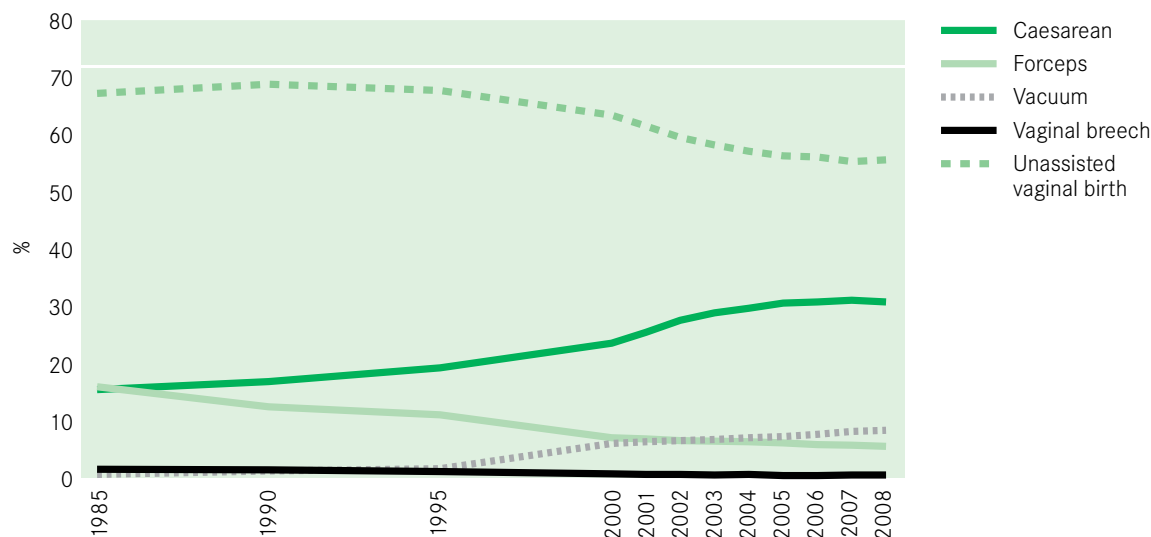
Artificial rupture of the membranes was the sole method of augmentation for more than half of labours that were augmented. An oxytocin infusion alone was used in around one quarter of augmentations. The remainder employed both of these methods, while a very small number report 'other' methods.

Method of birth

Table 44: Method of birth, all confinements, 2007 and 2008

	2007		2008	
	n	%	n	%
Unassisted cephalic	39,033	55.1	39,359	55.4
Vacuum	5,680	8.0	5,790	8.2
Forceps	3,950	5.6	3,821	5.4
Vaginal breech	261	0.4	264	0.4
Total caesarean	21,914	30.9	21,754	30.6
- <i>planned</i>	11,817	16.7	11,979	16.9
- <i>unplanned</i>	10,097	14.3	9,775	13.8
	70,838	100	70,988	100

Figure 9: Trends in method of birth, all confinements, 1985 to 2008



	1985	1990	1995	2000	2005	2006	2007	2008
Caesarean	15.3	16.7	19.1	23.4	30.4	30.6	30.9	30.6
Forceps	15.8	12.3	10.9	6.9	6.0	5.7	5.6	5.4
Vacuum	0.5	1.1	1.5	5.9	7.1	7.5	8.0	8.2
Vaginal breech	1.4	1.3	1.0	0.6	0.3	0.3	0.4	0.4
Unassisted vaginal (cephalic)	67.0	68.6	67.5	63.2	56.1	55.9	55.1	55.4

Caesarean sections now account for more than 30% of all confinements, although the rapid increase seen up to 2005 appears to have slowed. Just over half of all women had an unassisted vaginal birth in 2008. Vacuum extractions continued to increase steadily, mirroring the decrease in forceps births. Vaginal breech births remained rare.

Table 45: Method of birth by onset of labour, all confinements, 2007 and 2008

Onset of labour		Method of birth					Total
		Unassisted cephalic	Vacuum	Forceps	Vaginal breech	Caesarean	
Spontaneous (not augmented)	n	41,288	3,340	1,829	328	6,369	53,154
	%	77.7	6.3	3.4	0.6	12.0	100
Spontaneous & augmented	n	16,793	4,236	3,125	57	4,660	28,871
	%	58.2	14.7	10.8	0.2	16.1	100
Induced	n	20,311	3,894	2,817	140	7,476	34,638
	%	58.6	11.2	8.1	0.4	21.6	100
No labour	n	0	0	0	0	25,163	25,163
	%	0.0	0.0	0.0	0.0	100	100
Overall	n	78,392	11,470	7,771	525	43,668	141,826
	%	55.3	8.1	5.5	0.4	30.8	100

Unassisted cephalic birth was more common following a labour that was neither induced nor augmented. Conversely, both instrumental vaginal births and caesarean sections were more common following augmentation and particularly induction of labour.

Table 46: Method of birth by admission status, all confinements, pooled data 2007 and 2008

Admission status		Type of birth					Total
		Unassisted cephalic	Vacuum	Forceps	Vaginal breech	Caesarean	
Public admission	n	56,487	6,482	4,115	380	25,041	92,505
	%	61.1	7.0	4.4	0.4	27.1	100
Private admission	n	21,905	4,988	3,656	145	18,627	49,321
	%	44.4	10.1	7.4	0.3	37.8	100
Total	n	78,392	11,470	7,771	525	43,668	141,826
	%	55.3	8.1	5.5	0.4	30.8	100

Women admitted as public patients were considerably less likely to have an instrumental vaginal birth or a caesarean section than those admitted as private patients. Fewer than half of all women admitted as private patients had an unassisted cephalic birth.

Figure 10: Method of birth by admission status, all confinements 2007 and 2008

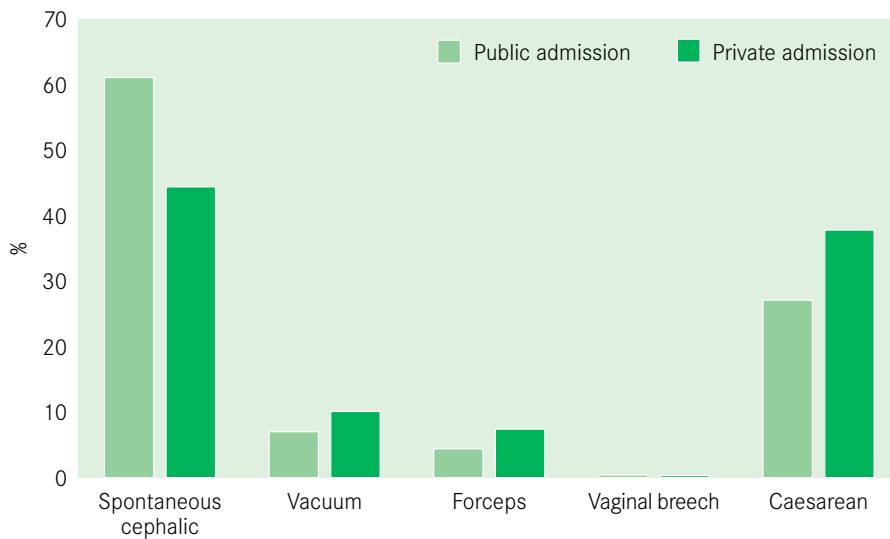


Table 47: Method of birth by maternal age and admission status, primiparous confinements 2007 & 2008

		Method of birth					Total
		Unassisted cephalic	Vacuum	Forceps	Vaginal breech	Caesarean	
Public admission							
Maternal age							
younger than 20 years	n	2,093	277	166	15	473	3,024
	%	69.2	9.2	5.5	0.5	15.6	100
20–34 years	n	16,074	4,153	2,856	114	8,382	31,579
	%	50.9	13.2	9.0	0.4	26.5	100
35 years or older	n	1,618	605	453	16	1,916	4,608
	%	35.1	13.1	9.8	0.3	41.6	100
Total	n	19,785	5,035	3,475	145	10,771	39,211
	%	50.5	12.8	8.9	0.4	27.5	100

Excludes 2 cases in which age was unknown

Private admission							
Maternal age							
younger than 20 years	n	84	18	8	1	32	143
	%	58.7	12.6	5.6	0.7	22.4	100
20–34 years	n	5,548	2,693	2,208	45	5,623	16,117
	%	34.4	16.7	13.7	0.3	34.9	100
35 years or older	n	1,369	818	776	17	2,748	5,728
	%	23.9	14.3	13.5	0.3	48.0	100
Total	n	7,001	3,529	2,992	63	8,403	21,988
	%	31.8	16.0	13.6	0.3	38.2	100

In both the public and private sectors, younger primiparae were more likely than older primiparae to experience an unassisted cephalic birth. In each age category, women were less likely to experience such a birth if they were admitted as private patients.

Forceps births and vacuum extractions were less frequent in women aged younger than 20 years, but did not differ markedly between the older age groups. The rate of caesarean section was higher with each increase in maternal age in both the public and private sectors. Women in each age group were more likely to have a caesarean section if they were admitted as a private patient.

Table 48: Method of birth by maternal age and admission status, multiparous confinements 2007 & 2008

		Method of birth					Total
		Unassisted cephalic	Vacuum	Forceps	Vaginal breech	Caesarean	
Public admission							
Maternal age							
younger than 20 years	n	427	16	4	6	68	521
	%	82.0	3.1	0.8	1.2	13.1	100
20–34 years	n	27,621	1035	443	169	9,654	38,922
	%	71.0	2.7	1.1	0.4	24.8	100
35 years or older	n	8,652	396	193	60	4,548	13,849
	%	62.5	2.9	1.4	0.4	32.8	100
Total	n	36,700	1,447	640	235	14,270	53,292
	%	68.9	2.7	1.2	0.4	26.8	100
Private admission							
Maternal age							
younger than 20 years	n	13	0	0	0	5	18
	%	72.2	0.0	0.0	0.0	27.8	100
20–34 years	n	8,491	762	375	43	4,908	14,579
	%	58.2	5.2	2.6	0.3	33.7	100
35 years or older	n	6,400	697	289	39	5,311	12,736
	%	50.3	5.5	2.3	0.3	41.7	100
Total	n	14,904	1,459	664	82	10,224	27,333
	%	54.5	5.3	2.4	0.3	37.4	100

Multiparous women demonstrated the same patterns regarding type of birth as did primiparae, with younger women more likely than older ones to experience an unassisted cephalic birth in both the public and private sectors. The converse was so for operative birth. In each age group, multiparae admitted as private patients were more likely to experience each type of operative birth than those admitted as public patients.

Table 49: Method of birth by presentation, all confinements, 2007 and 2008

		Unassisted cephalic	Vacuum	Forceps	Vaginal breech	Caesarean	Total
Vertex	n	77,403	11,384	7,723	0	37,442	133,952
	%	57.8	8.5	5.8	0.0	28.0	100.0
Breech	n	0	1 [#]	0	525	5,427	5,954
	%	0.0	0.0	0.0	8.8	91.1	100.0
Other*	n	941	82	48	0	733	1,803
	%	52.2	4.5	2.7	0.0	40.7	100.0

* 'Other' includes all presentations other than vertex and breech e.g. face, brow, compound, shoulder etc.

undiagnosed breech presentation

NB There were an additional 117 confinements for whom the presentation was not reported.

The vast majority of breech presentations overall were delivered by caesarean section (91%), along with 41% of 'other' presentations (Table 49). This table includes multiple births as a single confinement, but only considers the presentation of the first fetus.

Table 50: Trends in method of birth for breech presentation at term, singleton confinements, 1985 to 2008

Type of birth	1985 n=1,658 %	1990 n=1,940 %	1995 n=1,948 %	2000 n=1,886 %	2005 n=2,067 %	2006 n=2,232 %	2007 n=2,087 %	2008 n=2,107 %
Vaginal*	35.8	27.3	19.4	10.0	4.0	4.3	4.2	4.4
Caesarean	64.2	72.8	80.6	90.0	96.0	95.7	95.8	95.6

* whether or not forceps applied to after-coming head

Term, singleton breech presentations were more likely than breech presentations overall to be delivered by caesarean section (95.6% and 91.1% respectively) (Tables 49 and 50).

Table 51: Indication for caesarean section, pooled data 2007 and 2008 (confinements)

Reported Indications	All caesarean sections (n=43,668) % of all CS	Planned caesarean sections [#] (n=23,796) % of planned CS	Unplanned caesarean sections ^{**} (n=19,872) % of unplanned CS
Previous caesarean/s	37.0	64.1	4.4
CPD/FTP*	16.5	1.7	34.2
Non-reassuring fetal status	15.1	0.3	32.8
Malpresentation	13.1	14.9	10.9
Antepartum haemorrhage	3.3	2.7	4.0
Pre-eclampsia/HT	2.6	1.2	4.3
Multiple pregnancy	2.1	2.4	1.7
Fetal growth restriction	0.9	0.8	1.1
Other	9.4	11.9	6.5

* CPD=cephalo-pelvic disproportion, FTP=failure to progress

planned caesarean with or without labour

** unplanned caesarean with or without labour

The most common indication for caesarean section overall was the occurrence of a prior section, followed by cephalo-pelvic disproportion or failure to progress (16.5%), non-reassuring fetal status (15.1%) and malpresentation (13.1%).

This picture differed between planned and unplanned caesarean sections with nearly two-thirds of planned caesareans being carried out because of a prior section; and two-thirds of unplanned caesarean sections carried out for non-reassuring fetal status, or failure to progress/cephalo-pelvic disproportion.

Analgesia and anaesthesia

The perinatal form asks separately about analgesia used to relieve pain during labour, and anaesthesia given to facilitate an operative birth. Several of the same procedures can be used for either. If epidural/spinal (also known as regional) analgesia is given for pain relief, and is still active or is topped up for an operative birth, it is reported as both analgesia and anaesthesia.

Table 52: Analgesia used by women who experienced labour, 2007 and 2008

Analgesia for labour	2007		2008	
	n	%	n	%
No analgesia	15,713	27.0	15,664	26.8
Nitrous oxide only	14,297	24.6	14,567	24.9
IM opioids only	3,874	6.7	3,637	6.2
Nitrous oxide & IM opioids	8,020	13.8	8,364	14.3
Epidural/spinal/caudal with or without IM opioids	15,838	27.2	15,694	26.8
Other	438	0.8	557	1.0
Total*	58,180	100	58,483	100

* excludes cases with failed inductions of labour

Around half of all women who experienced labour in 2007 and 2008 used no analgesia, or nitrous oxide and oxygen only. Another fifth used intramuscular opioids, with or without nitrous oxide and oxygen. Slightly more than one quarter used epidural/spinal analgesia alone or in combination with other methods (Table 52). Primiparae were more than twice as likely to use epidural analgesia as multiparae (39.3% and 16.1% respectively).

Looking only at women who went on to experience a spontaneous cephalic birth, fewer had used epidural/spinal analgesia (Table 53), although those who were admitted as a private patient were twice as likely to use regional analgesia as those admitted as a public patient (Figure 11).

Table 53: Analgesia used by women who had an unassisted vaginal birth, 2007 and 2008

Analgesia for labour	2007		2008	
	n	%	n	%
No analgesia	12,214	31.3	12,258	31.1
Nitrous oxide only	12,096	31.0	12,273	31.2
IM opioids only	2,921	7.5	2,719	6.9
Nitrous oxide & IM opioids	5,928	15.2	6,237	15.8
Epidural/spinal/caudal with/without IM opioids	5,523	14.1	5,427	13.8
Other	351	0.9	445	1.1
Total	39,033	100	39,359	100

Figure 11: Analgesia used by women who had an unassisted vaginal birth, by admission status, 2007 and 2008

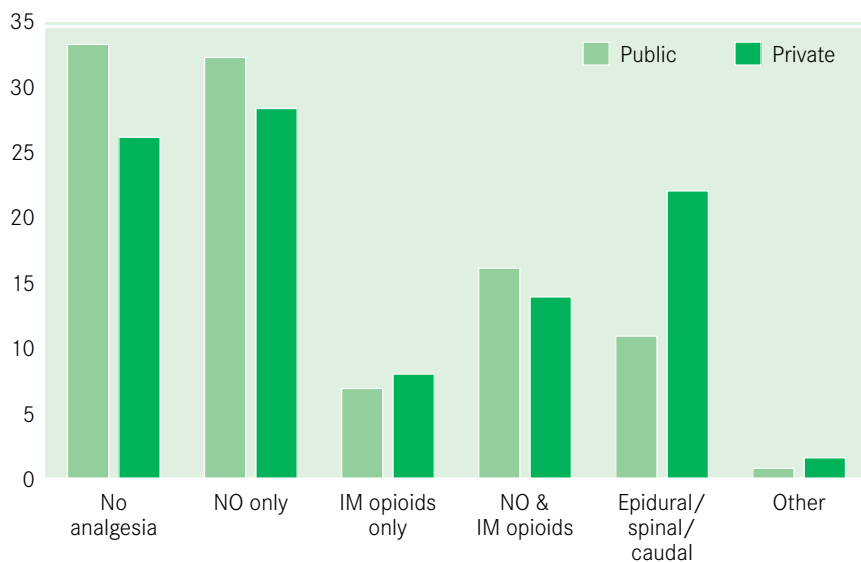


Table 54: Type of anaesthesia for operative birth, pooled data, 2007 and 2008 (confinements)

Type of anaesthesia	Operative vaginal birth (n=19,766) %	Caesarean section with labour (n=17,795) %	Caesarean section without labour (n=25,873) %
No anaesthesia	23.5	0	0
LA* only	14.8	0	0
Pudendal only	7.4	0	0
Epidural/spinal/caudal	54.1	92.8	94.6
GA* only	0.1	5.9	4.7
GA with epidural/spinal/ caudal	0	1.3	0.6
Other	0	0	0
Unknown	0	0	0
Total	100	100	100

* LA=local anaesthesia; GA=general anaesthesia

Around one-quarter of women who experienced operative vaginal birth did so with no anaesthesia, and a further one-fifth used local anaesthesia (including pudendal). Over half of them gave birth with epidural/spinal anaesthesia.

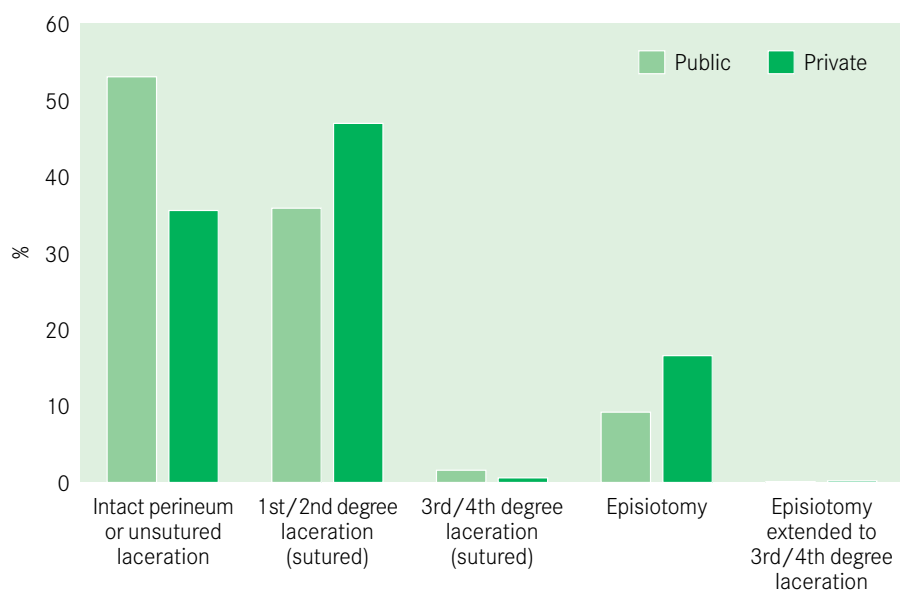
The vast majority of caesarean sections were carried out under epidural/spinal anaesthesia, with 7.2% of those in labour and 5.3% of those not in labour performed under general anaesthesia.

Perineal status

Table 55: Perineal status following vaginal birth (confinements), 2007 and 2008

	2007				2008			
	Primiparous women		Multiparous women		Primiparous women		Multiparous women	
	n	%	n	%	n	%	n	%
Intact perineum or unsutured laceration	5,024	24.0	14,991	53.5	4,947	23.4	14,931	53.1
1st/2nd degree laceration (sutured)	7,524	36.0	9,916	35.4	7,658	36.3	10,074	35.8
3rd/4th degree laceration	529	2.5	217	0.8	567	2.7	211	0.8
Episiotomy	7,568	36.2	2,848	10.2	7,668	36.3	2,862	10.2
Episiotomy extended to 3rd/4th degree laceration	275	1.3	32	0.1	267	1.3	49	0.2
Total	20,920		28,004		21,107		28,127	

Figure 12: Perineal status following unassisted vaginal birth by admission status, pooled data 2007 and 2008



Public	53.1	35.9	1.6	9.2	0.1
Private	35.6	47.0	0.6	16.6	0.2

For women who achieved an unassisted vaginal birth, those admitted as private patients were more likely to experience an episiotomy or a sutured laceration than those admitted as public patients. Third and fourth degree lacerations were relatively rare in this group, but were reported more frequently for women admitted as public patients. A small number of episiotomies extended to third or fourth degree lacerations in both sectors.

Postpartum haemorrhage

Table 56: Postpartum haemorrhage by parity, 2007 and 2008 (confinements)

	2007		2008	
	n	%	n	%
Primipara	4,152	13.6	4,294	14.0
Multipara	3,718	9.2	3,956	9.8

Postpartum haemorrhage occurred more frequently in primiparous women than multiparous women (13.6% versus 9.2% in 2007, and 14.0% versus 9.8% in 2008).

Infant factors

In this section, the number of babies (rather than the number of women giving birth) is the primary focus, so each baby in a multiple birth is counted separately unless otherwise specified.

Factors related to infant sex

Table 57: Sex of infants born in 2007 and 2008

	2007		2008	
	n	%	n	%
Male	37,018	51.3	37,165	51.5
Female	35,087	48.7	35,031	48.5
Indeterminate	0	0.0	2	0.0
Unknown	14	0.0	7	0.0
	72,119		72,205	

Factors related to gestation

Table 58: Trends in pre-term and post-term births, 1985 to 2006

	1985	1990	1995	2000	2005	2006	2007	2008
<37 weeks	6.0	6.7	7.1	7.6	7.7	7.8	7.9	7.9
>=42 weeks	3.8	4.5	2.9	1.3	1.3	1.4	1.3	1.3

The proportion of babies born before 37 weeks' gestation has increased very slightly since 2000, but is considerably higher than in 1985 (7.9% versus 6.0%).

There has been little change in the proportion of babies born at 42 or more weeks' gestation in recent years, but it was substantially lower in 2008 than in 1985 (1.3% versus 3.8%).

Figure 13: Trends in preterm and post-term birth, 1985 to 2008

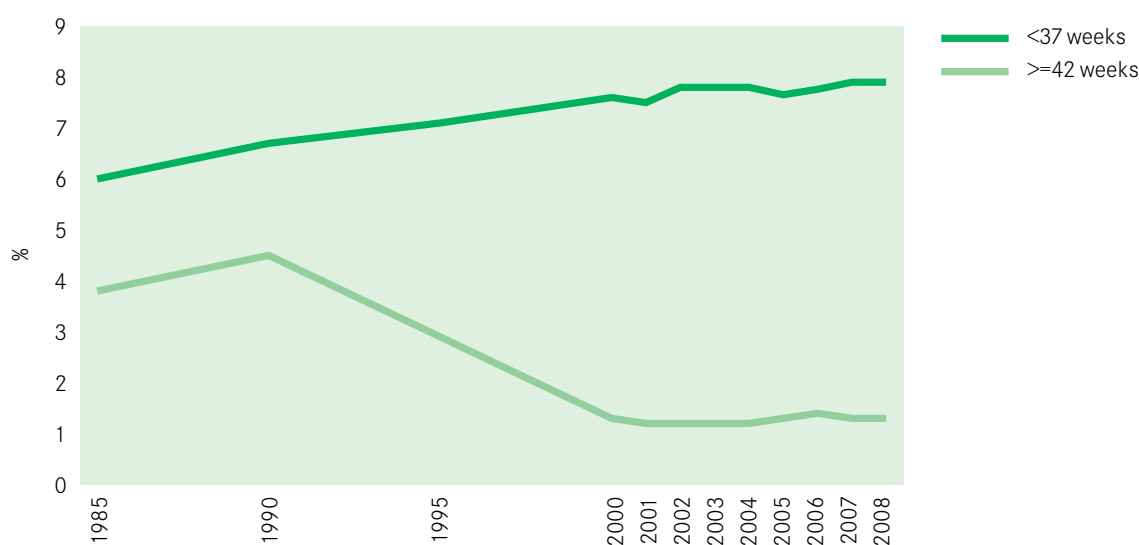


Table 59: Size of maternity service (annual births) for birth at various gestations (completed weeks) 2007 and 2008*

Gestation		< 100 births	100-999 births	1000-1999 births	2000+ births	Total
20-27 wks	n	6	90	152	739	987
	%	0.6	9.1	15.4	74.9	100
28-31 wks	n	4	57	113	946	1,120
	%	0.4	5.1	10.1	84.5	100
32-36 wks	n	42	1,508	2,241	5,514	9,305
	%	0.5	16.2	24.1	59.2	100
37-41 wks	n	1,961	26,312	31,207	70,978	130,458
	%	1.5	20.1	23.8	54.2	100
42+ wks	n	29	372	419	1,067	1,887
	%	1.5	19.2	21.7	55.2	100
Total	n	2,042	28,339	34,132	79,244	143,757
	%	1.4	19.7	23.7	55.1	

* excludes babies born at home as planned, and 9 babies with unknown gestation

More than 80% of babies born at 28 to 31 weeks' gestation were born in large hospitals ($\geq 2,000$ births), with 5.5% of them born in hospitals with less than 1,000 births per year. A higher proportion of extremely preterm babies was born in small hospitals (9.7%).

Table 60: Gestation by parity, all births 2007 and 2008 (%)

	2007			2008		
	1st birth n=31,082	2nd or 3rd birth n=35,450	4th or subsequent birth n=5,587	1st birth n=31,288	2nd or 3rd birth n=34,983	4th or subsequent birth n=5,934
20-27 wks	0.8	0.6	0.7	0.7	0.5	0.9
28-31 wks	0.9	0.6	1.0	1.0	0.6	1.0
32-36 wks	7.0	5.6	8.0	7.2	5.6	8.3
37-41 wks	89.4	92.4	88.7	89.1	92.5	88.3
42+ wks	1.8	0.9	1.6	1.9	0.8	1.5

First births, as well as 4th or subsequent births, were more likely to occur preterm and post-term than 2nd or 3rd births.

Table 61: Gestation by sex, all births 2007 and 2008 (%)

	2007		2008	
	Male n=37,018	Female n=35,087	Male n=37,165	Female n=35,031
20–27 wks	0.8	0.6	0.6	0.7
28–31 wks	0.8	0.8	0.8	0.8
32–36 wks	6.7	6.1	6.8	6.2
37–41 wks	90.5	91.2	90.4	91.0
42+ wks	1.4	1.3	1.3	1.4

* excludes babies with unknown gestation or indeterminate sex

There were no differences in the proportions of males and females born before 32 weeks' gestation, but males were more likely than females to be born between 32 and 36 weeks' gestation.

Table 62: Type of birth by gestation, all births 2007 and 2008

		20–27 weeks		28–31 weeks		32–36 weeks		37+ weeks	
		2007	2008	2007	2008	2007	2008	2007	2008
Spontaneous cephalic	n	233	205	149	160	1,825	1,808	36,949	37,288
	%	45.2	43.4	27.0	28.2	39.6	38.5	55.6	56.1
Vacuum	n	2	1	1	2	214	238	5,517	5,585
	%	0.4	0.2	0.2	0.4	4.6	5.1	8.3	8.4
Forceps	n	2	3	22	17	187	192	3,776	3,650
	%	0.4	0.6	4.0	3.0	4.1	4.1	5.7	5.5
Vaginal breech	n	131	131	33	25	89	91	161	158
	%	25.4	27.8	6.0	4.4	1.9	1.9	0.2	0.2
Planned caesarean	n	15	6	38	32	805	874	11,484	11,562
	%	2.9	1.3	6.9	5.6	17.5	18.6	17.3	17.4
Unplanned caesarean	n	132	126	309	332	1,493	1,493	8,549	8,220
	%	25.6	26.7	56.0	58.4	32.4	31.8	12.9	12.4
Total		515	472	552	568	4,613	4,696	66,436	66,463

* excludes 9 babies with unknown gestation

More than one quarter of all births at 20 to 27 weeks', nearly two-thirds of those at 28 to 31 weeks', and one half of those at 32 to 36 weeks' were by caesarean section.

Factors related to birthweight

Table 63: Birthweight categories, all births 2007 and 2008

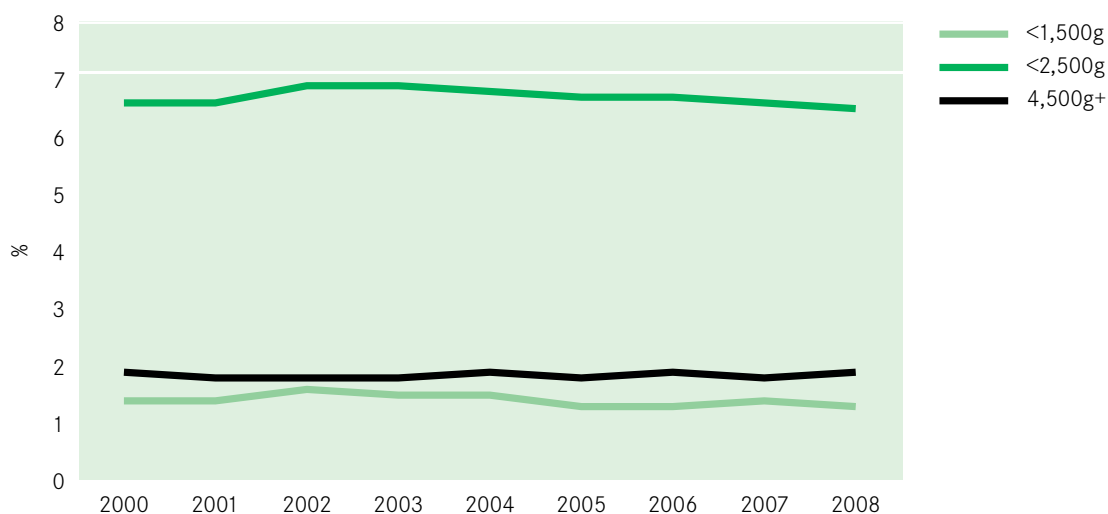
	2007		2008	
	n	%	n	%
Less than 500g	183	0.3	177	0.2
500–999g	337	0.5	334	0.5
1,000–1,499g	449	0.6	444	0.6
1,500–1,999g	957	1.3	906	1.3
2,000–2,499g	2,839	3.9	2,825	3.9
2,500–2,999g	11,035	15.3	10,832	15.0
3,000–3,499g	25,646	35.6	25,807	35.7
3,500–3,999g	22,059	30.6	22,001	30.5
4,000–4,499g	7,262	10.1	7,481	10.4
4,500g+	1,320	1.8	1,391	1.9
Unknown	32	0.0	7	0.0
	72,119	100	72,205	100

Table 64: Trends in birthweight 1985 to 2008 (%)

	1985 n=61,189	1990 n=66,878	1995 n=63,717	2000 n=62,555	2005 n=66,340	2006 n=69,550	2007 n=72,119	2008 n=72,205
Less than 500g	0.0	0.1	0.3	0.3	0.2	0.2	0.3	0.2
500–999g	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5
1,000–1,499g	0.5	0.6	0.6	0.6	0.6	0.7	0.6	0.6
1,500–1,999g	1.1	1.2	1.2	1.3	1.3	1.3	1.3	1.3
2,000–2,499g	3.4	3.6	3.9	3.9	4.1	4.0	3.9	3.9
2,500–2,999g	15.2	15.1	15.5	15.4	15.3	15.1	15.3	15.0
3,000–3,499g	37.6	37.0	36.0	36.1	35.5	35.6	35.6	35.7
3,500–3,999g	30.8	30.7	30.5	30.1	30.6	30.4	30.6	30.5
4,000–4,499g	9.2	9.4	9.7	9.9	10.2	10.2	10.1	10.4
4,500g+	1.6	1.7	1.8	1.9	1.8	1.9	1.8	1.9
Unknown	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0

Between 1985 and 2008, the percentage of babies with a birthweight of 4,000g or more increased from 10.8% to 12.3%.

Figure 14: Trends in major birthweight categories, 2000 to 2008



There was little change in the proportion of babies with low birthweight, and very low birthweight over the period 2000 to 2008. Neither was there any change in the proportion weighing 4,500 g or more.

Table 65: Size of maternity service (annual births) where babies of various birthweights were born, 2007 and 2008*

		< 100 births	100-999 births	1000-1999 births	2000+ births	Total
Less than 500g	n	2	47	82	229	360
	%	0.6	13.1	22.8	63.6	100
500-999g	n	2	41	75	553	671
	%	0.3	6.1	11.2	82.4	100
1,000-1,499g	n	5	46	95	747	893
	%	0.6	5.2	10.6	83.7	100
1,500-1,999g	n	6	179	318	1,360	1,863
	%	0.3	9.6	17.1	73.0	100
2,000-2,499g	n	39	944	1,335	3,344	5,662
	%	0.7	16.7	23.6	59.0	100
2,500-2,999g	n	250	4,027	5,111	12,442	21,830
	%	1.1	18.4	23.4	56.9	100
3,000-3,499g	n	728	10,081	12,243	28,261	51,313
	%	1.4	19.6	23.9	55.1	100
3,500-3,999g	n	721	9,198	10,602	23,324	43,845
	%	1.6	21.0	24.2	53.2	100
4,000-4,499g	n	240	3,205	3,610	7,563	14,618
	%	1.6	21.9	24.7	51.7	100
4,500g+	n	49	564	654	1,404	2,671
	%	1.8	21.1	24.5	52.6	100
Unknown	n	1	9	8	20	38
	%	2.6	1.7	21.1	52.6	100
Total	n	2,043	28,341	34,133	79,247	143,764
	%	1.4	19.7	23.7	55.1	100

* excludes babies born at home as planned

Table 66: Birthweight by parity, all births 2007 and 2008 (%)

	2007			2008		
	1st birth n=31,082	2nd or 3rd birth n=35,450	4th or subsequent birth n=5,587	1st birth n=31,288	2nd or 3rd birth n=34,983	4th or subsequent birth n=5,934
<500 g	0.3	0.2	0.4	0.3	0.2	0.4
500 to 999 g	0.6	0.4	0.4	0.6	0.3	0.7
1,000 to 1,499 g	0.8	0.5	0.8	0.8	0.4	0.6
1,500 to 1,999 g	1.6	1.0	1.8	1.6	0.9	1.8
2,000 to 2,499 g	4.6	3.2	4.7	4.7	3.2	4.2
2,500 to 2,999 g	17.0	13.8	15.6	16.5	13.8	14.4
3,000 to 3,499 g	36.7	35.0	32.9	37.0	35.4	31.5
3,500 to 3,999 g	28.6	32.6	28.8	28.5	32.2	30.5
4,000 to 4,499 g	8.5	11.3	11.4	8.7	11.5	12.5
4,500 g +	1.4	2.0	3.2	1.4	2.2	3.3
Unknown	0.1	0	0	0	0	0

Table 67: Birthweight by sex, all births 2007 and 2008 (%)

	2007		2008	
	Male n=37,018	Female n=35,087	Male n=37,165	Female n=35,031
<500 g	0.3	0.2	0.2	0.3
500 to 999 g	0.5	0.4	0.4	0.5
1,000 to 1,499 g	0.6	0.7	0.6	0.7
1,500 to 1,999 g	1.2	1.4	1.2	1.4
2,000 to 2,499 g	3.5	4.4	3.6	4.3
2,500 to 2,999 g	13.2	17.5	12.8	17.3
3,000 to 3,499 g	33.2	38.1	33.5	38.2
3,500 to 3,999 g	32.8	28.3	32.6	28.2
4,000 to 4,499 g	12.3	7.8	12.6	8.0
4,500 g +	2.5	1.2	2.5	1.3
Unknown	0	0	0	0

In 2008, 15.1% of male babies weighed 4,000 g or more compared with 9.3% of females.

Table 68: Type of birth by birthweight category, all births 2007 and 2008

		<1,500g		1,500–2,499g		2,500–4,499g		4,500g+	
		2007	2008	2007	2008	2007	2008	2007	2008
Spontaneous cephalic	n	331	313	1,468	1,421	36,687	37,005	659	724
	%	34.2	32.8	38.7	38.1	55.6	60.0	50.0	52.0
Vacuum	n	2	2	173	159	5,479	5,584	79	81
	%	0.2	0.2	4.6	4.3	8.3	8.4	6.0	5.8
Forceps	n	12	15	139	153	3,755	3,627	80	67
	%	1.2	1.6	3.7	4.1	5.7	5.5	6.1	4.8
Vaginal breech	n	153	158	101	86	152	160	0	1
	%	15.8	16.5	2.7	2.3	0.2	0.2	0.0	0.1
Planned caesarean	n	62	55	709	742	11,385	11,458	184	218
	%	6.4	5.8	18.7	19.9	17.2	17.3	13.9	15.7
Unplanned caesarean	n	409	412	1,206	1,170	8,544	8,287	318	300
	%	42.2	43.1	31.8	31.4	12.9	12.5	24.1	21.6
Total	n	969	955	3,796	3,731	66,002	66,121	1,320	1,391

* excludes 32 babies born in 2007 and 7 in 2008 with unknown birthweight

Babies with a birthweight of 2,500 to 4,499 g were less likely to be born by caesarean section (particularly unplanned caesarean) than heavier or lighter babies.

Table 69: Apgar score at 5 minutes, 2007 and 2008 (livebirths only)

Apgar	2007		2008	
	n	%	n	%
<4	194	0.3	190	0.3
4–6	880	1.2	974	1.4
7	1,096	1.5	1,204	1.7
8	3,193	4.4	3,355	4.6
9	51,096	70.9	52,282	72.4
10	15,172	21.0	13,736	19.0
Total	71,631	100	71,741	100

excludes 160 liveborn babies with unknown 5th Apgar score

Apgar scores reflect the baby's condition at birth, with a score of 10 being the optimal outcome. Few babies (1.5% in 2007 and 1.7% in 2008) had scores lower than 7 at five minutes. More than 90% had scores of 9 or 10.

Resuscitation at birth

Table 70: Most intensive method of resuscitation used, 2007 and 2008 (livebirths only)

	2007		2008	
	n	%	n	%
None	54,277	75.7	56,929	79.4
Suction and/or oxygen	11,828	16.5	9,224	12.8
Bag and mask	4,986	7.0	5,057	7.0
Endotracheal intubation	436	0.6	412	0.6
External cardiac massage & ventilation	175	0.2	171	0.3
Total	71,702	100	71,793	100

excludes 20 babies for whom resuscitation method was unknown, and 17 for whom medications alone were reported e.g. sodium bicarbonate, naloxone

Over three-quarters of all babies required no resuscitation at birth. A further 17% in 2007 and 13% in 2008 required oxygen and/or suction. Fewer than 1% needed intubation with or without external cardiac massage.

Multiple births

Table 71: Multiple births, 2007 and 2008

Year	Twins*	Sets	% of all births	Triplets*	Sets	% of all births	Quads	Sets	% of all births
2007	2,491	1,247 [#]	3.5	51	17	0.1	0	0	0
2008	2,378	1,189	3.3	42	14	0.0	0	0	0
Total	4,869			93			0		

* Figures relate to total number of births

data on three twins excluded from this report

Table 72: Trends in multiple births, 1990 to 2008

Year	Twins*	Sets	% of all births	Triplets*	Sets	% of all births	Quads*	Sets	% of all births
1990	1,649	824.5	2.5	69	23	0.1	4	1	0.0
1995	1,850	925	2.9	87	29	0.1	0	0	0.0
2000	1,903	951.5 [#]	3.0	63	21	0.1	0	0	0.0
2002	2,144	1,072	3.4	57	19	0.1	0	0	0.0
2003	2,212	1,106	3.5	54	18	0.1	4	1	0.0
2004	2,246	1,123	3.5	48	16	0.1	0	0	0.0
2005	2,388	1,194	3.6	48	16	0.1	0	0	0.0
2006	2,493	1,246.5	3.6	81	27	0.1	8	2	0.0
2007	2,491	1,247	3.5	51	17	0.1	0	0	0.0
2008	2,378	1,189	3.3	42	14	0.0	0	0	0.0

* figures relate to total number of multiples; occasionally one multiple is born in one year and the sibling in the next year

Twins made up 3.3% of all births in 2008 compared with 2.5% in 1990. Triplets continue to be very rare, and only 3 sets of quadruplets have been born since 2000.

Table 73: Multiple birth by maternal age group, all confinements in 2007 and 2008 (% of mothers in each age group)

Maternal Age (years)	Twins (sets)	%	Triplets (sets)	%	Quads (sets)	%
younger than 15	0	0.0	0	0.0	0	0.0
15-19	29	0.8	0	0.0	0	0.0
20-24	165	1.0	1	0.0	0	0.0
25-29	495	1.4	8	0.0	0	0.0
30-34	884	1.8	12	0.0	0	0.0
35-39	728	2.4	6	0.0	0	0.0
40-44	120	2.1	3	0.0	0	0.0
45+	15	5.4	1	0.0	0	0.0
Total*	2,436		31		0	

Twin pregnancies were more likely with increasing maternal age, with fewer than 1% of parturients aged 15 to 19 years having twins, increasing to 2.4% of women aged 35 to 44 years and 5.4% of those aged 45 years or older.

It is noteworthy that since 2002 there has been no significant increase in the incidence of multiple birth, possibly reflecting the reduction in the number of embryos transferred during IVF procedures.

Table 74: Gestation by plurality, all confinements in 2007 and 2008

Gestation (wks)	Singletons	%	Twins (sets)	%	Triplets (sets)	%	Quads (sets)	%
20-27	768	0.5	104	4.3	4	12.9	0	0.0
28-31	777	0.6	166	6.8	4	12.9	0	0.0
32-36	7,133	5.1	1,054	43.3	23	74.2	0	0.0
37-41	128,746	92.4	1,110	45.6	0	0.0	0	0.0
42+	1,929	1.4	2	0.1	0	0.0	0	0.0
Total	139,353	100	2,436	100	31	100	0	100

* excludes 9 unknown gestation

More than half of all sets of twins were born preterm compared with 6.2% of singletons.

Table 75: Method of birth for multiples, by presentation order (rank), 2007 and 2008

Type of Birth	Twin 1 (n=2,433) %	Twin 2 (n=2436) %	Triplet 1 (n=31)	Triplet 2 (n=31)	Triplet 3 (n=31)
Unassisted cephalic	18.7	9.4	9.7	9.7	9.7
Vacuum	4.7	3.7	0	0	0
Forceps	4.8	3.2	3.2	3.2	3.2
Vaginal breech	0.9	12.0	3.2	3.2	3.2
Total Caesarean	71.0	71.8	87.1	87.1	87.1
{planned	40.6	40.6	51.6	51.6	51.6
{unplanned	30.3	31.2	35.5	35.5	35.5

More than 70% of twins were born by caesarean section. Very rarely, a second twin was born by caesarean section after the vaginal birth of the first twin (0.8%). Considerably more second twins than first twins had a vaginal breech birth (12.0% versus 0.9%). The vast majority of triplets were born by caesarean section (87.1%).

Table 76: Method of birth for singleton and twin births, 2007 and 2008

Method of birth	Singleton % n = 139,362	Twin % n = 4,869
Unassisted cephalic	55.9	14.0
Forceps	5.5	4.0
Vaginal Breech	0.4	6.4
Vacuum	8.1	4.2
Total Caesarean	30.1	71.4
{elective	16.4	40.6
{emergency	13.7	30.8

Indigenous mothers and their babies

The perinatal form asks whether the mother identifies as Aboriginal or Torres Strait Islander, or both. It does not ask about paternal Indigenous status, so this section relates only to babies born to women who identify as Indigenous.

There is likely to be under-ascertainment of maternal Aboriginal or Torres Strait Islander status. Indigenous status was not reported for 46 women.

Table 77: Trends in births and confinements to indigenous women, 1985 to 2008

Year	Births		Confinements	
	n	% of all births	n	% of all confinements
1985	323	0.5	321	0.5
1990	436	0.7	429	0.6
1995	423	0.7	417	0.7
2000	380	0.6	376	0.6
2001	419	0.7	414	0.7
2002	421	0.7	416	0.7
2003	372	0.6	364	0.6
2004	435	0.7	431	0.7
2005	534	0.8	525	0.8
2006	568	0.8	561	0.8
2007	698	1.0	688	1.0
2008	727	1.0	720	1.0

The number of women giving birth who identified as Aboriginal or Torres Strait Islander has steadily increased over the period 1985 to 2008 from 0.5% to 1.0% (Table 77).

Table 78: Maternal age by indigenous status, confinements 2007 and 2008

	Indigenous		Non-indigenous	
	n	%	n	%
Younger than 20 years	232	16.5	3,470	2.5
20–34 years	1,006	71.4	100,154	71.3
35 years or older	170	12.1	36,748	26.2
	1,408		140,372	

Table 79: Type of birth by indigenous status, confinements 2007 and 2008

	Indigenous		Non-indigenous	
	n	%	n	%
Unassisted vaginal cephalic	965	68.5	77,405	55.1
Vacuum	68	4.8	11,400	8.1
Forceps	47	3.3	7,717	5.5
Caesarean section	315	22.2	43,339	30.9
Vaginal breech	13	0.9	511	0.4
	1,408		140,372	

Table 80: Onset of labour by indigenous status, confinements 2007 and 2008

	Indigenous		Non-indigenous	
	n	%	n	%
Spontaneous	652	46.3	52,479	37.4
Augmented	259	18.4	28,602	20.4
Induced	314	22.3	34,316	24.4
No labour	183	13.0	24,975	17.8
	1,408		140,372	

Indigenous women were considerably more likely than other women to be aged younger than 20 years when they gave birth in 2007 and 2008, and conversely, were less likely to be aged 35 years or older (Table 78).

They were more likely than other women to have an unassisted vaginal birth, and less likely to have an instrumental vaginal birth or a caesarean section (Table 79).

Indigenous women were slightly less likely than others to have labour induced, or to have a pre-labour caesarean section (Table 80).

Table 81: Birth weight by maternal indigenous status, births in 2007 and 2008

	Indigenous		Non-indigenous	
	n	%	n	%
<1,500g	35	2.5	1,886	1.3
1,500–2,499g	161	11.3	7,362	5.2
2,500–4,499g	1,206	84.6	130,876	91.6
4,500g+	23	1.6	2,688	1.9
	1,425		142,812	

39 cases with unknown birthweight, and 48 cases with unknown indigenous status not reported here

Table 82: Gestation by maternal indigenous status, births in 2007 and 2008

	Indigenous		Non-indigenous	
	n	%	n	%
20–27 weeks	18	1.3	968	0.7
28–31 weeks	19	1.3	1,099	0.8
32–36 weeks	143	10.0	9,158	6.4
37–41 weeks	1,231	86.4	129,700	90.8
42+ weeks	14	1.0	1,919	1.3
	1,425		142,844	

excludes 9 cases with unknown gestation, and another 46 with unknown Indigenous status

Babies born to indigenous mothers were around twice as likely as others to have low birthweight (<2,500 g) (13.8% and 6.5% respectively) or very low birthweight (<1,500 g) (Table 81), and were also more likely to be born preterm (12.6% versus 7.9%) (Table 82).

Comparisons between hospital types

This section compares a number of variables according to characteristics of the birth hospital – public or private, and the annual number of births.

Table 83: Confinements by hospital category, 2007 and 2008

Births per year	2007		2008*	
	n	%	n	%
Public hospitals				
<1000	8,712	12.3	8,674	12.2
1000–1999	12,782	18.0	11,163	15.7
2000+	28,105	39.7	29,480	41.5
Private hospitals				
<1000	6,258	8.8	6,388	9.0
1000–1999	4,797	6.8	4,848	6.8
2000+	9,931	14.0	10,130	14.3
Home or non-maternity hospital	253	0.4	302	0.4
Total	70,838		70,985	

* excludes 3 women who did not access maternity care

Table 84: Induction of labour by hospital category, 2007 and 2008

Births per year	2007		2008	
	n	%	n	%
Public hospitals				
<1000	2,017	23.2	2,076	23.9
1000–1999	3,103	24.3	2,577	23.1
2000+	6,569	23.4	6,779	23.0
Private hospitals				
<1000	1,795	28.7	1,813	28.4
1000–1999	1,281	26.7	1,229	25.4
2000+	2,657	26.8	2,741	27.1

Hospital size was not associated with the rate of induction of labour (Table 84), but women admitted to private hospitals were more likely to have labour induced than those admitted to public hospitals.

Table 85: Type of birth by hospital category, 2007 and 2008 (% of confinements)

Births per year	2007		2008	
	n	%	n	%
Unassisted vaginal birth				
Public				
<1000	5,542	63.6	5,675	65.4
1000-1999	7,580	59.3	6,706	60.1
2000+	16,694	59.4	17,512	59.4
Private				
<1000	2,853	45.6	2,865	44.8
1000-1999	2,019	42.1	2,099	43.3
2000+	4,097	41.3	4,203	41.5
Vacuum birth				
Public				
<1000	584	6.7	608	7.0
1000-1999	1,043	8.2	836	7.5
2000+	1,904	6.8	2,103	7.1
Private				
<1000	505	8.1	568	8.9
1000-1999	519	10.8	542	11.2
2000+	1,124	11.3	1,132	11.2
Forceps birth				
Public				
<1000	283	3.2	279	3.2
1000-1999	595	4.7	580	5.2
2000+	1,436	5.1	1,318	4.5
Private				
<1000	479	7.7	444	7.0
1000-1999	460	9.6	429	8.8
2000+	697	7.0	771	7.6
Vaginal breech birth				
Public				
<1000	40	0.5	36	0.4
1000-1999	42	0.3	35	0.3
2000+	121	0.4	131	0.4
Private				
<1000	9	0.1	16	0.3
1000-1999	14	0.3	11	0.2
2000+	31	0.3	31	0.3

Table 85: Type of birth by hospital category, 2007 and 2008 (% of confinements) (continued)

Births per year	2007		2008	
	n	%	n	%
Caesarean section				
Public				
<1000	2,263	26.0	2,076	23.9
1000–1999	3,522	27.6	3,006	26.9
2000+	7,950	28.3	8,416	28.5
Private				
<1000	2,412	38.5	2,495	39.1
1000–1999	1,785	37.2	1,767	36.4
2000+	3,982	40.1	3,994	39.4

Women who gave birth in smaller hospitals were more likely to have an unassisted vaginal birth than those born in larger hospitals.

Women who gave birth in public hospitals were less likely to have vacuum, forceps and caesarean births than those in private hospitals (Table 85).

Table 86: Postnatal length of stay by hospital category, 2007 and 2008 (% of confinements)

Births per year	2007		2008	
	n	%	n	%
2 days or less				
Public hospitals				
<1000	3,241	37.2	3,595	41.4
1000–1999	5,959	46.6	5,562	49.9
2000+	14,141	50.3	15,583	52.8
Private hospitals				
<1000	191	3.1	200	3.2
1000–1999	168	3.5	174	3.6
2000+	204	2.1	216	2.1
6 days or more				
Public hospitals				
<1000	492	5.6	442	5.1
1000–1999	342	2.7	245	2.2
2000+	917	3.3	868	2.9
Private hospitals				
<1000	639	10.2	490	7.7
1000–1999	423	8.8	370	7.6
2000+	258	2.6	294	2.9

Women were very much more likely to have a short stay in hospital following the birth (2 days or less) if they gave birth in a public hospital than a private hospital.

Residential information related to births

Table 87: Births and confinements by Local Government Area, 2007 and 2008

LGA	Births		Confinements	
	2007	2008	2007	2008
Alpine	138	125	135	120
Ararat	125	133	122	131
Ballarat	1,224	1,236	1,195	1,214
Banyule	1,685	1,606	1,645	1,576
Bass Coast	296	289	290	282
Baw Baw	500	501	484	496
Bayside	1,073	1,071	1,051	1,046
Benalla	152	130	151	129
Boroondara	1,729	1,609	1,704	1,571
Brimbank	2,794	2,780	2,760	2,745
Buloke	82	50	81	49
Campaspe	457	460	446	455
Cardinia	877	969	864	953
Casey	3,911	3,923	3,844	3,851
Central Goldfields	147	123	146	122
Colac-Otway	226	266	223	262
Corangamite	220	212	212	209
Darebin	2,100	2,070	2,056	2,043
East Gippsland	436	444	427	437
Frankston	1,868	1,827	1,835	1,795
French Island	<10	<10	<10	<10
Gannawarra	135	124	130	123
Glen Eira	1,776	1,801	1,742	1,762
Glenelg	246	194	242	191
Golden Plains	205	230	201	228
Greater Bendigo	1,330	1,282	1,302	1,263
Greater Dandenong	2,085	2,090	2,060	2,062
Greater Geelong	2,584	2,635	2,536	2,579
Greater Shepparton	855	959	840	944
Hepburn	148	171	144	166
Hindmarsh	51	77	49	76
Hobsons Bay	1,355	1,315	1,328	1,296
Horsham	248	238	244	233
Hume	2,578	2,657	2,537	2,618
Indigo	157	159	153	153
Kingston	1,840	1,878	1,810	1,854
Knox	1,928	1,917	1,890	1,890
Latrobe	931	1,007	919	991
Loddon	91	89	91	87
Macedon Ranges	427	464	420	452
Manningham	1,190	1,103	1,165	1,086

Table 87: Births and confinements by Local Government Area, 2007 and 2008 (continued)

LGA	Births		Confinements	
	2007	2008	2007	2008
Mansfield	100	86	98	84
Maribyrnong	1,249	1,236	1,233	1,217
Maroondah	1,342	1,360	1,322	1,336
Melbourne	766	832	751	818
Melton	1,586	1,674	1,565	1,644
Mildura	707	675	693	668
Mitchell	452	427	443	421
Moira	351	342	346	335
Monash	1,857	1,895	1,822	1,865
Moonee Valley	1,519	1,491	1,492	1,447
Moorabool	343	333	336	330
Moreland	2,234	2,268	2,196	2,236
Mornington Peninsula	1,595	1,556	1,567	1,536
Mount Alexander	177	163	172	159
Moyne	198	200	195	193
Murrindindi	172	148	168	145
Nillumbik	726	725	715	711
Northern Grampians	137	120	136	119
Port Phillip	1,297	1,287	1,278	1,267
Pyrenees	56	72	55	70
Queenscliffe	17	27	17	27
South Gippsland	314	297	311	293
Southern Grampians	203	180	198	179
Stonnington	1,123	1,106	1,095	1,077
Strathbogie	78	89	76	88
Surf Coast	327	322	318	319
Swan Hill	292	309	290	306
Towong	45	66	45	66
Wangaratta	349	350	343	344
Warrnambool	469	433	461	427
Wellington	509	523	499	513
West Wimmera	31	23	31	23
Whitehorse	2,014	2,020	1,979	1,977
Whittlesea	1,927	2,064	1,896	2,025
Wodonga	523	519	514	515
Wyndham	2,324	2,425	2,285	2,385
Yarra	1,118	1,144	1,097	1,127
Yarra Ranges	1,903	1,777	1,866	1,751
Yarriambiack	74	78	74	75
Outside Victoria	1,415	1,349	1,386	1,330
Total	72,119	72,205	70,838	70,988

Table 88: Births and confinements by Department of Health Region, 2007 and 2008

Regions	Births		Confinements	
	2007	2008	2007	2008
Barwon SW	4,490	4,469	4,402	4,386
Grampians	2,642	2,711	2,587	2,665
Loddon Mallee	3,845	3,739	3,771	3,684
Hume	3,372	3,400	3,312	3,344
Gippsland	2,986	3,061	2,930	3,012
Western Metro	11,593	11,753	11,414	11,552
Northern Metro	12,368	12,534	12,142	12,336
Eastern Metro	11,963	11,681	11,748	11,476
Southern Metro	17,445	17,508	17,146	17,203
Other	1,415	1,349	1,386	1,330
Total	72,119	72,205	70,838	70,988

Table 89: Livebirths by Local Government Area, 2007–2008

	2007	2008
Alpine	138	125
Ararat	125	133
Ballarat	1,215	1,225
Banyule	1,682	1,600
Bass Coast	291	289
Baw Baw	497	500
Bayside	1,066	1,067
Benalla	151	130
Boroondara	1,722	1,604
Brimbank	2,778	2,765
Buloke	82	49
Campaspe	455	456
Cardinia	873	967
Casey	3,889	3,900
Central Goldfields	144	120
Colac-Otway	225	266
Corangamite	219	211
Darebin	2,092	2,065
East Gippsland	434	441
Frankston	1,860	1,811
Gannawarra	134	124
Glen Eira	1,765	1,788
Glenelg	244	192
Golden Plains	205	230
Greater Bendigo	1,319	1,278
Greater Dandenong	2,069	2,070
Greater Geelong	2,564	2,619
Greater Shepparton	846	955
Hepburn	147	170
Hindmarsh	51	76
Hobsons Bay	1,350	1,308
Horsham	247	238
Hume	2,560	2,638
Indigo	155	159
Kingston	1,830	1,869
Knox	1,918	1,905
La Trobe	925	999
Loddon	90	89
Macedon Ranges	424	461
Manningham	1,185	1,099
Mansfield	100	86
Maribymong	1,244	1,225

Table 89: Livebirths by Local Government Area, 2007–2008 (continued)

	2007	2008
Maroondah	1,339	1,348
Melbourne	762	831
Melton	1,579	1,669
Mildura	701	672
Mitchell	451	423
Moira	349	340
Monash	1,846	1,886
Moonee Valley	1,509	1,485
Moorabool	343	330
Moreland	2,219	2,256
Mornington Peninsula	1,585	1,547
Mount Alexander	175	161
Moyne	197	198
Murrindindi	172	147
Nillumbik	724	723
Northern Grampians	136	118
Port Phillip	1,293	1,282
Pyrenees	55	72
Queenscliffe	17	27
South Gippsland	314	294
Southern Grampians	201	179
Stonnington	1,119	1,100
Strathbogie	78	88
Surf Coast	327	319
Swan Hill	290	307
Towong	45	65
Wangaratta	349	346
Warrnambool	467	433
Wellington	505	521
West Wimmera	31	23
Whitehorse	2,005	2,007
Whittlesea	1,916	2,051
Wodonga	520	519
Wyndham	2,314	2,416
Yarra	1,111	1,139
Yarra Ranges	1,892	1,763
Yarriambiack	74	78
Outside Victoria	1,405	1,342
Total	71,725	71,807

Note this table is based on livebirths. Reports prior to the 2005 and 2006 Births In Victoria were based on all births.

Table 90: Confinements to women younger than 20 years, and proportion of all confinements by Local Government Area, 2007 and 2008

Local Government Area	2007			2008		
	Total confinements	Mothers younger than 20 yrs	%	Total confinements	Mothers younger than 20 yrs	%
Alpine	135	<10		120	10	8.7
Ararat	122	<10		131	<10	
Ballarat	1,195	53	4.5	1,214	52	4.5
Banyule	1,645	28	1.7	1,576	18	1.1
Bass Coast	290	12	4.2	282	<10	
Baw Baw	484	13	2.7	496	12	2.5
Bayside	1,051	<10		1,046	<10	
Benalla	151	11	7.8	129	<10	
Booroondara	1,704	<10		1,571	<10	
Brimbank	2,760	54	2.0	2,745	54	2.0
Buloke	81	<10		49	<10	
Campaspe	446	28	6.5	455	26	6.0
Cardinia	864	27	3.2	953	30	3.3
Casey	3,844	89	2.3	3,851	119	3.2
Central Goldfields	146	15	11.4	122	<10	
Colac-Otway	223	17	8.1	262	12	4.7
Corangamite	212	10	4.8	209	<10	
Darebin	2,056	34	1.6	2,043	29	1.5
East Gippsland	427	23	5.8	437	29	7.0
Frankston	1,835	67	3.7	1,795	73	4.2
Gannawarra	130	11	8.9	123	10	8.8
Glen Eira	1,742	<10		1,762	10	0.6
Glenelg	242	16	7.0	191	12	6.6
Golden Plains	201	<10		228	<10	
Greater Bendigo	1,302	71	5.9	1,263	74	6.1
Greater Dandenong	2,060	67	3.3	2,062	62	3.1
Greater Geelong	2,536	77	3.1	2,579	95	3.7
Greater Shepparton	840	45	5.6	944	47	5.4
Hepburn	144	<10		166	<10	
Hindmarsh	49	<10		76	<10	
Hobsons Bay	1,328	25	1.9	1,296	26	2.1
Horsham	244	<10		233	18	8.2
Hume	2,437	94	3.8	2,618	81	3.2
Indigo	153	<10		153	<10	
Kingston	1,810	15	0.8	1,854	15	0.9
Knox	1,890	40	2.1	1,890	41	2.2
Latrobe	919	64	7.5	991	83	9.1
Loddon	91	<10		87	<10	
Macedon Ranges	420	13	3.1	452	12	2.7
Manningham	1,165	<10		1,086	<10	

Table 90: Confinements to women younger than 20 years, and proportion of all confinements by Local Government Area, 2007 and 2008 (continued)

Local Government Area	2007			2008		
	Total confinements	Mothers younger than 20 yrs	%	Total confinements	Mothers younger than 20 yrs	%
Mansfield	98	<10		84	<10	
Maribyrnong	1,233	25	2.0	1,217	22	1.8
Maroondah	1,322	20	1.6	1,336	25	1.9
Melbourne	751	<10		818	<10	
Melton	1,565	43	2.8	1,644	44	2.7
Mildura	693	49	7.4	668	53	8.5
Mitchell	443	24	5.6	421	18	4.4
Moira	346	17	5.1	335	17	5.6
Monash	1,822	10	0.5	1,865	10	0.5
Moonee Valley	1,492	11	0.7	1,447	11	0.7
Moorabool	336	14	4.3	330	21	6.7
Moreland	2,196	45	2.1	2,236	41	1.8
Mornington Peninsula	1,567	44	2.8	1,536	40	2.6
Mount Alexander	172	<10		159	<10	
Moyne	195	<10		193	<10	
Murrindindi	168	<10		145	<10	
Nillumbik	715	<10		711	<10	
Northern Grampians	136	10	7.9	119	13	12.1
Port Phillip	1,278	<10		1,267	<10	
Pyrenees	55	<10		70	<10	
Queenscliffe	17	<10		27	<10	
South Gippsland	311	12	4.0	293	12	4.2
Southern Grampians	198	<10		179	10	5.9
Stonnington	1,095	<10		1,077	<10	
Strathbogie	76	<10		88	<10	
Surf Coast	318	<10		319	<10	
Swan Hill	290	14	5.0	306	23	8.0
Towong	45	<10		66	<10	
Wangaratta	343	13	3.9	344	<10	
Warrnambool	461	20	4.5	427	30	7.4
Wellington	499	25	5.2	513	22	4.4
West Wimmera	31	<10		23	<10	
Whitehorse	1,979	13	0.7	1,977	11	0.5
Whittlesea	1,896	42	2.3	2,025	41	2.1
Wodonga	514	27	5.4	515	32	6.6
Wyndham	2,285	68	3.1	2,385	63	2.7
Yarra	1,097	17	1.5	1,127	13	1.1
Yarra Ranges	1,866	48	2.6	1,751	46	2.7
Yarriambiack	74	<10		75	<10	
Outside Victoria	1,386	70	5.2	1,330	67	5.4
Total	70,838	1,819	2.6	70,988	1,887	2.7

Table 91: Births and confinements by reporting hospital, 2007 and 2008

Hospital	Births		Confinements	
	2007	2008	2007	2008
Mercy Hospital for Women	5,808	5,666	5,666	5,551
Monash MC-Clayton	3,189	3,027	3,075	2,910
Royal Women's Hospital	6,678	6,607	6,522	6,442
Werribee Mercy Hospital	1,867	1,730	1,848	1,706
Box Hill Hospital-Biralee	2,080	2,092	2,048	2,073
Dandenong Hospital	2,720	2,692	2,704	2,674
The Northern Hospital	1,741	1,927	1,722	1,908
Sandringham District Hospital	1,065	1,088	1,056	1,085
Sunshine Hospital	3,482	3,415	3,450	3,389
Epworth Freemason's Hospital	3,250	3,538	3,180	3,469
Cabrini Health	1,426	1,439	1,400	1,412
Casey Hospital	1,196	1,346	1,196	1,346
Ballarat Health Services	1,198	1,275	1,169	1,253
Bendigo Health Care Group	1,196	1,133	1,178	1,118
St John of God Hospital Bendigo	367	401	356	390
Barwon Health-Geelong	1,954	2,022	1,920	1,993
CGHS-Sale	523	511	512	495
WDHS-Hamilton	223	214	221	214
Mildura Base Hospital	948	872	929	864
Goulburn Valley Health	1,113	1,161	1,094	1,145
Northeast Health-Wangaratta	574	541	563	529
South West Health Care-Wbool	616	604	604	591
Wimmera Health Care-Horsham	387	369	384	365
EGHS-Ararat	93	100	93	100
Djerriwarrh Health Services	533	637	533	637
Bairnsdale Regional Health Service	323	330	322	330
Benalla & District Memorial	123	124	123	124
South West Hlth Sve-Camperdown	62	76	61	75
St John of God Warrnambool	163	147	155	144
Colac Area Health	174	215	174	215
Hepburn Health Service	19	<10	19	<10
Echuca Regional Health Services	307	302	306	301
PHCN-Frankston	2,372	2,326	2,337	2,303
Kerang District Health	83	72	83	72
Kyabram & District Health Services	137	123	137	123
Kyneton District Health Service	184	151	184	150
Latrobe Regional Hospital	895	941	883	932
Maryborough District Hlth Sve	116	89	116	89
Portland District Health	153	82	153	82

Table 91: Births and confinements by reporting hospital, 2007 and 2008 (continued)

Hospital	Births		Confinements	
	2007	2008	2007	2008
Swan Hill District Hospital	251	267	249	266
West Gippsland Hlth Care Grp	759	786	741	774
Angliss Hospital	2,326	2,176	2,303	2,145
Wodonga District Hospital	1,619	1,624	1,599	1,602
Bass Coast Regional Health	161	143	161	143
GSHS-Leongatha	217	214	217	214
Yarrawonga District Health Service	95	96	95	96
Cohuna District Hospital	46	60	46	60
Healesville & District Hospital	70	77	70	77
Kilmore & District Hospital	205	214	205	214
Mansfield District Hospital	92	78	92	78
Alpine Health-Myrtleford	21	17	21	17
Orbost Regional Health	29	49	29	49
Seymour District Memorial Hospital	<10	113	<10	113
South Gippsland Hospital-Foster	55	70	55	70
PHCN-Rosebud	69	0	69	0
Stawell Regional Health	80	66	80	66
Terang & Mortlake Health Service	29	31	29	31
Timboon & District Healthcare Service	57	17	57	17
St John of God Ballarat	484	486	474	473
St John of God Geelong	1,035	1,056	1,018	1,031
Jessie McPherson Private Hospital	1,089	1,129	1,034	1,076
Mt Alexander Hospital	55	61	55	61
Planned home births	254	303	253	302
Knox Private Hospital	577	606	571	597
Mitcham Private Hospital	1,368	1,358	1,345	1,329
South Eastern Private Hospital	619	584	610	572
Waverley Private Hospital	872	897	862	884
St Vincent's & Mercy Private	3,553	3,556	3,487	3,485
Peninsula Private Hospital	635	642	623	638
Northpark Private Hospital	939	930	928	922
Masada Private Hospital	721	729	714	724
St John of God Berwick	497	550	491	547
Alpine Health-Bright	14	17	14	17
The Bays Hospital	447	468	443	464
Frances Perry House	3,382	3,290	3,264	3,176
Shepparton Private Hospital	32	33	31	32
Total	72,119	72,205	70,838	70,988

* hospitals with <10 births excluded

